



Learning and Education Achievement in Pakistan Schools (LEAPS)

Applying A Systems Approach to Diagnose and Alleviate Frictions in Learning: Evidence from Pakistan's LEAPS Project

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Based On joint work with Asim Khwaja (Harvard) and Jishnu Das (Georgetown)**

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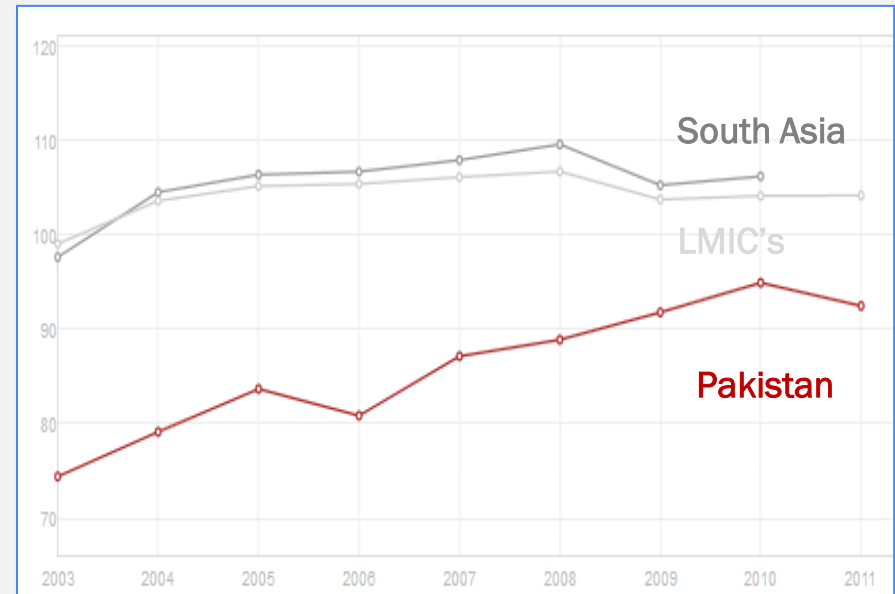
Documenting the Education Ecosystem

Pakistan's education landscape is **fast-changing** and **dynamic**.

► *Dramatic rise in enrollment*

2. Rapid rise in private school sector
3. Active school choice environment
4. On-going education reforms
5. Demographic shift in public teachers

Compared to South Asia and LMIC's, Pakistan's enrollment is still low but **is growing dramatically**.

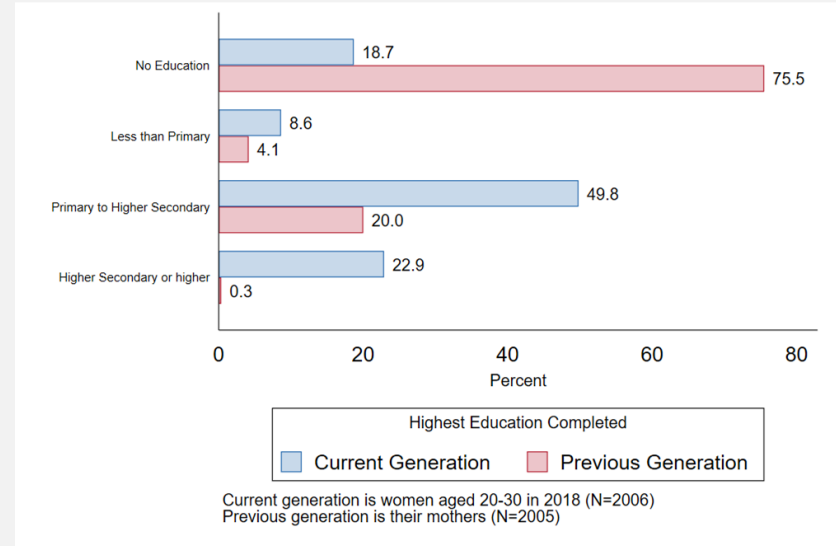


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Gender equity: the number of educated women in Punjab villages has gone up dramatically in one generation.

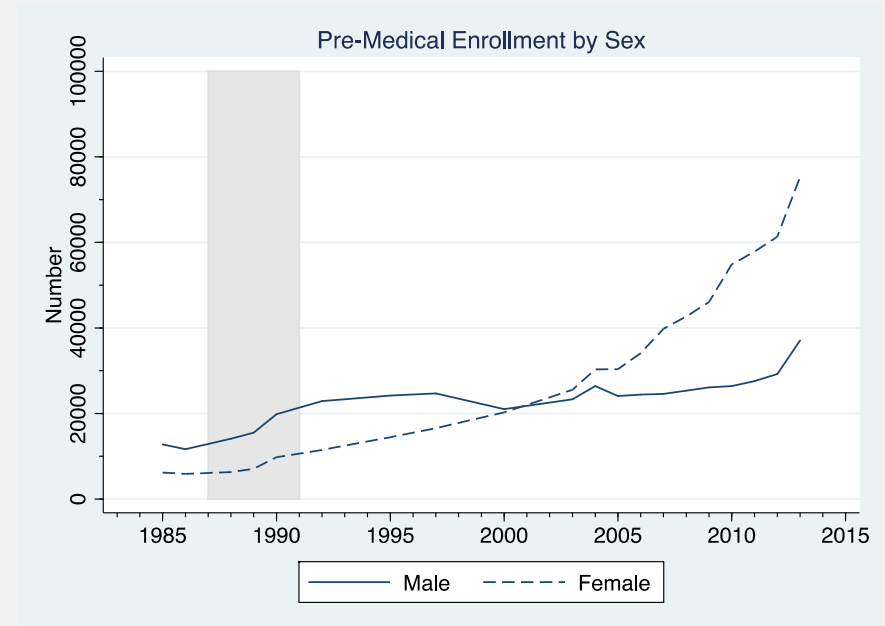


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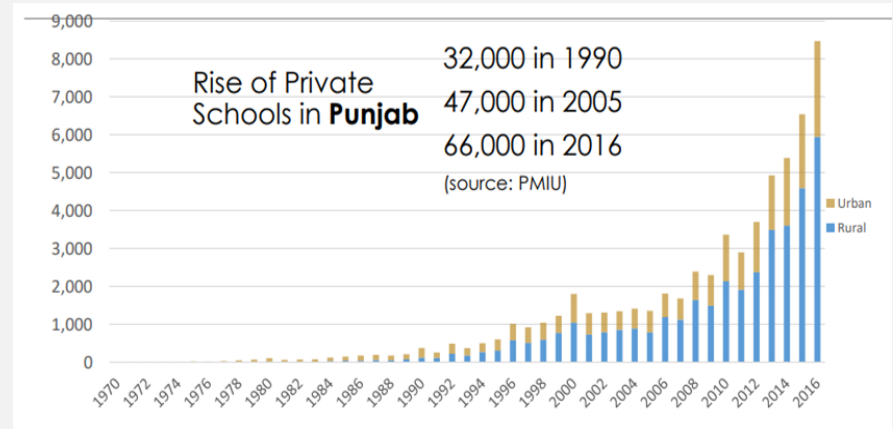
Gender equity: Total urban women enrolled in pre-university education has surpassed men.



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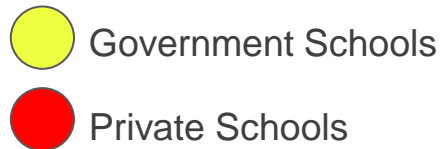
1. Dramatic rise in enrollment
 - ▶ **Rapid rise in private school sector**
3. Active school choice environment
4. On-going education reforms
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1. The number of private schools increased from ~3,000 in 1982 to more than 66,000 in 2016
2. 30% of total enrolled primary students in 2015 are in private schools. Most private schools are low fee
3. Exponential increase in tutors, tuition academies and education intermediaries



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- ▶ **Active school choice environment**
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- A typical village in Punjab, Pakistan has 8 schools.
- Most children attend schools within the village.
- There is substantive within-village school choice between public and private schools.



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- ***On-going education reforms***
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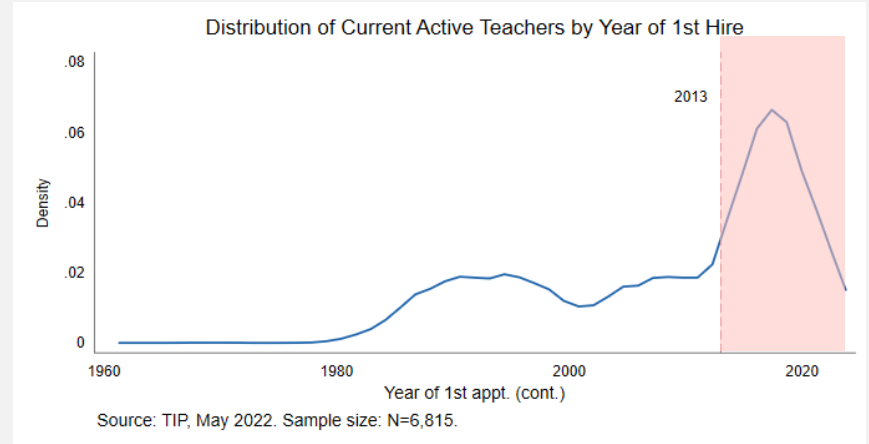
Substantive reforms have been implemented at the national and provincial levels in teacher qualifications, transfers, training, school monitoring, school management, assessments, and private schools.

Areas of Policy Reform	Reforms Passed Nationally or in Punjab		
	2000-2005	2006-2010	2011-2015
Teachers			
Hiring and recruitment	x	x	x
Pre-service credentials and assessment	x	x	x
In-service training and support	x	x	x
Transfer and promotion policies		x	x
Teacher monitoring and assessment	x	x	x
Salaries			x
Performance incentives	x	x	x
Contract teachers	x	x	x

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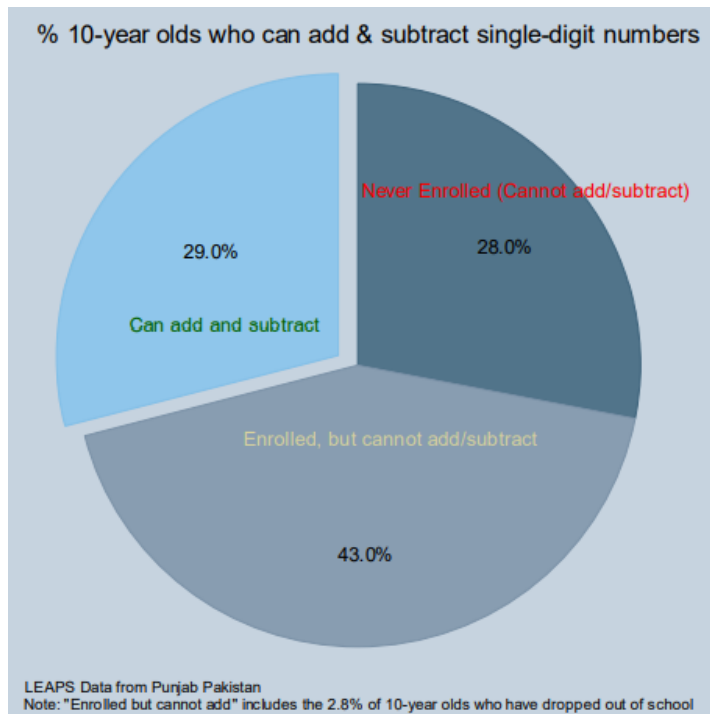
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► *Demographic shift in public teachers*



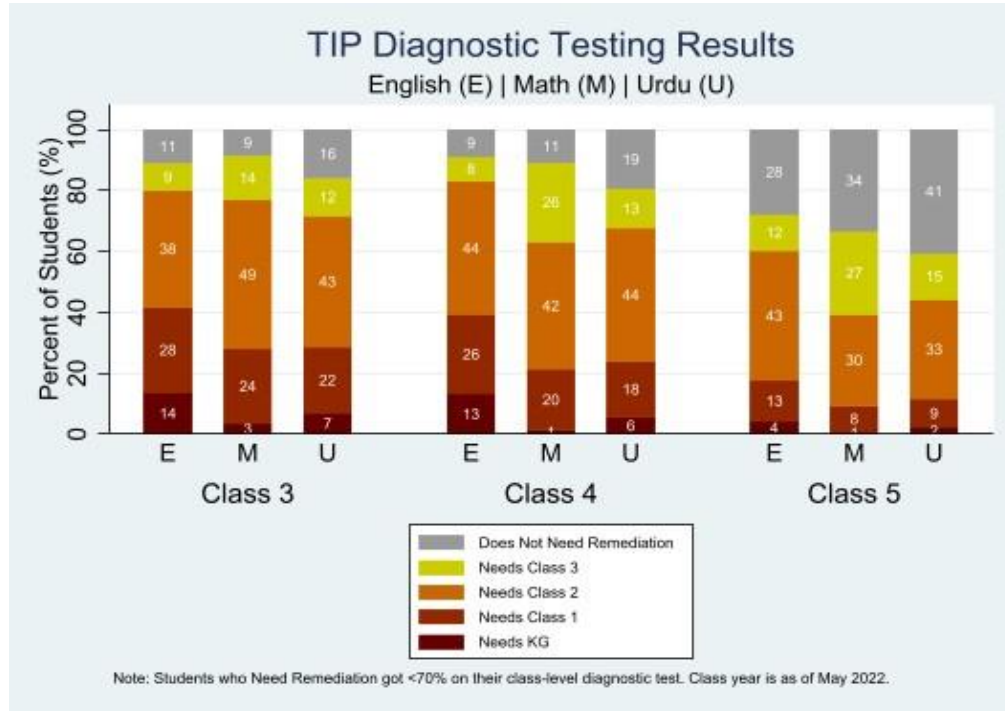
% of All New Hires	Pre-2013	Post-2013	Difference
STEM Degree Holders	4.2%	43.2%	38.9%***
Master's Degree Holders	46.7%	70.2%	23.5%***

In spite of this tremendous progress in enrollment, equity, and reform, learning levels are still low.



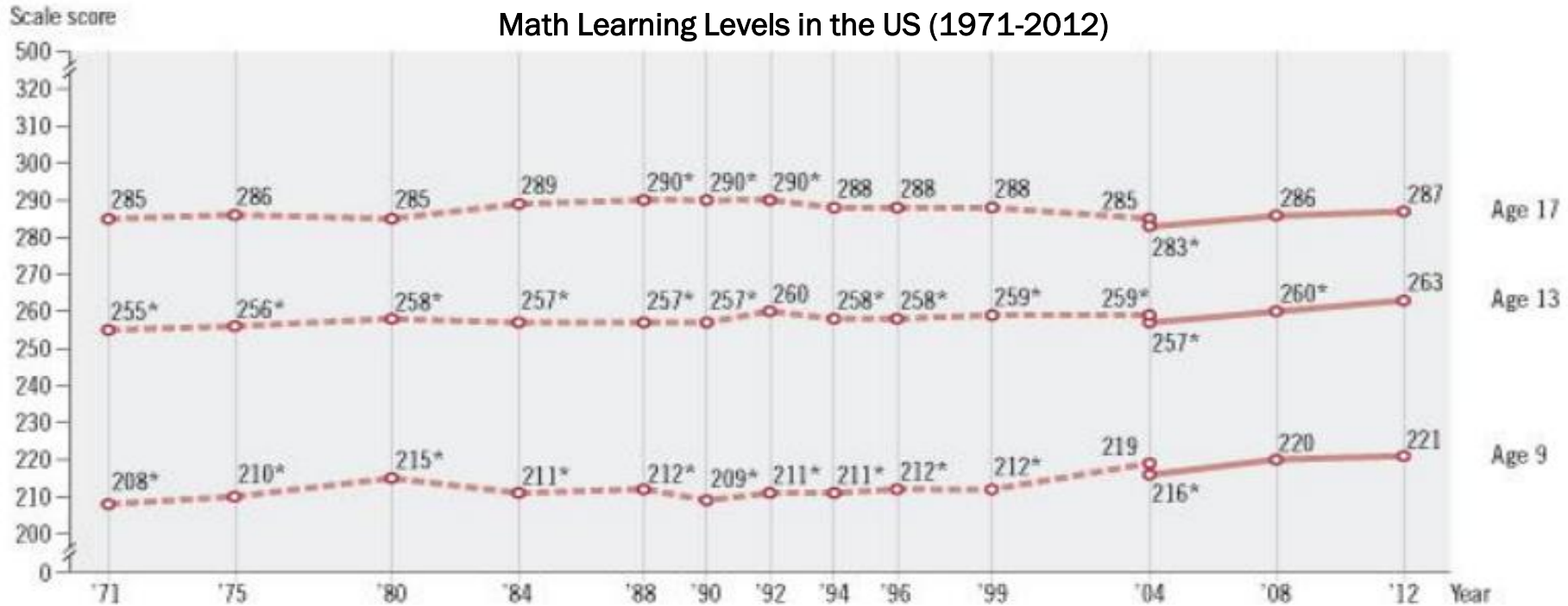
Before COVID (LEAPS, 2011), 70% of Class 3 students cannot do basic addition/subtraction, 80% cannot read a sentence in English, and 60% cannot read a sentence in the local vernacular.

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During COVID - ~90% of Class 3 students do not possess foundational skills.
(Source: Targeted Instruction Program in Pakistan, May 2022)

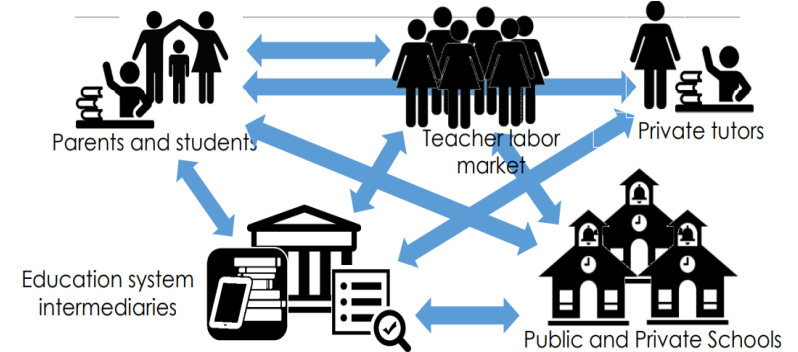
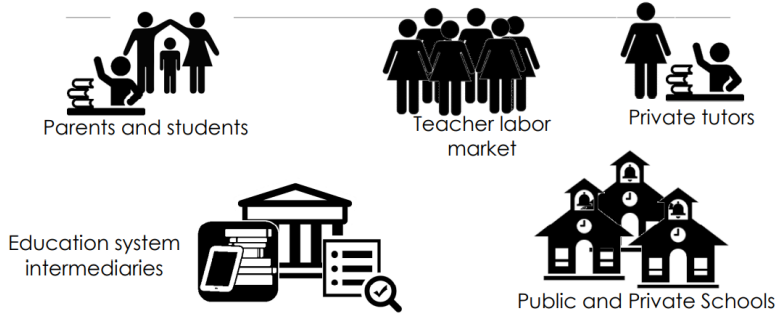
However, low learning levels are **not unique to Pakistan**.
High-income countries are also see lagging learning progress.



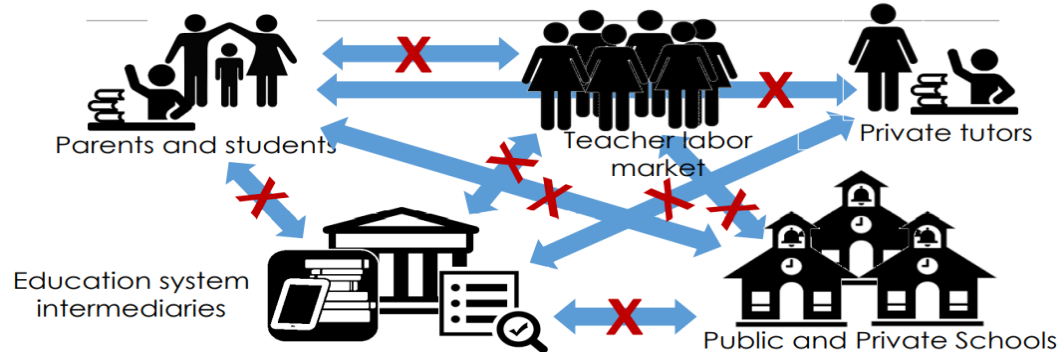
Keep in mind: education is a complex ecosystem with multiple actors...

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... and all need to be engaged in effective exchange...



... but frictions block these exchanges.



We need to address frictions to enable effective exchange between actors.
Doing so would empower actors to find out what input is needed,
and tailor to the actor in their context.

- 1. Map the ecosystem and identify actors**
- 2. Understand challenges/frictions**
- 3. Test solutions: design, implement and refine**

Are students of today, teachers of tomorrow? Answer: **Yes**

Diagnosis: There is a teacher labor market friction.

In villages with public secondary schools for girls:



x2

There are twice
as many educated
women



x3

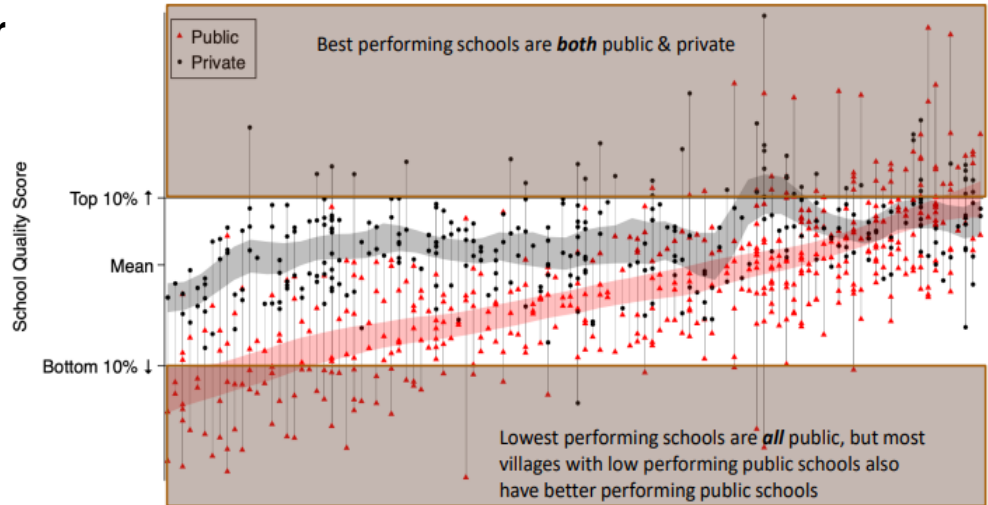
Private schools
are three times as
likely to open

Policies must consider the **complementarity between public AND private schools**, and their responses in a unified framework.

Are private schools better? Answer: **it is complicated.**

What We Find (Andrabi et al, 2023):

1. While on the average private schools are better, there are government schools that are better as well, even within the same village
2. Most low-quality schools are government schools, and they persist. Low quality private schools shut down
3. In government schools, unlike private schools, enrollment **does not reflect school quality (SVA)**.



Andrabi, Tahir, Natalie Bau, Jishnu Das, and Asim Ijaz Khwaja. *Heterogeneity in School Value-Added and the Private Premium*. No. w30627. National Bureau of Economic Research, (2023a).

Can parents discern quality?

Answer: They respond to credible and relevant information provision.

Diagnosis: There is an information friction.

Report Cards Study (Andrabi et al., 2017): Examine impact of providing child, school and village report cards to parents and schools to eliminate information asymmetries in LEAPS villages

Selected Results:

- 1) Learning outcomes improved. Public schools also increased quality, but less than private schools**
- 2) High performing private schools lowered their fees**
- 3) Enrolment increased**
- 4) The worst-performing private schools went out of business**
- 5) Quality norms in the community changes as improvements persist in the long-term such as hiring practices (better teachers are hired)**

Andrabi, Tahir, Jishnu Das, and Asim Ijaz Khwaja. *Report cards: The impact of providing school and child test scores on educational markets*. *American Economic Review* 107, no. 6 (2017): 1535-63.

Can policy improve schooling quality in both public and private schools?

Answer: Improve quality of public schools.

Public School Grants in 2007 (Andrabi et al., 2022)

Intervention: Government provided large grants to public schools, empowered school councils to make school-level budget re-allocations as they saw fit.

Selected Results:

- 1) Test scores in public schools improved significantly**
- 2) Because of competition, test scores were higher in private schools as well, even as they did not receive any grants.**
- 3) The private spillover increases the cost-effectiveness of the program by 85%, putting it among the top ranks of education interventions in low-income countries.**
- 4) Within-village inequality increased as private schools respond more to government schools with higher quality**

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Can a foundational learning program be implemented in a complex ecosystem of public and private schools?

Answer: Map ecosystem and actors, identify challenges/frictions, test solutions

Targeted Instruction in Pakistan

Implementation in public schools: A foundational learning program, with embedded impact evaluations, to support existing teachers, through low-cost technology, in helping primary students (grades 1-5) across 1800+ public schools KP and ICT.

- **System:** Embed the program in federal, provincial and district tiers
- **Teachers:** Alignment of beliefs around the program and alleviate constraints: extra burden, need for effective pedagogy, regulatory oversight, and technology support

Potential in private schools: Willingness to implement the program to address low learning levels as part of regular timetable or after school hours.

- **Owners:** Content alignment with national curriculum, availability of low/no-cost materials, explore parental willingness to pay
- **Teachers:** *Same as in public school system except flexibility in compensation*

Refine, iterate and scale across Pakistan.

In line with RISE's 5 recommended actions for addressing the learning crisis.

Commit to universal, early foundational learning

Measure learning regularly, reliably, and relevantly

Align systems around learning commitments

Support teaching

Adapt what you adopt as you implement

Policy implication #1: Align systems and ensure targeted instruction

Ensure alignment between curriculum, teaching, and assessments. Support targeted instruction for improved learning.

Policy Implication #2: How to think about “zombie” public schools?

Evaluate school consolidation/closures policy and public-private partnerships (such as PEF).

Policy implication #3: Information Flows

Provide full information of school quality and child performance to teachers, schools AND parents at the village level

Policy implication #4: Financing and resource allocation friction

Provide resources and decision-making autonomy to schools for better learning outcomes.