

Course Overview

1. Introducing Randomized Impact Evaluations (Thomas Chupein)
2. Outcomes, Impact, and Indicators (Rohit Nainpally)
3. Why Randomize? (Thomas Chupein)
4. How to Randomize (Rohit Nainpally)
5. Sampling and Sample Size (Rohit Nainpally)
6. Threats and Analysis (Lina Marliani)
7. Evaluation from Start to Finish (Lina Marliani)
8. Evidence from Health, Education, and Community Participation Programs (Thomas Chupein and John Floretta)
9. Using Evidence from Randomized Evaluations for Decision-Making and Policy Change (John Floretta)
10. Discussion: Where do RCTs fit in a Good M&E Strategy? (All)



Evidence from Health, Education, and Community Participation Programs

Thomas Chupein and John Floretta
J-PAL Global



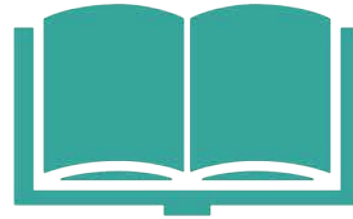
J-PAL's Eight Sectors



Agriculture



Crime



Education



Environment
and Energy



Finance and
Microfinance



Health

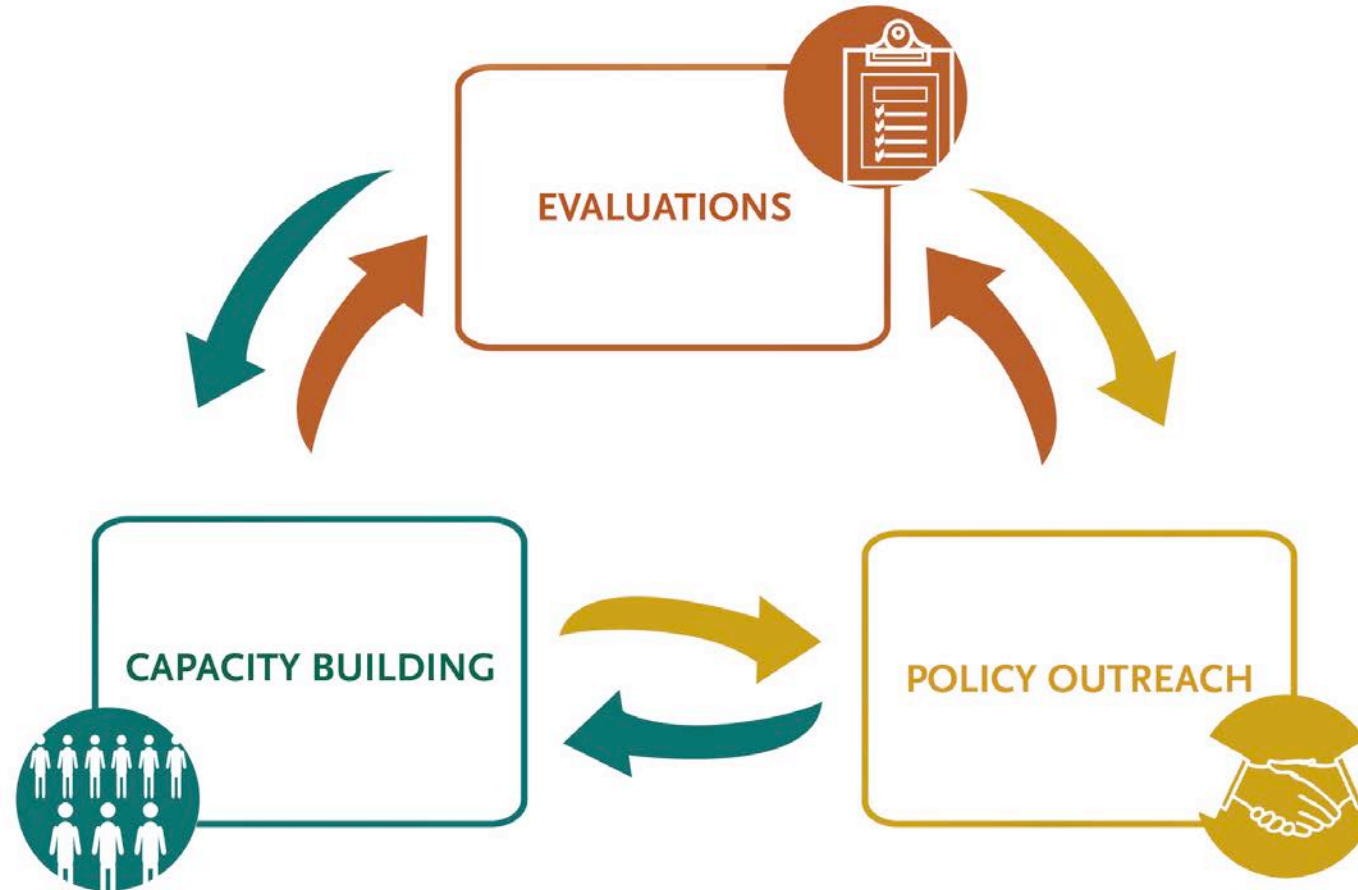


Labor Markets



Political Economy
and Governance

J-PAL's Three Pillars



Sector-Level Evidence

- Presentations designed to synthesize findings from randomized evaluations of interventions in each sector aimed at improving the welfare of the poor, and distill them into clear policy lessons and recommendations.

Introduction to J-PAL Health Sector



Joseph Doyle
MIT



Pascaline Dupas
Stanford



Seema Jayachandran
Northwestern

Introduction to J-PAL Health Sector

142 ongoing and completed randomized evaluations in 34 countries.
Approximately half of our affiliates have health projects.



Introduction to J-PAL Health Sector

Demand

Preventive behavior

- Family planning
- HIV/AIDS prevention
- Immunization
- Malaria prevention
- WASH

Treatment

- Diagnostic services
- Drug adherence
- Deworming
- Iron fortification

Supply

- Drug supply
- ECD
- Health care systems reform
- Health insurance
- mHealth
- Provider care

Policy Themes

The majority of J-PAL health evaluations fall into the following six policy themes:

1. **Pricing** preventive health products to increase adoption
2. **Incentives and nudges** to increase health-promoting behaviors
3. **Information campaigns** to increase health-promoting behaviors
4. Interventions to improve **healthcare provider job performance**
5. **School-based interventions** to improve child health outcomes
6. Interventions to improve **early childhood development**

Promising Interventions and Policies

- Subsidize user fees for key preventive health products and eliminate cost-sharing where possible
- Campaigns with sufficiently specific and actionable information to increase health-promoting behavior
- School-based deworming
- Community agents supporting parents to provide child psychosocial stimulation



Evidence in Health



Evidence Theme 1: Pricing preventive health products to increase adoption



Pricing: The Debate

In Favor of Free Distribution

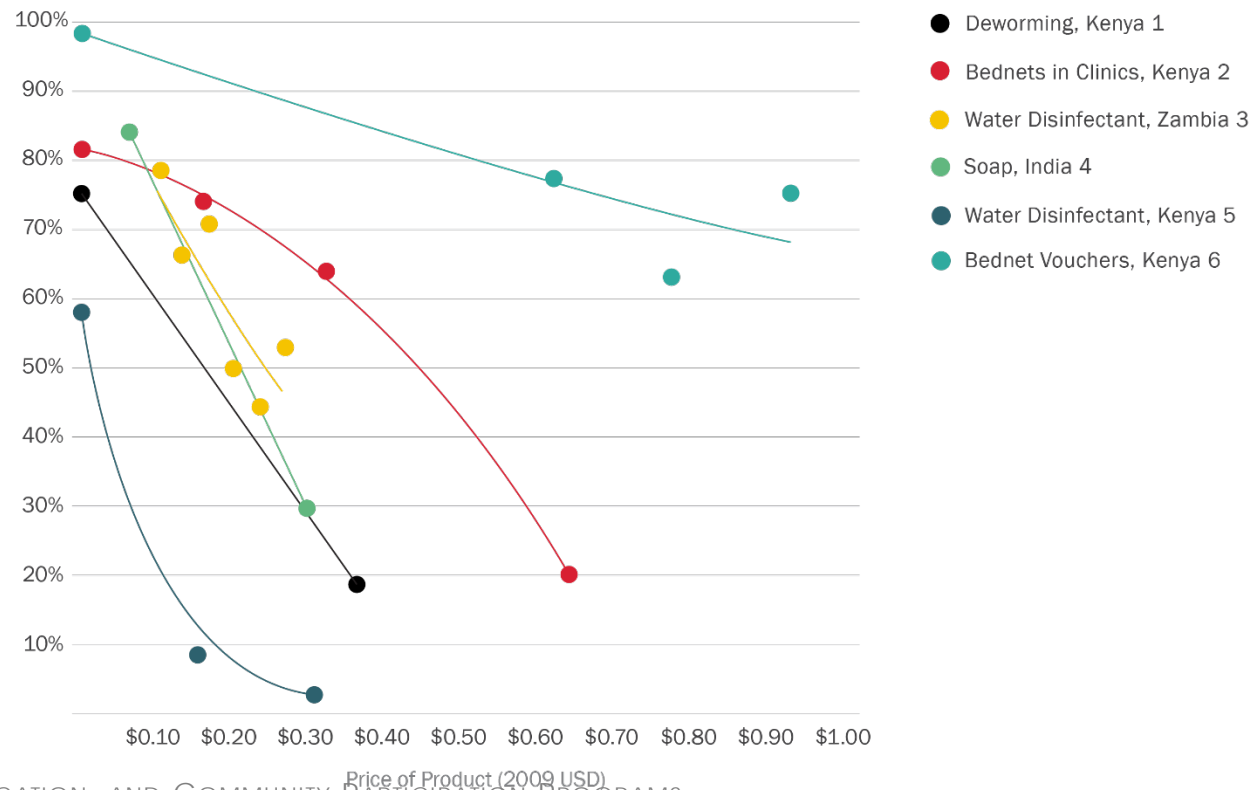
- Prices prevent access for people who need it the most
- Sunk cost bias may be negligible
- Free samples help people learn about a good's benefits and they will be willing to pay for them later
- There are positive health externalities that warrant complete subsidization for maximum public health benefits

In Favor of Cost-Sharing

- People who need something are more willing to pay for it
- Paying for goods makes people more likely to use them (sunk cost bias is significant)
- Giving away goods and services for free creates dependency (an entitlement effect)
- Charging fees helps programs maintain financial sustainability

Emerging Policy Lesson

- Relative to free distribution, charging even very small fees substantially reduces take-up.



Bednets

- Charging 40 cents for deworming medicine in Kenya resulted in demand falling to 18% from 75% when medicine was distributed for free (2001)
- Charging 60 cents (10% of actual price) for insecticide treated nets (ITNs) reduced take-up by 60pp relative to free distribution in Kenya (2007)



Chlorine

- Purchase of rubber shoes for children in Kenya fell from 93% to 42% when prices increased from \$0.07 to \$0.87 (2010)
- Purchase of chlorine disinfectant in Zambia fell by over 30pp when prices increased from \$0.09 to \$0.25 (2006)



Other Emerging Policy Lessons

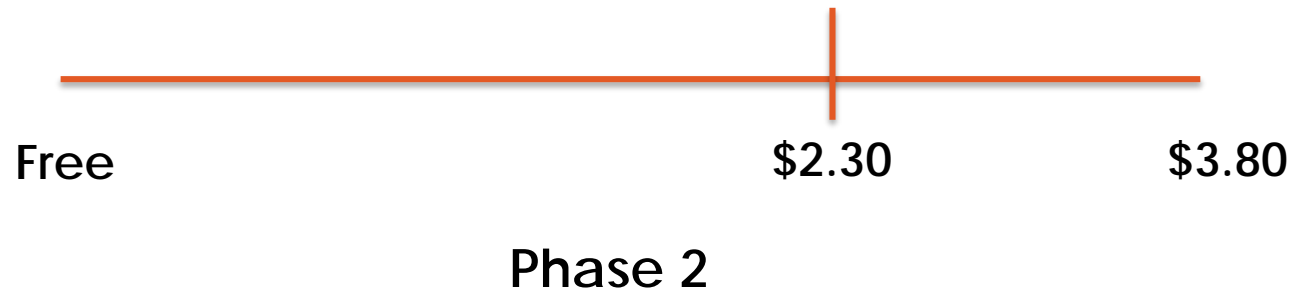
- Due to drop-offs in take-up, charging fees may make an intervention less cost-effective
- Cost-sharing does not appear to concentrate take-up on those who need products most
- There is no evidence that the act of paying for a product makes a recipient more likely to use it



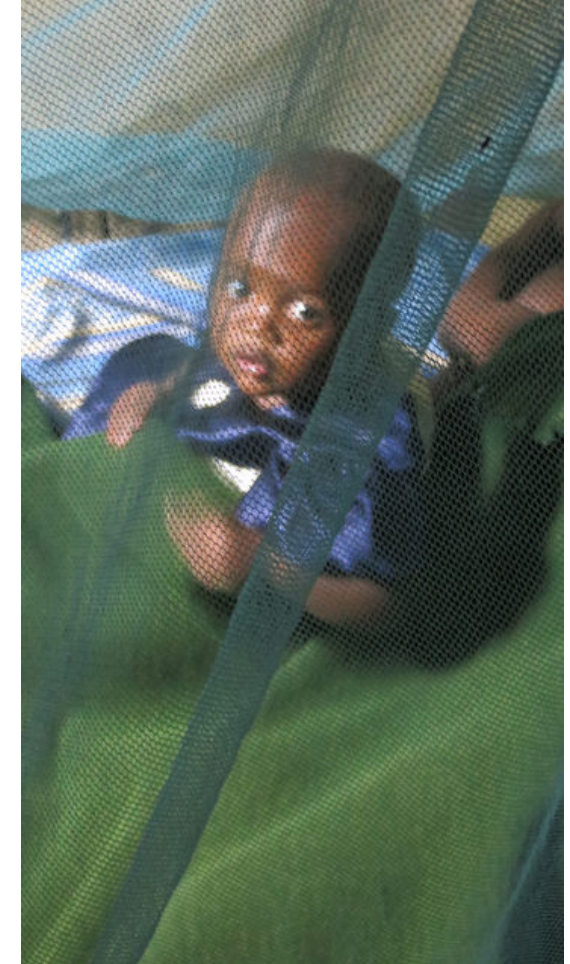
Other Emerging Policy Lessons

- Due to drop-offs in take-up, charging fees may make an intervention less cost-effective
- Cost-sharing does not appear to concentrate take-up on those who need products most
- There is no evidence that the act of paying for a product makes a recipient more likely to use it
- Free trials enable people to learn about new health products. For products with high private returns, this can increase willingness to pay for the new product

Other Emerging Policy Lessons



Households that received a free or highly subsidized bednet were more likely to later buy a moderately subsidized (63%) bednet than those who had not in a follow-up study in Kenya (2007)



Other Emerging Policy Lessons

- Due to drop-offs in take-up, charging fees may make an intervention less cost-effective
- Cost-sharing does not appear to concentrate take-up on those who need products most
- There is no evidence that the act of paying for a product makes a recipient more likely to use it
- Free trials enable people to learn about new health products. For products with high private returns, this can increase willingness to pay for the new product
- Use of preventive goods can often have positive externalities, which increases the rationale for subsidies (though not necessarily to 100 percent)

Pricing Policy Recommendation

Subsidize user fees for key preventive health products* and eliminate cost-sharing when possible

**Broader questions remain on the impact of user fees for other types of health services such as clinic visits or acute care. There is little rigorous evidence on this question, and existing evidence is mixed*



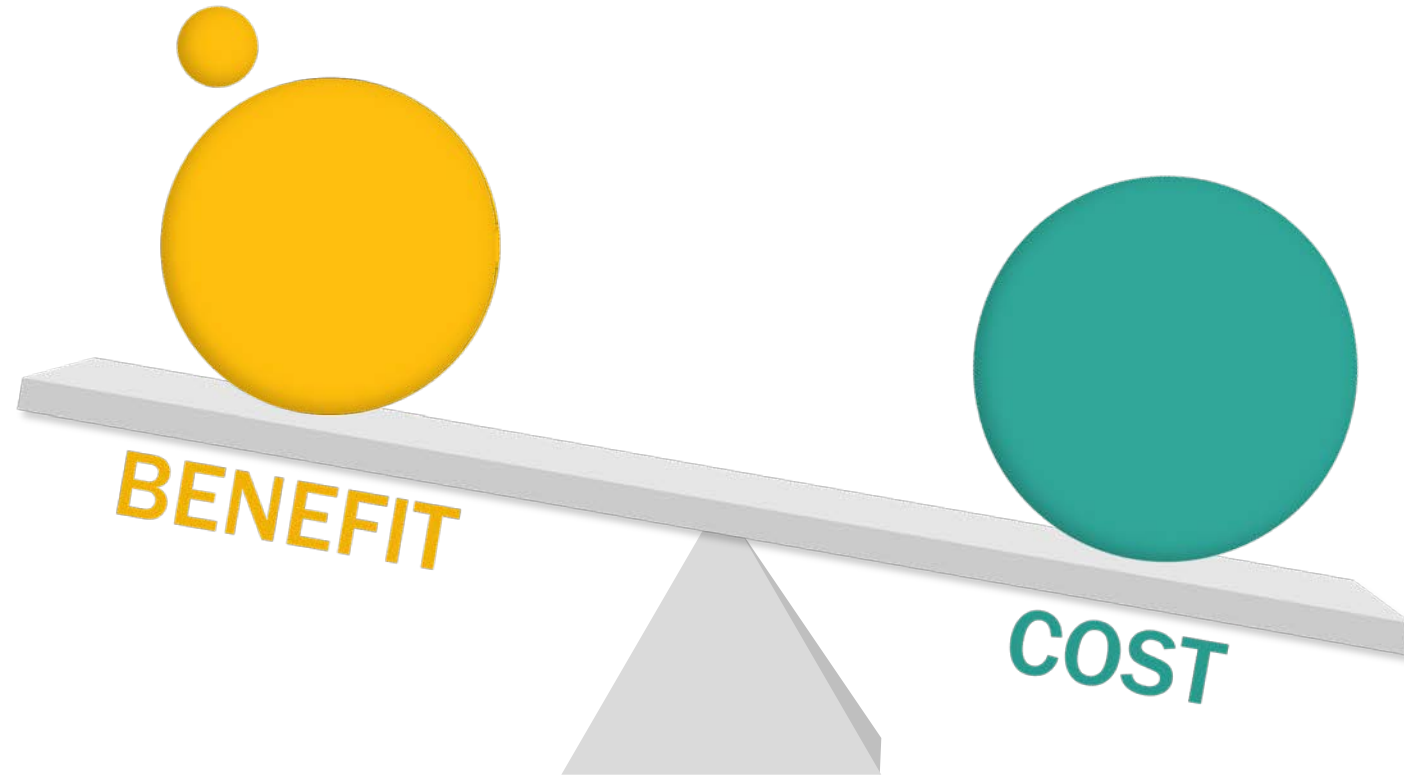
Evidence Theme 2: Incentives and Nudges to increase health-promoting behaviors



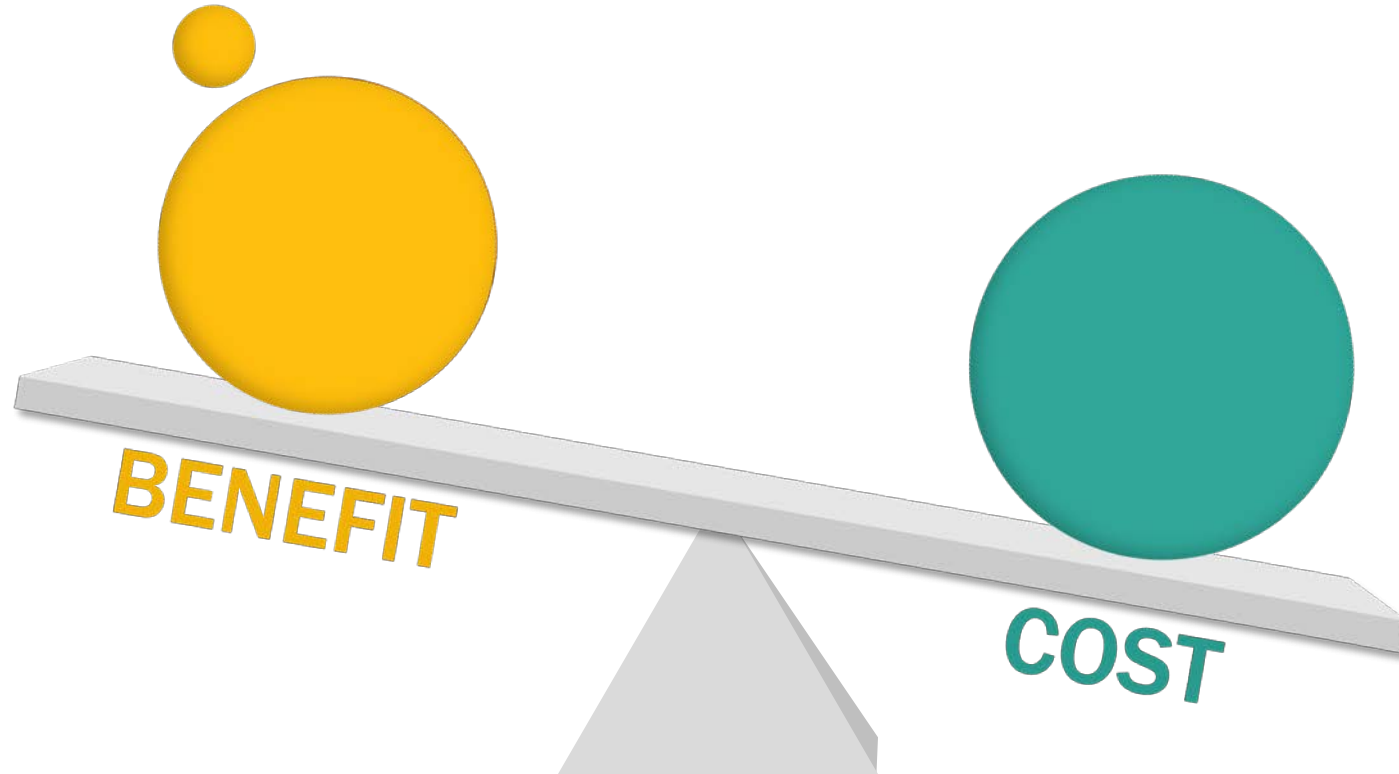
Behavioral theory on use of incentives



Incentives and Nudges



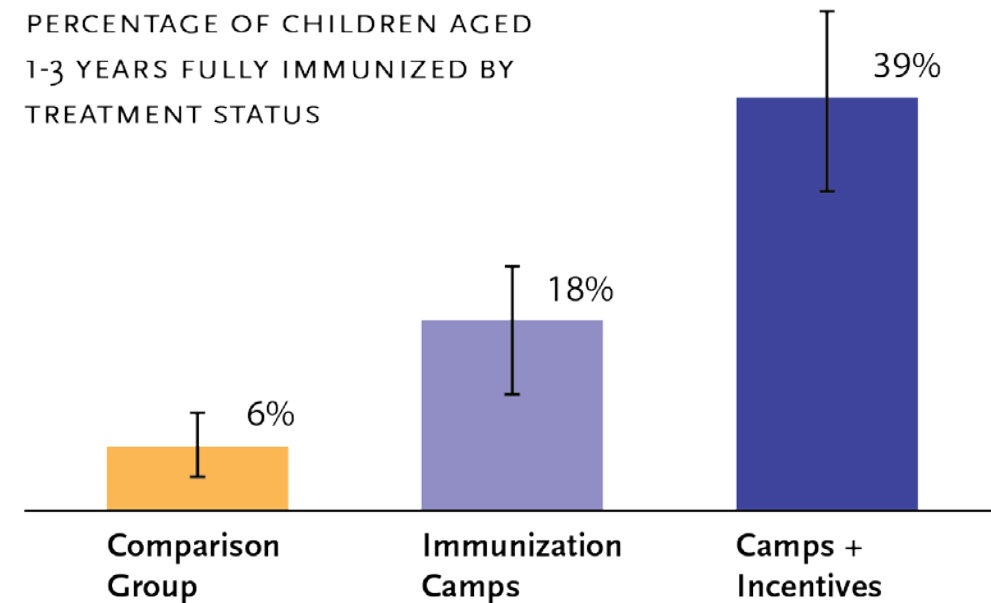
Incentives and Nudges



Small Incentives for Immunization

- Alongside reliable NGO-provided monthly immunization camps, offer mothers a small incentive to bring their child
- When coupled with in-kind incentives (raw lentils and metal plates for completing immunization), full immunization rates increased six-fold

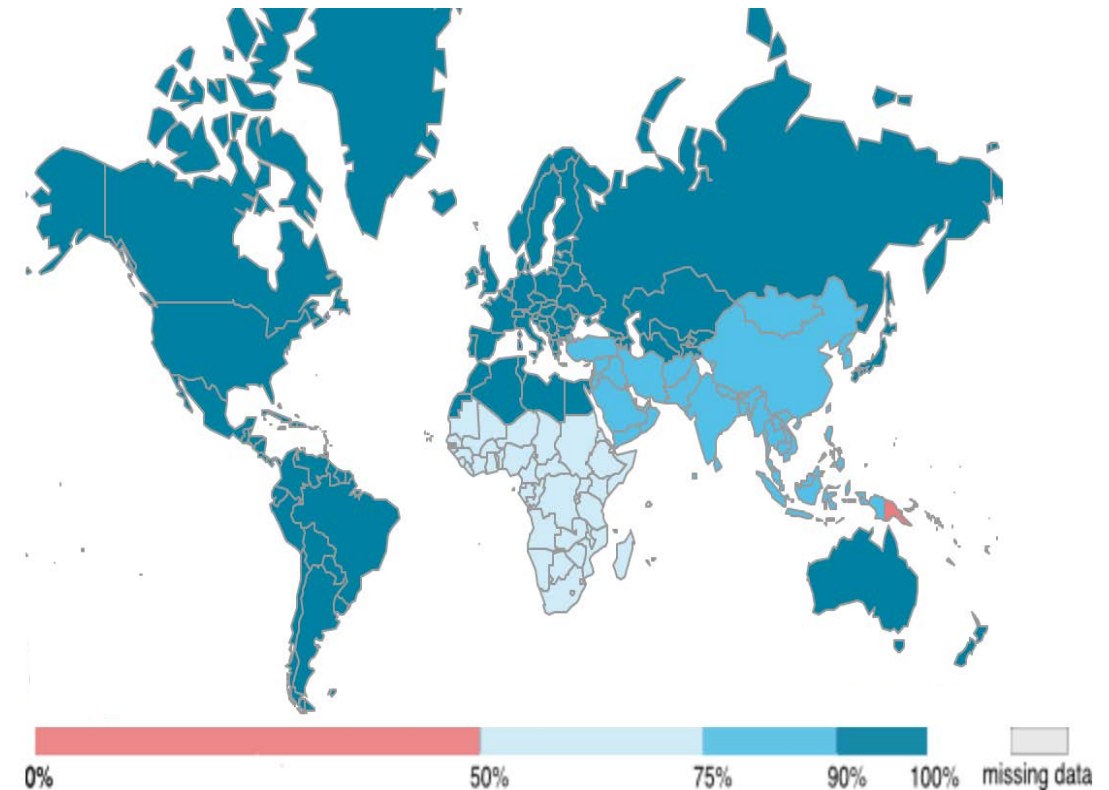
PERCENTAGE OF CHILDREN AGED 1-3 YEARS FULLY IMMUNIZED BY TREATMENT STATUS



Nudges for Behavioral Change

More than 780 million people worldwide lack access to safe drinking water.

Percentage of population with access to improved water sources



Nudges for Behavioral Change

- A point-of-use chlorine dispenser with a free supply of chlorine, in combination with paid promoters, increased take-up by 53 percentage points
- Take-up was sustained 30 months into the program



Nudges for Behavioral Change

- Potential Mechanisms of Impact
- Convenience
- Visual reminder (saliency)
- Reminders and Encouragement
- Social learning and norming
- Habit formation



Emerging Policy Lessons

- **Simplifying access** to the health good and/or **offering nudges** can substantially improve take-up.
- **Small financial or in-kind incentives** can help cost-effectively overcome "present bias".
- **Cash transfers** can significantly impact health outcomes.

Evidence Theme 3: Information Campaigns to Increase Health-Promoting Behavior



Information

Extremely large investments in information campaigns

Why do we believe information matters?

- Lack of awareness of benefits
- Lack of salience of health threat
- Social norms

Exhortation

Generally exhorting people to change behavior does not seem to work

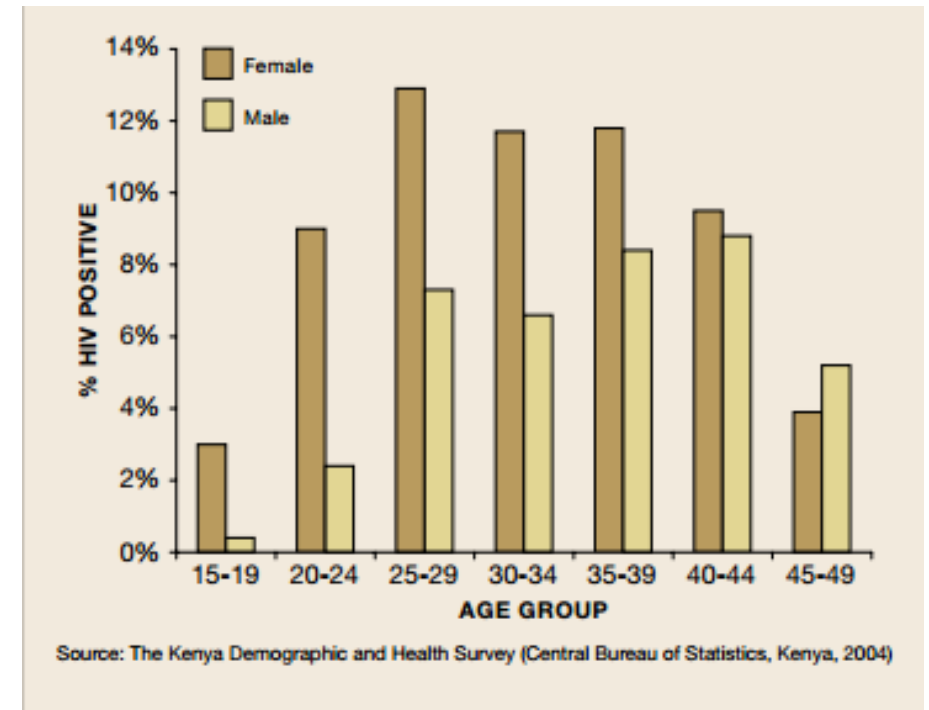
- Providing in-service training on the national HIV/AIDS curriculum, which was abstinence-focused, to teachers in primary schools in rural Kenya had no impact on teen pregnancy



Specific and Actionable Information

Information that is specific and actionable is effective

- Providing information on the relative risk of HIV infection by gender and partner's age led to a 28 percent decrease in teen pregnancy among school-going adolescent girls in Kenya



Emerging Policy Lessons

- Generally exhorting people to change behavior does not seem to work
- Providing information that is specific and easy to act on tends to be effective
- In certain contexts, information campaigns combined with financial incentives or nudges can help increase demand of new health products
- Framing and context matters in how effective the information would be

Policy Recommendation

Campaigns with sufficiently specific and actionable information (with low switching costs) can encourage health-promoting behavior



Evidence Theme 4: Interventions to Improve Healthcare Provider Performance



Provider Performance

- Entrenched absenteeism among health care providers
- Quality of health care in some settings is substandard as measured by provider performance
- Potential Solutions
 - Incentives
 - Monitoring
 - Contracting
 - Provider Selection



Incentivizing Health Outcomes

Linking community block grants to performance in Indonesia improved maternal and child health indicators, but had no impact on education indicators (2007-2009)

BRIEFCASE
J-PAL POLICY BRIEFCASE | MAY 2014 |

ABDUL LATIF JAMEEL
Poverty Action Lab
TRANSLATING RESEARCH INTO ACTION

COMMUNITY GRANTS FOR THE NEXT GENERATION

Community block grants improved health and education in Indonesian villages, and adding performance incentives sped up improvements in health.

Featuring an evaluation by Benjamin Olken, Junko Onishi, and Susan Wong



Governments and donors are searching for the most effective ways to distribute development aid. Some suggest that local communities should have the power to allocate funds since community members may understand their own needs better than national governments or international agencies. Community block grants, which allow communities to spend funds on the activities they think would best achieve certain goals, could help channel resources to needed individuals and avoid wasteful spending.

Alternatively, some argue that linking development aid to performance is the best way to improve its effectiveness. This approach encourages implementers and beneficiaries to improve along the dimensions donors care about most. Some governments and aid organizations require beneficiaries to meet certain conditions in order to receive loans and grants. Other organizations offer rewards for good performance on measures that the donors have chosen to assess a program's progress.

There is some inherent tension between these two approaches. Although performance incentives can encourage communities to focus on the most effective policies, penalties or rewards that are too strong may reduce communities' discretion in how to spend funds. Incentives may direct effort and resources away from activities that the community values but the program does not reward. They may also encourage implementers to manipulate records and exaggerate their achievements to receive larger rewards. Furthermore, since wealthier areas often start from higher levels of social and economic development, they may more easily reach performance targets, earn more rewards, and draw money away from poorer areas that would benefit most from additional resources.

In 2007, J-PAL affiliate Benjamin Olken (MIT), Junko Onishi (World Bank), and Susan Wong (World Bank) partnered with the Government of Indonesia to evaluate the impact of community block grants and the additional effect of performance incentives.

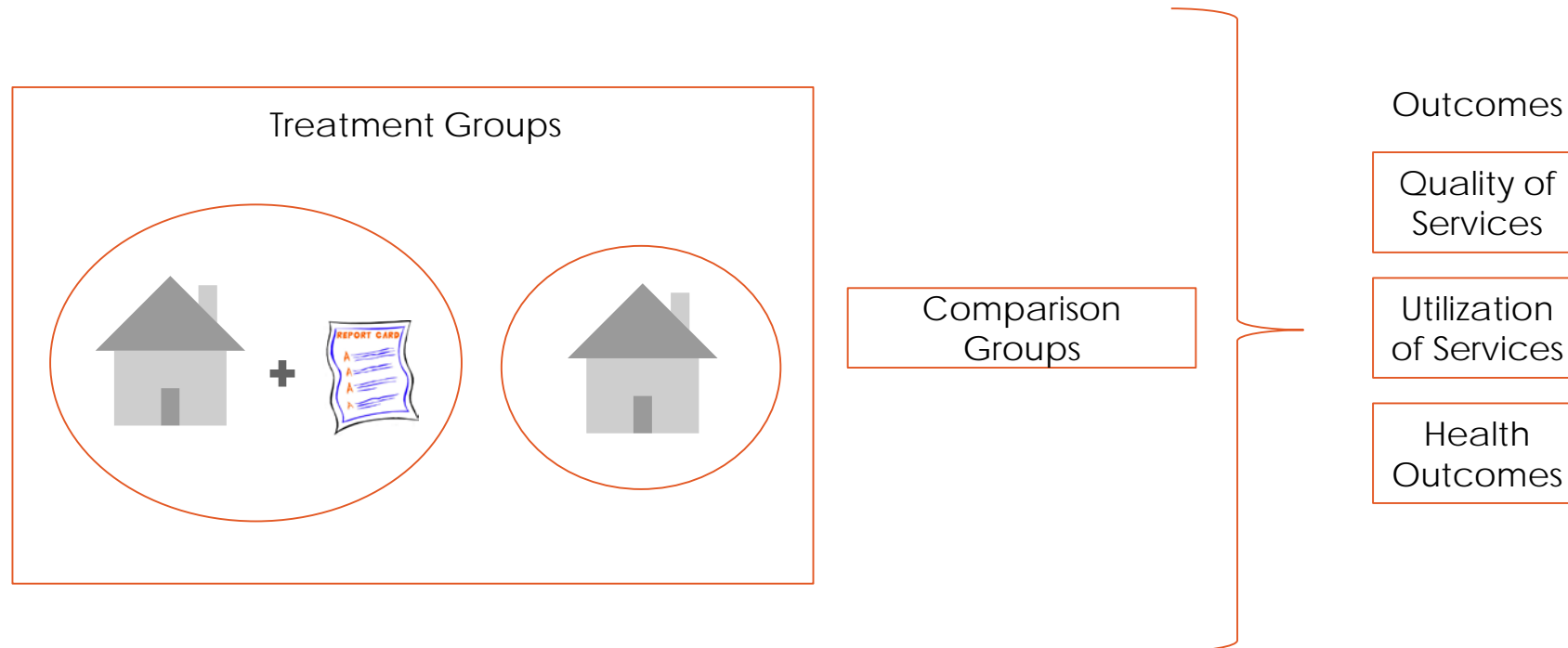
Community block grants issued through *Generasi* improved health and education outcomes. After 2.5 years, villages that were offered *Generasi* experienced a 0.24 standard deviation improvement across 12 health and education indicators the program was designed to address.

Disadvantaged areas benefited most from *Generasi*. The program was about twice as effective in villages at the tenth percentile of the targeted health and education indicators at the start of the program.

Health indicators improved faster in villages that received performance incentives. Villages receiving incentivized block grants showed larger improvements in health indicators after 1.5 years. One year later, villages receiving unconditional grants had partially caught up. The incentives had no effect on education.

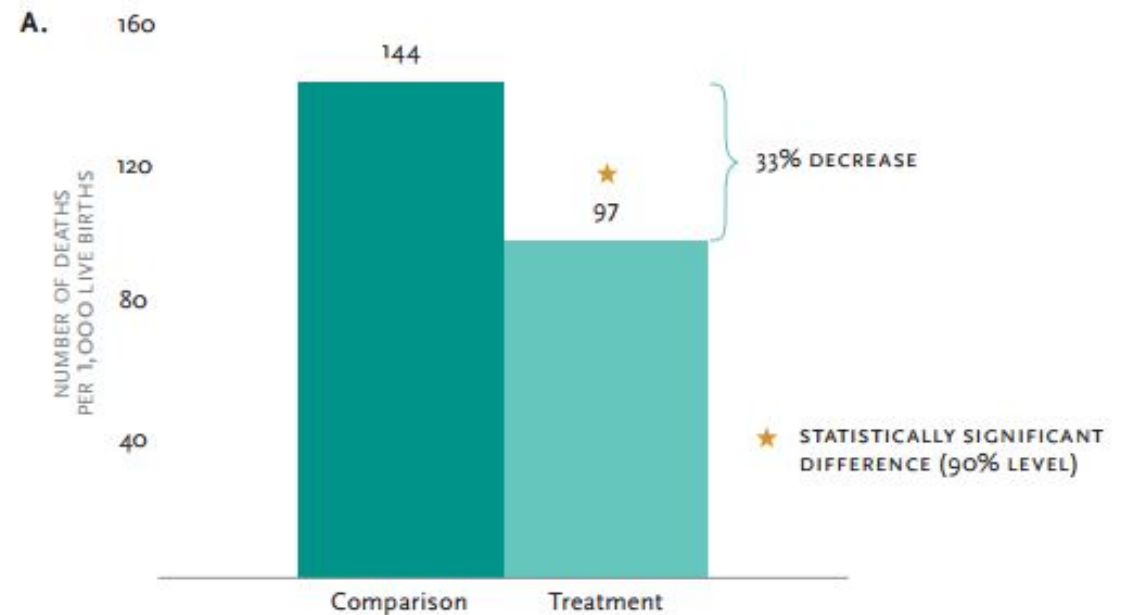
There was no evidence supporting common criticisms of performance incentives. Officials did not manipulate records to show better performance and wealthier areas did not draw funds away from poorer areas.

Community Monitoring



Community Monitoring

The community monitoring system, based on citizen report cards on public health facilities' performance and NGO-facilitated meetings, improved provider effort and health outcomes in Uganda



Community Monitoring

The community monitoring system, based on citizen report cards on public health facilities' performance and NGO-facilitated meetings, improved provider effort and health outcomes in Uganda

BRIEF CASE
J-PAL POLICY BRIEF CASE [JULY 2015]


ABDUL LATIF JAMEEL
Poverty Action Lab
TRANSLATING RESEARCH INTO ACTION

THE POWER OF INFORMATION IN COMMUNITY MONITORING

A community-based monitoring program in Uganda led to large and sustained increases in health care utilization and improvements in child health. The key to success was providing communities with information on the performance of local health care providers.

Featuring evaluations by Martina Björkman Nyqvist, Damien de Walque, and Jakob Svensson

Every year, an estimated 6.4 million children under five die of diseases, such as diarrhea, pneumonia, and malaria, that could have been prevented or treated with a small set of proven, inexpensive health services. Most of these deaths occur in developing countries. One possible reason that these services are not provided is that weak accountability systems affect health workers' performance. A 2003 survey of six developing countries found that, on average, 35 percent of health workers were absent on any given day, and among those who were present, many were not working.



In an effort to strengthen local accountability, many policymakers have invested in programs that enhance beneficiary involvement in monitoring service providers. In the last decade, the World Bank allocated close to US\$5 billion to local participatory development programs. Despite the enthusiasm for the approach, the existing evidence on its effectiveness is mixed, and little is known about the long-term impacts and what program features make community monitoring more or less successful.

Between 2004 and 2006, J-PAL affiliates Martina Björkman Nyqvist (Stockholm School of Economics) and Jakob Svensson (Stockholm University) evaluated the impact of a community monitoring program on the performance of public primary health care providers in Uganda. In a follow-up study with Damien de Walque (World Bank), researchers evaluated the longer-term (four-year) impacts of the original program, and conducted a second randomized evaluation to test a less expensive version of the program that did not give communities information about provider performance.

Efforts to stimulate more beneficiary control, coupled with information on provider performance, led to substantial and sustained improvements in health. After the first year, the weight-for-age for infants was 0.14 z-scores higher and under-five mortality was 33 percent lower in program communities. These positive impacts were still present four years after the initial intervention.

Communities that received information on provider performance as a component of the community monitoring program were more involved in monitoring, and in response, health workers exerted more effort. Better treatment practices, clinic management, and more frequent use of health facility tools aimed at increasing patient satisfaction suggest that improvements in health care delivery were due to changes in staff behavior.

Providing communities with information about their health care providers' performance was likely important for the success of the community monitoring program. In a separate evaluation, efforts to stimulate community involvement without addressing communities' lack of information about the state of provider behavior and the relative quality of care had no impact on provider performance or patient health.

Without information on provider performance, communities could not identify and challenge poor behavior and this constrained their ability to hold providers accountable. Communities that did not receive information focused on issues that required third-party actions to fix (e.g. more support from upper-level authorities or NGOs), while communities that received information focused on issues they could affect locally, such as absenteeism, opening hours, patient-clinician interactions, and wait times.

Emerging Policy Lessons

- **Incentivizing outcomes** can elicit greater effort, but has worked differently in different settings
- **Community monitoring generally has not worked** except for one notable exception; more research is needed

Evidence Theme 5: School-Based Interventions to Improve Child Health



School-based Interventions

- Evidence suggests that access to preventive health goods should be free, convenient, and salient
- Schools may be a good venue to cost-effectively and conveniently reach more children
 - Schools are more widespread than clinics in most countries
 - In some countries, absenteeism among teachers is half that of health workers
 - Improving health and nutrition outcomes for school-going children might impact education and economic outcomes

Impact on School Attendance

Improving health of school-going children has a strong impact on school attendance

School-based deworming increased school participation by at least 7pp, which equates to a one-quarter reduction in school absenteeism in Western Kenya



Deworming Spillovers

Spillovers

- Primary school deworming improved cognitive ability of very young children in the communities where mass deworming took place



Deworming Long Term Impacts

Long Term Impacts

- Ten years after the start of the deworming program, men who were eligible to participate as boys were more likely to work more hours, earn higher wages, and have higher living standards.
- Women eligible as girls were more likely to achieve higher educational attainment and relocate labor time from agriculture to entrepreneurship.



Emerging Policy Lessons

- **Schools** have proven to be a **highly effective medium** to reach children across a range of health interventions
- Students may not receive beneficial health interventions due to **parental misconceptions or lack of awareness**
- **Peer effects may play an important role** in increasing adoption
- Improving health of school-going children has a **strong impact on educational outcomes**

Policy Recommendation

Implement primary school-based deworming in high worm load contexts



Evidence Theme 6: Interventions to Improve Early Childhood Development



Early Childhood Development

- Early childhood (in utero to 5 years old) is a critical stage for development and involves physical, cognitive, and socio-emotional dimensions
- Factors that affect early childhood development include:
 - Maternal health and pre-natal care, nutrition, physical environment;
 - Early childhood education and support for learning;
 - Level of emotional nurturing and support and socialization
- An estimated 200 million children under age 5 are not fulfilling their developmental potential

Early Childhood Development

- Improvements in ECD can result in long-lasting positive effects on a range of outcomes, including:
 - Cognition, educational attainment
 - Adult health
 - Wages and employment
 - Criminality, adult relationships, social integration
- This section highlights the importance of investing in ECD rather than focusing on specific promising interventions

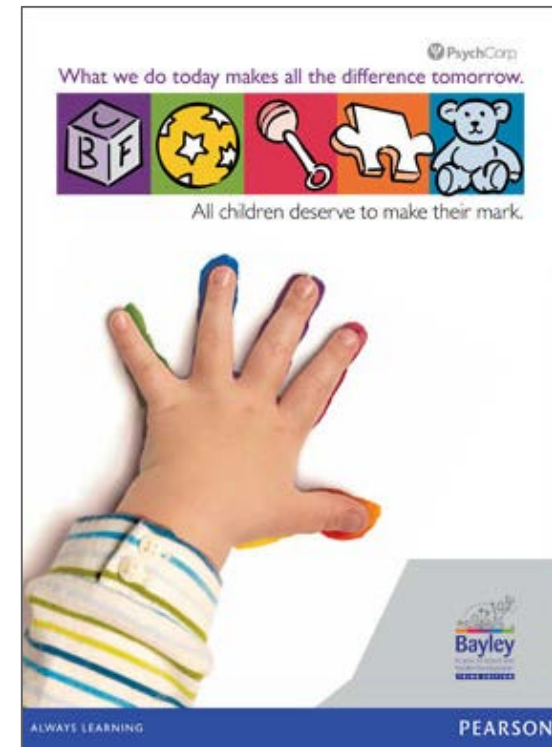
Early Childhood Stimulation

Long term

- A two-year program that provided weekly psychosocial stimulation to children aged 9-24 months in Jamaica resulted in long-term higher levels of educational attainment, earnings, and reduced crime.

At scale

- A more recent study in Colombia that replicated this intervention found that early childhood stimulation had significant short-term effects on cognition and receptive language skills.



[Grantham et al. 1991](#)
[Walker et al 2005](#)
[Gertler et al 2015](#)
[Attanasio et al 2014](#)

Early Childhood Development Policy Recommendation

Community agents supporting parents to provide
child psychosocial stimulation



Evidence in Education



Evidence In Education

Improving Learning in Primary Schools



Introduction to J-PAL Education Sector



Rachel Glennerster
MIT
Co-Chair, Education



Karthik Muralidharan
University of California,
San Diego,
Co-Chair, Education



Philip Oreopoulos
University of Toronto
Co-Chair, Education

J-PAL's Work in Education

172 completed and ongoing evaluations in 37 countries



Classifying education sector evaluations

Country level of development

- Developing
- Developed

Student age or level

- Early childhood education
- Primary schools
- Post-Primary

Intervention objective

- Increase participation
- Increase learning

Classifying education sector evaluations

Country level of development

- **Developing**
- Developed

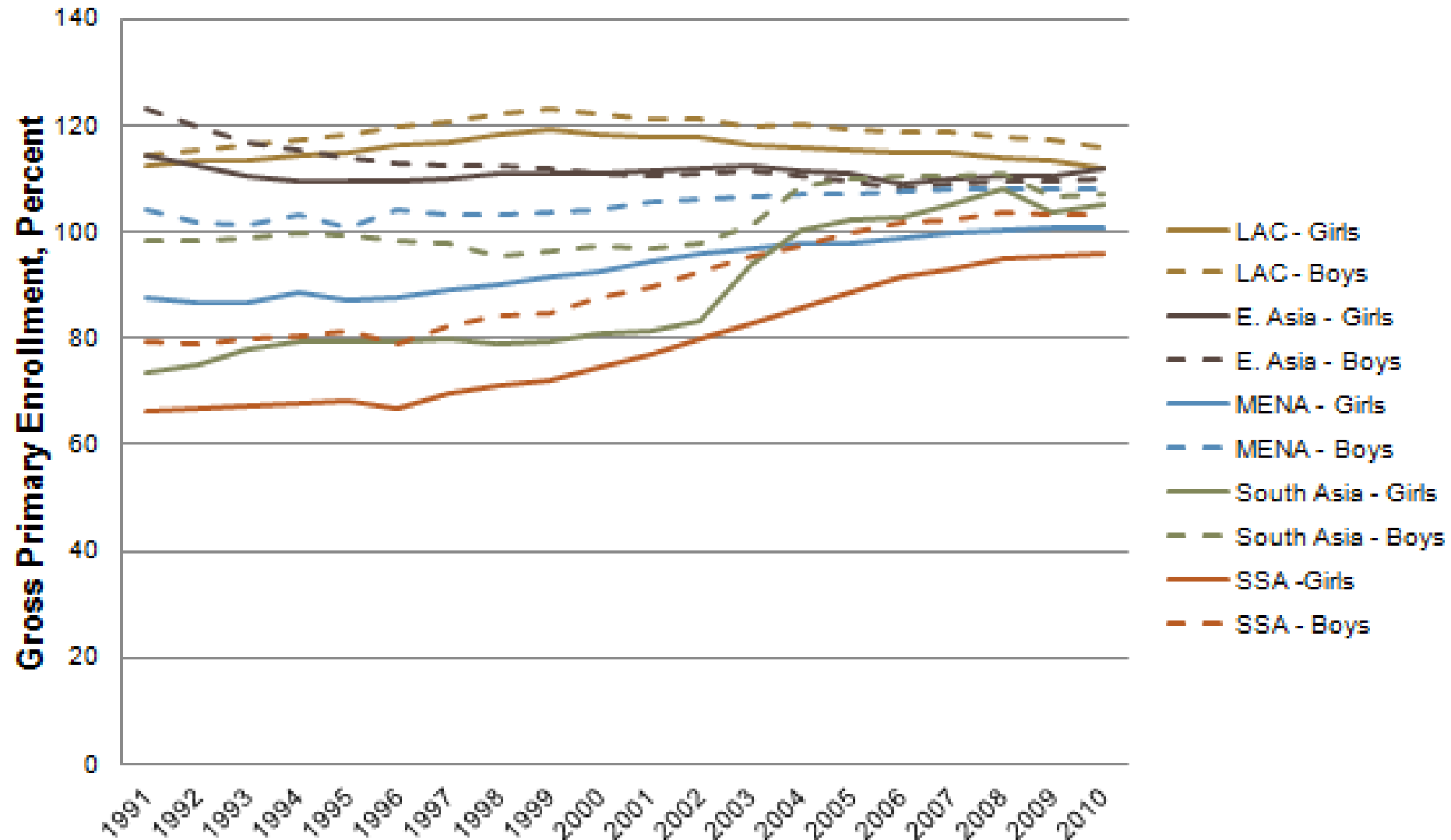
Student age or level

- Early childhood education
- **Primary school**
- Post-Primary

Intervention objective

- Increase participation
- **Increase learning**

Converging on Universal Primary Enrollment



...But Learning Levels Remain Low

- Being in school does not seem to imply that children are learning
 - 2014 ASER survey: only 42 percent of 5th graders in rural India can read a 2nd grade text
 - Similar results from ASER Pakistan, Uwezo in East Africa, Mali and Senegal, Mexico
 - Very poor results on international exams such as TIMSS, PISA

SAMPLE **BASIC ASER READING TOOL: ENGLISH**

Std. 5 level text

A big tree stood in a garden. It was alone and lonely. One day a bird came and sat on it. The bird held a seed in its beak. It dropped the seed near the tree. A small plant grew there. Soon there were many more trees. The big tree was happy.

Note: This test has been prepared after analysis of Std. 5th textbooks across India.

Reading tests available in all Indian languages. Visit: www.asercentre.org, email: aser@upmeximc.org

Std. 1 level text

This is a big monkey. He lives on a tree. He likes to jump. He also likes bananas.

Letters

m t z
f k
o a r
v p

Common simple words

both step
cup
out rope
dog
hat key

For Letters/Words: Ask the child to read any 5, out of which 4 must be correct.

SAMPLE **BASIC ASER MATH TOOL**

Number Recognition 1-9	Number Recognition 11-99	Subtraction (2 digit with carry over)	Division (2 digit by 1 digit)
3 7	65 38	51 67 - 35 - 48	7) 919
1 4	92 23	84 73 - 49 - 36	6) 769
8 9	47 72	56 31 - 37 - 13	8) 983
5 2	56 87	45 43 - 18 - 24	4) 513
	29 11		

Ask the child any 2 numbers, out of which 4 must be correct.

Ask the child any 2 numbers, out of which 4 must be correct.

Ask the child to solve any 2 subtraction problems. Both must be correct.

Ask the child to solve any 1 division problem which must be correct.

Note: In most Indian states, children are expected to do the test at minimum of subtraction problem in Std. 5.

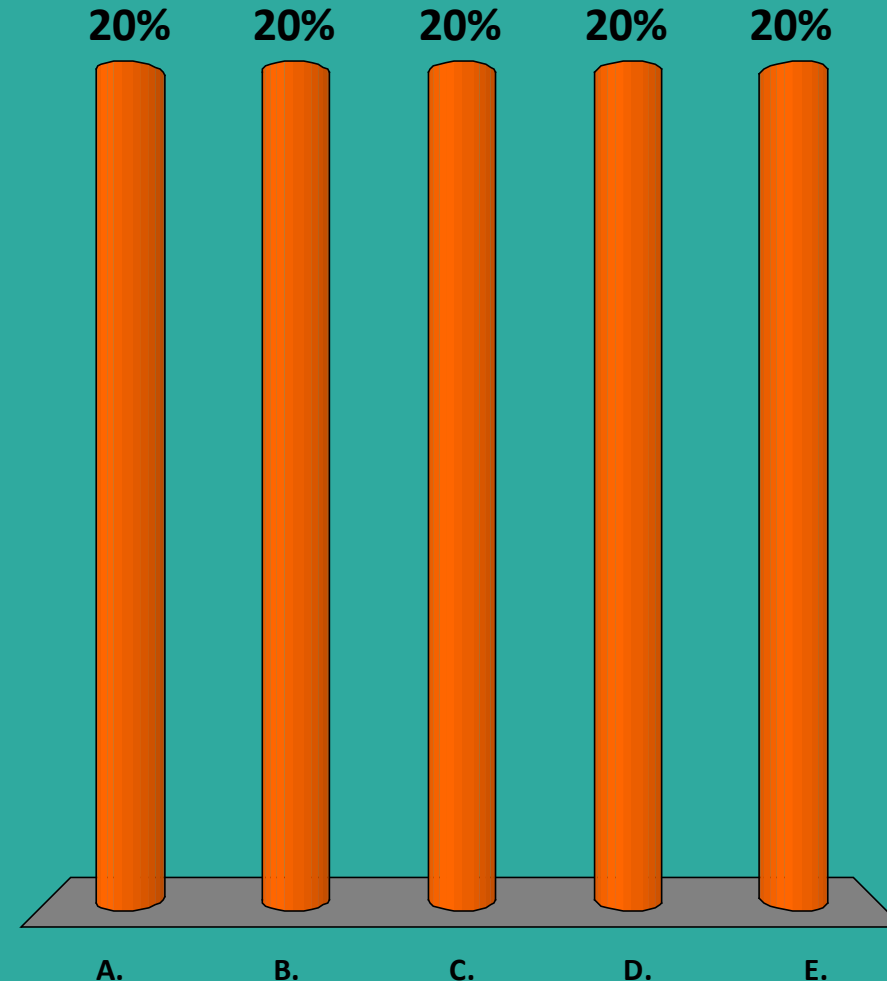
Note: In most Indian states, children are expected to do the test at minimum of division problem in Std. 5.

Why Are Learning Outcomes So Poor?

- **Access:** not enough schools
- **Resources:** not enough teachers, books, supplies, etc.
- **Curricula and pedagogy:** rigid and overly ambitious curricula do not match the learning levels or needs of students
 - Technology: could play a role in improving outcomes but may be poorly utilized
- **Teachers:**
 - May be absent
 - Little motivation or are poorly educated themselves, often constrained by a poorly designed and inappropriate syllabus

What are the best ways to improve student learning?

- A. Textbooks
- B. Uniforms
- C. Computers
- D. Scholarships
- E. Cash transfers
- F. Reduce class sizes
- G. Train teachers
- H. Incentivize teacher attendance/performance
- I. Divide classrooms by achievement level

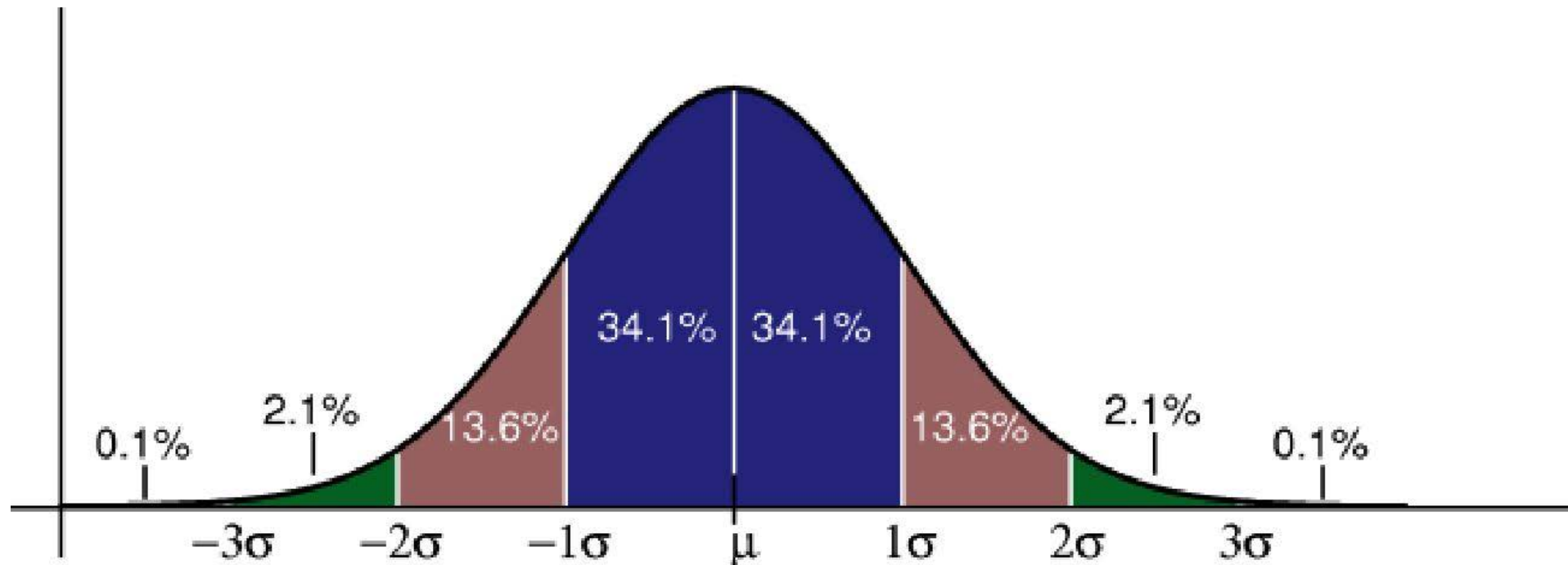


Grouping interventions to improve learning

1. Household and student inputs
2. School-level inputs
3. Curriculum and pedagogy
4. School governance

A Word About Measurement

- Changes in test scores often reported in standard deviations for comparability
- Impacts of effective programs typically range from 0.1 – 0.5 s.d. over one academic year



1: Household and student inputs



Increasing School Attendance Matters for Learning

- Large test score gains from new primary schools in underserved areas
 - Village-based schools in Afghanistan: 0.65 s.d. for girls, 0.4 for boys
 - Subsidies for private schools in Pakistan: 0.67 s.d.
- Mixed results from interventions that boost attendance
 - Deworming in Kenya improved test scores in the long run but not the short run
 - School meals in Kenya improved curricular achievement through higher attendance
 - Mixed results from cash transfers

References: Burde and Linden (2013), Barrera-Osorio et al (2013), Miguel and Kremer (2004), Baird et al (2013), Vermeersch and Kremer (2005)

Rewards to Students for Learning Can Be Effective

- Merit scholarships for high-performing 6th grade girls in Kenya improved test scores for girls (0.2 s.d.) and boys (0.1 s.d.)
- Merit-based, but not poverty-based, scholarships in Cambodia improved learning outcomes
- Prizes for reaching personalized learning goals improved learning outcomes in India

References: Kremer et al (2009), Barrera-Osorio and Filmer (2013), Berry (2014)

2: School-level inputs



Adding Inputs is Not Sufficient

- Little impact from adding classroom inputs
 - Flipcharts, Kenya
 - Textbooks, Kenya (effective for already higher-achieving students)
 - Textbooks, Sierra Leone
 - Libraries, India
- Two studies found no effect from cutting student-teacher ratio
 - Extra teacher project, Kenya cut average class sizes from 82 to 44
 - Balsakhi program, India: smaller classes for part of day due to remedial tutoring

References: Glewwe et al (2004), Glewwe et al (2009), Sabarwal (2014), Borkum et al (2013), Duflo et al (2015), Banerjee et al (2007)

Adding Inputs is Not Sufficient

- Little impact from flexible grants for inputs
 - Grants for inputs, India—small impact if not anticipated, but offset by reductions in household spending if anticipated
 - School committee block grants, Indonesia
 - School grants, The Gambia
 - Performance-based grants for schools and teachers, Tanzania
 - School grants lead to .22 sd increase for girls, Senegal

References: Das et al. (2013), Pradhan et al. (2014), Blimpo et al (2013), Mbiti and Muralidharan (forthcoming)

Adding Inputs is Not Sufficient: ICT

- Similar to other inputs, simply adding technologies to the classroom has little impact
 - Peru: One Laptop Per Child had no effects beyond computer knowledge
 - Colombia: Computer for Education had little effect on students' test scores and other outcomes

References: Beuermann et al (2015), Cristia et al (2012), Linden and Barrera-Osorio (2009)

3: Curriculum and pedagogy



Need to Focus on Basic Skills

- Remedial Education in India
 - Used lightly trained, locally hired tutors (“balsakhi”)
 - Pulled lower-performing students out for remedial instruction
 - Large effects on test scores of lowest performing children (0.6 standard deviations)

References: Banerjee et al (2007)

Strong Evidence for Teaching at the Right Level (TaRL)

- Interventions that restructure classes by learning level can produce large gains in learning outcomes
- Urban India:
 - Balsakhi (0.14 s.d. in first year, 0.28 s.d. in second, and 0.60 s.d. for weakest students)
- Rural India
 - Pratham tutoring with community volunteers (0.11 s.d.)
 - Pratham summer camps with government teachers (0.08 s.d.)
 - Pratham learning camps in Uttar Pradesh (0.61 – 0.71s.d.)
 - STRIPES program in Andhra Pradesh: after-school sessions with community volunteers (0.75 s.d.)

References: Banerjee et al (2007), Banerjee et al (2010), Banerjee et al (2011), Duflo et al (forthcoming), Lakshminarayana et al (2013)

Strong Evidence for Teaching at the Right Level (TaRL)

- In government school settings:
 - Haryana, India: Learning Enhancement Program (LEP) with Pratham (0.14-0.15 s.d.)
 - Ghana: Teacher Community Assistant Initiative (0.08-0.14 s.d.)
 - Kenya: Tracking by initial test scores (0.14 s.d.)
 - Chile: Small group tutoring (0.15-0.20 s.d.)

References: Duflo et al (2015), A. Duflo and Kiessel (forthcoming), Duflo et al (2011), Cabezas et al (2011)

TaRL: Many implementation models

- In school vs. out of school
- Contract teachers, government teachers, teacher assistants, volunteers
- Pulling out lower-performing students for part of the day vs. splitting the class
- Can be implemented by government teachers with dedicated time and a specific mandate to teach at child's level
 - BUT: Simply training teachers in remedial pedagogy not effective, possibly due to competing priority of finishing syllabus

Combining Inputs and Changes in Pedagogy

- Better results when appropriate materials are used to solve a particular problem, or change in the teaching approach:
 - Read-a-Thon, Philippines
 - Short-term program including storybooks, teacher training, student encouragement improved students' reading skills
 - Reading to Learn, Kenya and Uganda
 - Teacher training and school materials increased literacy
 - Kenya Primary Mathematics and Reading (PRIMR) initiative
 - Improved several indicators of reading skill

References: Abeberese et al (2013), Lucas et al (2014), Piper et al (2014)

ICT Has Potential When Integrated into Learning Process

- When ICT is used to improve pedagogy or change the classroom, can have large impacts on learning:
- India: highly effective Pratham program using self-paced math games (0.47 s.d. test score increase)
- India: after-school model increased test scores, but in-school model counterproductive, in well-functioning NGO schools
- China: after-school computer-assisted remedial tutoring raised math test scores

References: Banerjee et al. (2007), Linden (2008), Lai et al (2013)

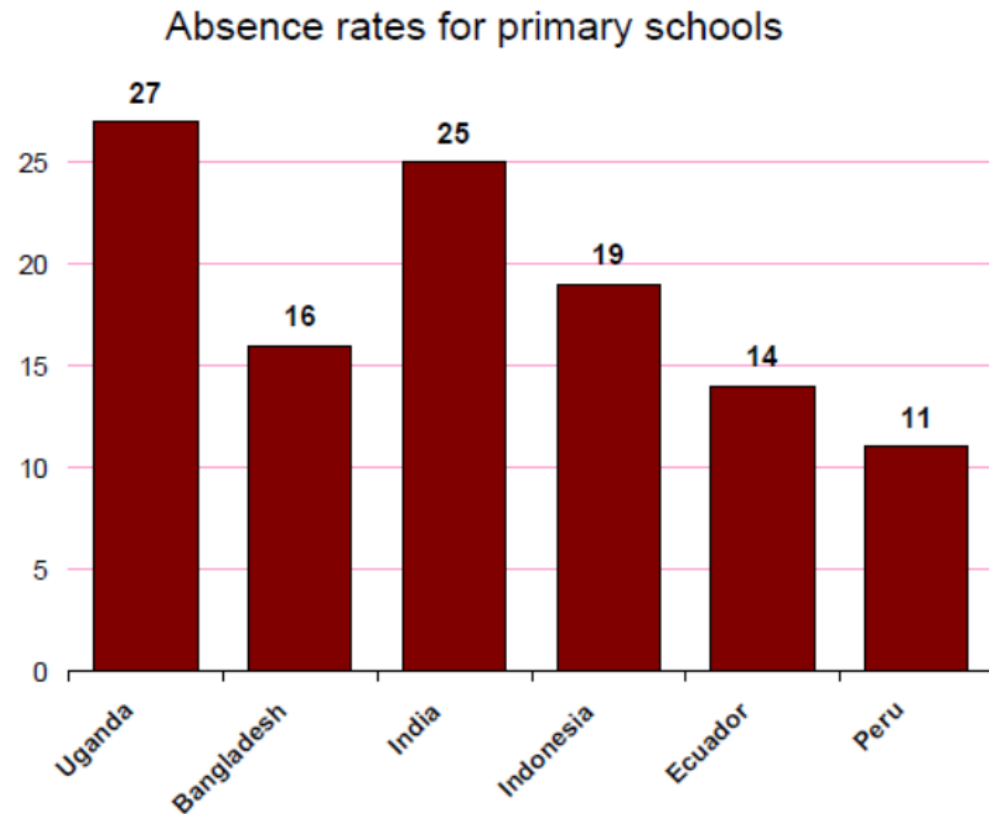
4: School governance



Why Does Governance Matter?

- If teachers and school administrators are absent or unmotivated, investments in education can be wasted
- Weak incentives and accountability mechanisms for school administrators and teachers contribute to low learning levels
- Difficult for parents and community members to monitor school quality or hold teachers accountable

Teacher absenteeism is high



- Teachers rarely held accountable for absences
- Even when present, often not teaching
- Two studies find no effect from cutting student-teacher ratio

References: Duflo et al (2015), Banerjee et al (2007)

Incentives To Show Up Work, With a Few Caveats

- Incentives can be a useful tool to motivate teachers and increase attendance
 - Camera monitoring in Udaipur, India cut absenteeism in half and improved test scores (0.2 s.d.) – suggests attendance incentives are effective when objective and impersonal
 - Evidence from the health sector suggests that programs can be undermined by supervisor discretion

References: Duflo et al (2012), Banerjee et al (2008)

Incentives To Improve Learning Work, With a Few Caveats

- Performance pay for test scores also effective, but some danger of teaching to the test
 - Performance pay in Kenya led to “cram sessions,” no change in classroom practices
- Even small incentives can be effective (3% in Andhra Pradesh, India)
 - Test score improvements without an increase in teacher attendance, spillovers to non-incentivized subjects
- Design of incentives matters for performance, but optimal design still an open question

References: Glewwe et al (2010), Muralidharan and Sundararaman (2011)

Contract Teachers Often Perform Better

- Local teachers hired on a short-term contract often outperform regular civil-service teachers
 - Extra Teacher Program, Kenya
 - Contract teachers in Andhra Pradesh, India
- But some evidence of counterproductive responses by regular teachers
- Institutional environment matters
 - In Kenya, contract teacher program raised test scores when implemented by NGO but not when implemented by government

References: Duflo, Dupas, and Kremer (2012), Muralidharan and Sundararaman (2010); Bold et al (2012)

Mixed Results for Community Monitoring

- Information without “teeth” had no impact in India, Uganda
- Better results for report cards on public and private schools delivered through focus groups in Pakistan
 - Improved test scores (0.11 s.d.) and reduced private school fees 20 percent

Communities Must Be Empowered to Hold Teachers Accountable

- Extra Teacher Project, Kenya: management training for school committees reduced counterproductive responses (absenteeism, nepotism) by regular teachers
- Enabling school management committees to design their own monitoring approach increased test scores and attendance in Uganda
- Strengthening ties between school committees and other stakeholders, introducing democratic elections of committee members improved learning in Indonesia

References: Duflo et al (2015), Barr et al (2012), Pradhan et al (2014)

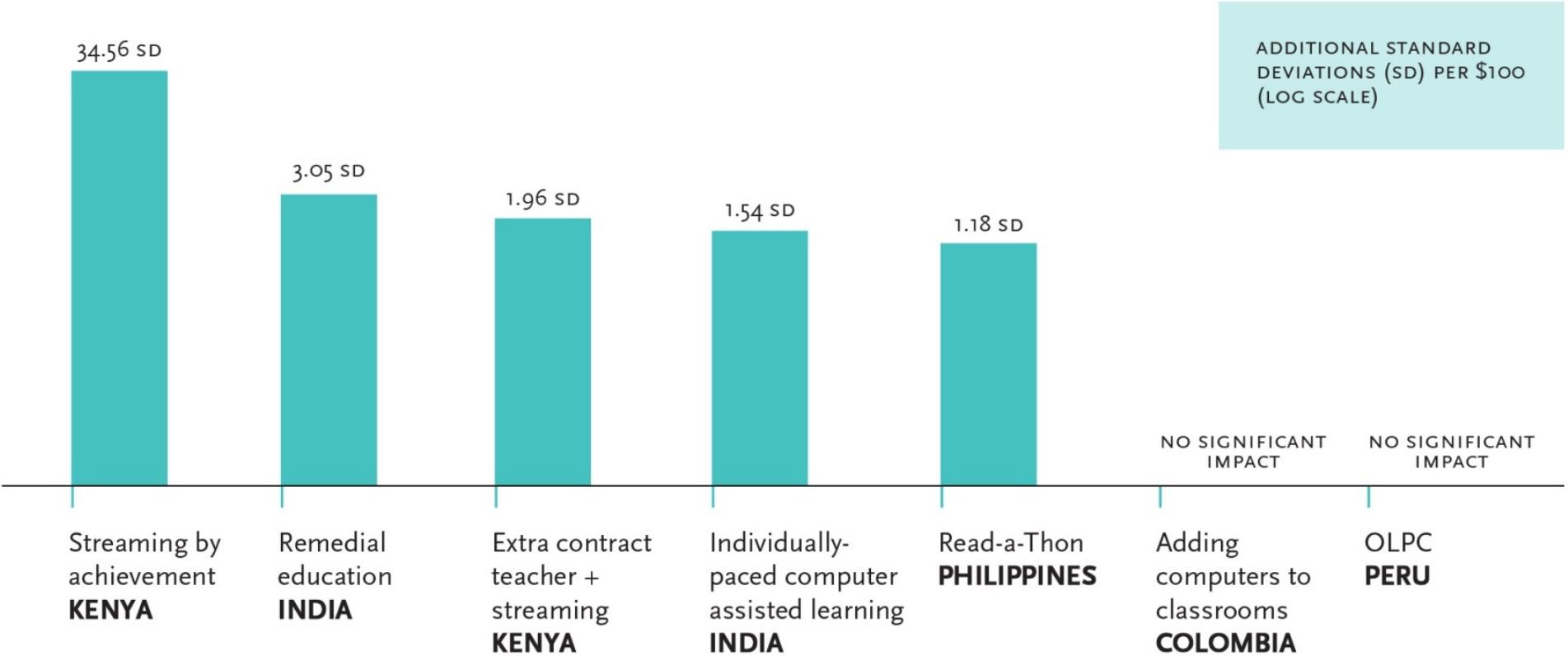
Some Evidence in Favor of Private Schools

- Proliferation of low-cost private schools raising concerns about quality and equity
- Vouchers for private schools in Andhra Pradesh, India
 - Similar test scores in basic subjects, with less instructional time and at lower cost
 - Used remaining time to focus on other subjects, e.g. English
 - Did not find unfavorable equity implications
- Broadly complements results on secondary school vouchers in Colombia

References: Muralidharan and Sundararaman (2015), Angrist et al. (2006)

Cost-Effectiveness Analysis (CEA) Comparison

IMPROVING STUDENT LEARNING: COST-EFFECTIVENESS OF EDUCATION PROGRAMS



Summary: Student Learning

- Physical access to school is critical
 - Student motivation is key, and can be improved with incentives to learn
- Little evidence to suggest that adding inputs alone helps the majority of students
 - Inputs, including ICT, can be effective when tailored to the needs of students and classrooms
 - Many children falling behind curricula
 - Teaching at the right level is consistently effective
 - Models include tracking, remedial teaching, learning camps

Summary: Student Learning

- Providing incentives and empowering the local community to hold service providers accountable can improve learning
 - Implementation clearly important, though we do not fully understand mechanisms
 - Community monitoring more effective when people were given specific tools and clear avenues to effect change

Explaining The Results

- Many results consistent with observations that:
 - Schools based on covering material rather than learning
 - Parents (incorrectly) see schooling as a lottery with long odds
- Parents and teachers take ability mostly as a given, focus on top students only
- Self-fulfilling prophecy: kids who miss something early on never catch up

Explaining The Results

- This helps explain:
 - Why being in school generates learning but decreasing student-teacher ratios does not
 - Why textbooks only work for the best children
 - Why remedial education is so effective
 - Why tracking works
 - Why government teachers perform so differently in summer schools
 - Why (accurate) information on returns to schooling increases attendance and test scores

Community Participation: Emerging Policy Lessons

There are many ways of involving the community in the provision of public services, but there is no one-size-fits-all solution to improving services.

- Training communities and empowering them tend to improve the provision of services.
- Knowing about available community programs, and how to get involved, is the first step.
- Communities who have action plans and oversight of implementation tend to be more effective at improving service delivery.
- In one instance, central auditing was more effective than community participation, but it was also more expensive.

Thank You



तमसा
मृत्याम