Roll Call: Getting Children Into School

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Outline

• Introduction to J-PAL
• Increasing Enrollment and Attendance
  – Reducing Costs
  – Increasing Perceived Benefits
  – Gender
  – Cost-effectiveness
• Conclusion
• Questions
J-PAL’s network of 161 professors use randomized evaluations to inform policy
J-PAL’s mission is to ensure that policy is informed by evidence and research is translated into action.
Research: We conduct randomized evaluations to test the effectiveness of programs aimed at reducing poverty.

Before the program starts, eligible individuals are randomly assigned to two groups so that they are statistically identical before the program.

Population is randomly split into 2 or more groups

Intervention

Outcomes for both groups are measured

Comparison

Two groups continue to be identical, except for treatment

Any differences in outcomes between the groups can be attributed to the program.
J-PAL’s affiliated professors have conducted over 900 randomized evaluations in 79 countries with governments, NGOs, and other implementing partners.
To date, J-PAL has 222 completed and ongoing education evaluations across 43 countries
What we know based on findings from RCTs

<table>
<thead>
<tr>
<th>Priority topic</th>
<th>What have we learned?</th>
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<tbody>
<tr>
<td>Increasing Enrollment &amp; Attendance</td>
<td>1. Convenience of participating in school matters, especially for girls</td>
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<td>2. Highly sensitivity to costs and incentives</td>
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<td>3. Health and nutrition interventions have increased attendance (in particular, deworming)</td>
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<td>4. Providing information about the benefits of education and ways to reduce cost can be effective</td>
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<td>5. Improving education quality (i.e., learning) may not lead to increased participation</td>
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<td>Improving Student Learning</td>
<td>1. Physical access to schools is critical</td>
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<td>2. Student motivation is key and can be improved with incentives</td>
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<td>3. Adding school-based inputs alone is not sufficient</td>
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<td>4. …unless they are integrated into the learning process</td>
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<td>5. Changes in pedagogy can have large impacts</td>
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<td>6. Remedial education, one form of pedagogy, has been consistently effective</td>
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<td>7. School governance is key but difficult to implement at scale</td>
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Measuring school participation

• Enrollment, conditional attendance, unconditional attendance
• How to measure? School register vs. survey data
Increasing Enrollment and Attendance
Converging on universal primary enrollment
Enrollment ≠ attendance

**Primary School Age Children In India**

- Enrolled in School: 96.9%
- Attending on a given day: 71.4%
Possible barriers to school participation

- Access and convenience
- Costs
- Health
- Low-quality education
- Underestimate the benefits
- Discount the future
- Low community involvement
- Poor school infrastructure
- Low student motivation
- Gender-specific barriers
Costs and benefits framework

- Education is an investment of time, money, and effort— with many of the benefits coming far in the future
- Costs are immediate and salient
- Benefits may be harder to perceive (especially for uneducated parents and children) and less salient
Changing the cost-benefit calculation

A. Reducing costs
   1. Shortening travel time to school
   2. Subsidies and in-kind transfers
   3. Reducing child morbidity

B. Increasing perceived benefits
   4. Improving the quality of education
   5. Changing perceptions
   6. Involving local communities
   7. Adding school supplies
   8. Increasing student motivation

C. Applying the lenses of gender and cost-effectiveness
   9. Gender
   10. Cost-effectiveness
Reducing costs
1. Shortening travel time to school

• Distance can deter attendance.

• Time, effort, and risk of a long trip to school is immediate, salient, and daily.

*In areas where few schools exist, creating local schools is a very effective way to increase participation.*
1. Shortening travel time to school

- **“Village-based primary schools” in rural Afghanistan:**
  - Only 29% of students lived within 5 km of primary school at baseline
  - Enrollment decreased by 16 pp for each additional mile child had to walk

- **Subsidies for new, free private primary schools in rural Pakistan**
  - Target areas with no existing school within 1.5 km

- **Additional examples from Indonesia, Burkina Faso, and India**
  - School construction in Indonesia
  - Building schools in Burkina Faso
  - Providing secondary school girls with bicycles in India

1. Reducing distance to school can be particularly helpful for girls

<table>
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<tr>
<th>Differential Impacts by gender: Reducing travel time to school</th>
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<tbody>
<tr>
<td>Village-based schools in Afghanistan (boys)</td>
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<tr>
<td>Village-based schools in Afghanistan (girls)</td>
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<tr>
<td>Subsidies for new private schools in Pakistan - Y1 (boys)</td>
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<tr>
<td>Subsidies for new private schools in Pakistan - Y1 (girls)</td>
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<tr>
<td>Subsidies for new private schools in Pakistan - Y2 (boys)</td>
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<tr>
<td>Subsidies for new private schools in Pakistan - Y2 (girls)</td>
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</tbody>
</table>

- Village-based schools in Afghanistan (boys): 34.70 pp
- Village-based schools in Afghanistan (girls): 51.50 pp
- Subsidies for new private schools in Pakistan - Y1 (boys): 46.50 pp
- Subsidies for new private schools in Pakistan - Y1 (girls): 51.70 pp
- Subsidies for new private schools in Pakistan - Y2 (boys): 31.40 pp
- Subsidies for new private schools in Pakistan - Y2 (girls): 31.70 pp

Key:
- Comparison group
- Positive impact
- Negative impact
- Enrollment
- Attendance
- Unconditional Attendance
Changing the cost-benefit calculation

A. Reducing costs

1. Shortening travel time to school

2. Subsidies and in-kind transfers
   a. Eliminating school fees
   b. Conditional Cash Transfers (CCT)
   c. CCT design details
   d. Conditionality
   e. Small incentives or removing small costs
2a. Eliminating school fees

• Fees more common in secondary school than primary
  – High-income nations: 6% charge secondary school tuition
  – Middle-income: 22 percent
  – Low-income: 63 percent

• Annual fees can be substantial (20% of GDP per capita in Ghana)
2a. Eliminating fees can lead to large increases in participation

- In Ghana, providing poor students with scholarships for senior high school (SHS) led to:
  - 30 pp increase in SHS enrollment (from 56 percent)
  - 26 pp increase in SHS completion (from 48 percent)
  - 8 years after scholarship led to gains in:
    - Learning
    - Increase in earnings
    - Increased in preventative health behaviors
    - Delays in marriage and childbirth

2b. Conditional Cash Transfers: Widely tested, consistently effective at increasing participation

Randomized evaluations of CCTs around the world

2c. CCT design details matter

- Timing payments by school fee deadline (Colombia):
  - Received $10 v. $15 per month
  - And also $50 payout when school fees were due
  - Dropout declined from 29% to 26%

- Link to student achievement:
  - Postponing part of transfer for $300 “graduation” bonus for completing school
  - 68% of students enrolled in tertiary compared to 19 percent in control group

References: Barrera-Osorio et al. (2011)
2d. Mixed results on importance of conditionality

• In Malawi, CCT program improved schooling outcomes more effectively than UCT program.
  – UCTs reduced dropout, but only 43 percent as much as CCTs of same size
  – UCTs reached more marginalized out-of-school girls, better at delaying marriage and childbearing

• “Labeled” cash transfers as effective as CCTs in Morocco
  – But authors suggest families misunderstood conditionality

• Potential benefit of UCTs is greater cost-effectiveness— but still not sufficient to make UCTs cost-effective at increasing participation

References: Baird et al. (2011), Akresh et al. (2013), Benhassine et al. (2014)
2e. Even small incentives, or removing small costs, can have large impacts

- $20 scholarships reduced dropout amongst 6th graders in Cambodia by ~20%
- In Malawi, a $5/month transfer was nearly as effective as a $15/month transfer
- Free uniforms for 6th grade girls in Kenya reduced dropout by 3 pp (16%)
- Breakfast increased student participation at preschools (Kenya) and primary school (Jamaica)
- School feeding program in Burkina Faso improved enrollment by 4-5 percentage points

Changing the cost-benefit calculation

A. Reducing costs
   1. Shortening travel time to school
   2. Subsidies and in-kind transfers
      a. Eliminating school fees
      b. CCTs
      c. CCT design details
      d. Conditionality
      e. Small incentives or removing small costs
   3. Reducing child morbidity
3. Reducing the burden of school by reducing child morbidity

- Several studies of nutrient supplementation find increases in attendance:
  - Daily multivitamin supplement containing iron, China
  - Information campaigns, subsidies, and incentives, China
  - Performance-based financial incentives and block grants for anemia reduction, China

References: Bobonis et al. (2006), Luo et al. (2012), Miller et al. (2012), Luo et al. (2013), Berry et al. (forthcoming)
3. Reducing the burden of school by reducing child morbidity

- Low-cost *deworming* drugs distributed in mass school-based campaigns reduced absenteeism by 9.3 pp (25%) in Kenya

- Shows that interventions not obviously about education can have education impact

Deworming increased attendance for both treated and untreated students, resulting in a total increase in attendance of almost 28 days

References: Miguel and Kremer (2003), Baird et al. (2013), Ozier (2014)
B. Increasing perceived benefits
Changing the cost-benefit calculation

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C. Applying the lenses of gender and cost
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4. Increasing the quality of education

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<th>IMPROVED LEARNING?</th>
<th>IMPROVED PARTICIPATION?</th>
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<tbody>
<tr>
<td>32: Camera monitoring of teachers with incentives in India</td>
<td>✓</td>
<td>✗</td>
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<tr>
<td>33: Computer-assisted curriculum in primary schools in India</td>
<td>✓</td>
<td>✗</td>
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<tr>
<td>34: Remedial tutoring in India</td>
<td>✓</td>
<td>✗</td>
</tr>
<tr>
<td>35: Contract teachers and streaming by ability in Kenya</td>
<td>✓</td>
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</tr>
<tr>
<td>35: Contract teachers in Kenya</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>35: Extra contract teachers and school-based management training in Kenya</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>37: Child and school report cards in Pakistan</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>45: Participatory community-based monitoring in Uganda</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>49: School committee elections, join planning meetings, grants, and training in Indonesia</td>
<td>✓</td>
<td>✗</td>
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4. Increasing the quality of education

- *Can—but does not always—increase attendance* (at least in short term)
- Quality may be hard to judge; community engagement may help
- Long-term impacts of improving quality on participation not yet evaluated

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5. Changing perceptions

• *Programs that address perception gaps or make the benefits of education more salient can change behavior at low cost.*

• In the DR, more than 40% of 8th graders did not expect their future earnings to be higher if they completed secondary school.
  – Providing information on average earnings by education level increased schooling by 0.2 years for 8th grade boys

• In Chile, a video explaining how good grades can qualify students for university financial assistance increased attendance among 8th graders

• Exception in China: no effects from information on scholarships for 7th and 9th graders; competitiveness of education system may be primary barrier

References: Jensen (2010), Dinkelman and Martinez (2014), Loyalka et al. (2012)
Examples can be powerful in changing priorities

Two randomized evaluations in India:

- **Increased opportunities:** Recruiting services for outsourcing sector increased school enrollment and other investments in girls

- **Increased aspirations:** Quota policy for female village leaders erased gender gap in educational attainment in villages

References: Jensen (2012), Beaman et al. (2012)
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6. Involving local communities

• **Mixed results:** Community monitoring and school-based management can improve both participation and learning, but are difficult to do well.

• Out of 7 community monitoring and school-based management studies:
  - 3 improved both participation and learning
  - 2 improved neither
  - 1 improved learning but had no impact on (already low) dropout
  - 1 improved attendance but had no impact on learning

References: Barr et al. (2012), Lassibille et al. (2010), Gertler et al. (2012), Beasley and Huillery (2015), Banerjee et al. (2010), Pradhan et al. (2014), Blimpo et al. (2015)
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7. Adding school supplies

No consistent impact of increased spending on inputs on school participation

- Textbooks in Kenya
- Textbooks in Sierra Leone
- Laptops in Peru
- Libraries in India
- Infrastructure investments in Bolivia

References: Glewwe et al. (2009), Sabarwal et al. (2014), Cristia et al. (2012), Borkum et al. (2012), Newman et al. (2002)
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8. Increasing student motivation

- Policy discussions often focus on parents—but students’ own perceived costs and benefits are also important

- **Mexico**: Classmates of children who received CCTs were more likely to go to school

- **Kenya**: Merit scholarships for girls increased attendance for all girls (not just those at the top of the class)

References: Bobonis et al. (2009), Kremer et al. (2009)
Gender & Cost-effectiveness
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What about gender?

- **General lessons in the review apply equally to girls and boys**
- **Less evidence on gender-specific barriers, such as menstruation**
  - Nepal provided sanitary cup to 7th and 8th grade girls
  - Found that menstruation was not a key barrier to attendance

References: Oster and Thornton (2011)
Disaggregating data by gender

• Disaggregating 25 evaluations shows:
  – Most successful interventions helped girls at least as much as— if not more than— boys
  – Where boys benefited more, they had lower attendance to start with
  – In other words: the most disadvantaged gender usually benefits most
Cost-effectiveness analysis
Key Lessons: Reducing Costs

• Costs are not just monetary, but also include effort and travel time to school. When school is far away, reducing travel time can help boost participation. This can be particularly important for girls and in areas where security is an issue.

• The costs of education are immediate and easy to observe. As a result, even small changes in costs can have important impacts on participation.

• The effort cost of attending school is higher for a child who is sick and lethargic. Health interventions that reduce student morbidity may be among the most effective ways of boosting school participation.
Key Lessons: Increasing Perceived Benefits

• It appears to be difficult for parents to accurately perceive the quality of education their children are receiving. Improving the quality of education (as measured by gains in test scores) does not always translate into improved participation, at least in the short run.

• Programs that address perception gaps or make the benefits of education more salient can change behavior at low cost. Examples include telling students about the availability of scholarships and presenting examples of future job opportunities.

• Children, not just their parents, are important to consider when designing policies to address school attendance.
Key Lessons: Gender and Cost-effectiveness

• **These general lessons apply equally to boys and girls.** Although more girls are out of school than boys, general programs that seek to increase schooling for all tend to help girls as much as or even more than boys.

• **Health interventions are among the most cost-effective ways of improving participation.** This includes programs that address intestinal worms and chronic anemia.
Thank you