Incentivizing private school supply in underserved rural communities: Experimental evidence from Pakistan

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Preexisting conditions

- **Poor outcomes**: Prior to the program, 57% of 6-10 year olds went to school in rural Sindh.
- 47% of rural girls; 42% of rural poor children; 30% of rural poor girls.
- **Weak public provision of education**, with limited quality inputs and accountability for improving outcomes.
- **Little private supply of schooling** in rural Sindh. <4% of school-going 6-10 year olds went to private school.
- **Dual failure**: public sector failure and private market failure in the provision of schooling in rural Sindh.

Program features

- **Promoting Private Schools in Rural Sindh (PPRS)** program.
- Government of Sindh's initiative in *public-private partnership* innovation, administered by the **Sindh Education Foundation**.
- **PPP modality**: Use public resources to leverage the private sector to deliver schooling with high accountability.
- Incentivize private operators (individuals, organizations) to set up and run coeducational primary schools in underserved rural communities.
- **Aims:** Increase school participation and student achievement.
- Initiated on a pilot basis in FY2009/10 (3-year pilot).
- Two rounds of entry to date: Round 1: spring/summer 2009. Round 2: spring/summer 2010. Round 3: underway.

Program features (cont.)

- **Cash benefits**: *Subprogram 1*: Per-student subsidy of Rs. 350. *Subprogram 2*: Per-girl student subsidy of Rs. 450 & per-boy student subsidy of Rs. 350.
- **In-kind benefits** (Same for subprograms): Initial and refresher operator and teacher training; learning support school visits; textbooks; teaching and learning materials; stationery; and bookbags.
- **Subsidy benefit calculation** (tied to *attendance*):
  - If the attendance rate is 80% or higher (against reported enrollment), then benefit = per-student amount*enrollment.
  - If the attendance rate is less than 80%, then benefit = 1.25*attendance.
  - **Why?** Protection against enrollment inflation and promotion of better bookkeeping.
- Attendance data collected by SEF in unannounced school visits.
- Cash subsidy benefits paid out quarterly.

Key program entry criteria

- (1) In selected districts (10 educationally-disadvantaged districts).
- (2) No school (functional or closed) within 1.5 kilometer radius of the proposed school site.
- (3) Building/site that complies with size, amenity, legal status, and safety (qualitative assessment) stipulations.
- (4) At least two potential teachers (1 female) with a minimum attainment of grade 8.
- Prospective operators submit application forms after a call for applications is announced.
- Independent survey firms visit all proposed communities and collect data on the qualifying criteria (including GIS data on all schools in the general vicinity of the proposed school site).

Present composition of schools

- Schools: 295 (148 in subprogram 1; 147 in subprogram 2).
- Distinct operators: 211.
- Teachers: 741.
- Total enrollment: 40,885 students.
- Total attendance (March 2011): 26,321 students.

Research questions

- What are the average causal effects of the program on child participation and student learning in program communities?
- Are there differential average causal effects on these outcomes by subprogram in program communities?

Research design

- **Experimental design** taking advantage of *oversubscription*.
- **Round 1**: 263 distinct communities qualified for the program based on the criteria.
- **Subprogram (treatment) 1**: 100 communities.
- **Subprogram (treatment) 2**: 100 communities.
- **Control (untreated)**: 63 communities.
- Assignment to the three experimental groups was randomized.
- Data generating process allows us to identify the average causal effect of the program (and the subprograms) on outcomes of interest in program communities.

Data

- **Baseline**: Parsimonious data collected by "piggybacking" off survey firms contracted by SEF for school site and community vetting. February-March 2009.
- **First follow-up**: Independent household census in evaluation communities. School participation data collected for children between the ages of 5 and 15. June 2010 (after one academic year of operation).
- **Second follow-up**: Independent detailed school and household sample survey (with home-based child testing). May 2011 (after two academic years of operation).

Summary of findings

- **Nearly all young children drawn into school:** School participation increased by 29 ppts. The average participation rate in control communities is 63%, while in program communities, the rate is 92%.
- **Cost-effectiveness of the program in increasing school participation is among the highest.** Current cost of the program is Rs. 8,600/student/year. Cost per program student to induce a 1 ppt increase in school participation is Rs. 300/year.
- No difference in school participation effects for boys or girls between subprogram-1 and -2 communities.

Summary of findings (cont.)

- **Large gains in achievement:** On average, in control communities, children answered 3 and 2 questions correctly in the math and language tests, respectively. On average, in program communities, children answered +5 and +3 questions correctly in the math and language tests, respectively.
- **Substantially higher achievement gains than in other schools that children attend in the evaluation communities.** Children enrolled in school answered +7 and +5 questions correctly in the math and language tests, respectively. Children enrolled in school as a *result of the program* answered +14 and +9 questions correctly in the math and language tests, respectively.
- No difference in achievement effects for boys or girls between subprogram-1 and -2 communities.

What facilitated the impact evaluation?

- **What facilitated program entry and administration in compliance with program assignment agreement?**
- Strong government demand for IE, given the flow of public monies to private entities.
- Program piloting.
- “Under the radar”— limited political interference.
- Excessive qualifying applications with a binding program expansion plan (i.e., budget).
- No clear (objective) sense of “degrees of qualifying”. Thus, randomization viewed as fair.
- Transparency—randomization was performed in public, with press participation.
- Strong, productive partnership between IE team and program design/administration team. Members of IE team advised on program design first. Discussions on IE design came much later.


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