Impact evaluations for education policy

J-PAL Africa workshop

Department of Basic Education

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Poverty Action Lab

TRANSLATING RESEARCH INTO ACTION

IMPACT EVALUATIONS FOR EDUCATION POLICY

Lessons from J-PAL evidence

Accra, Ghana

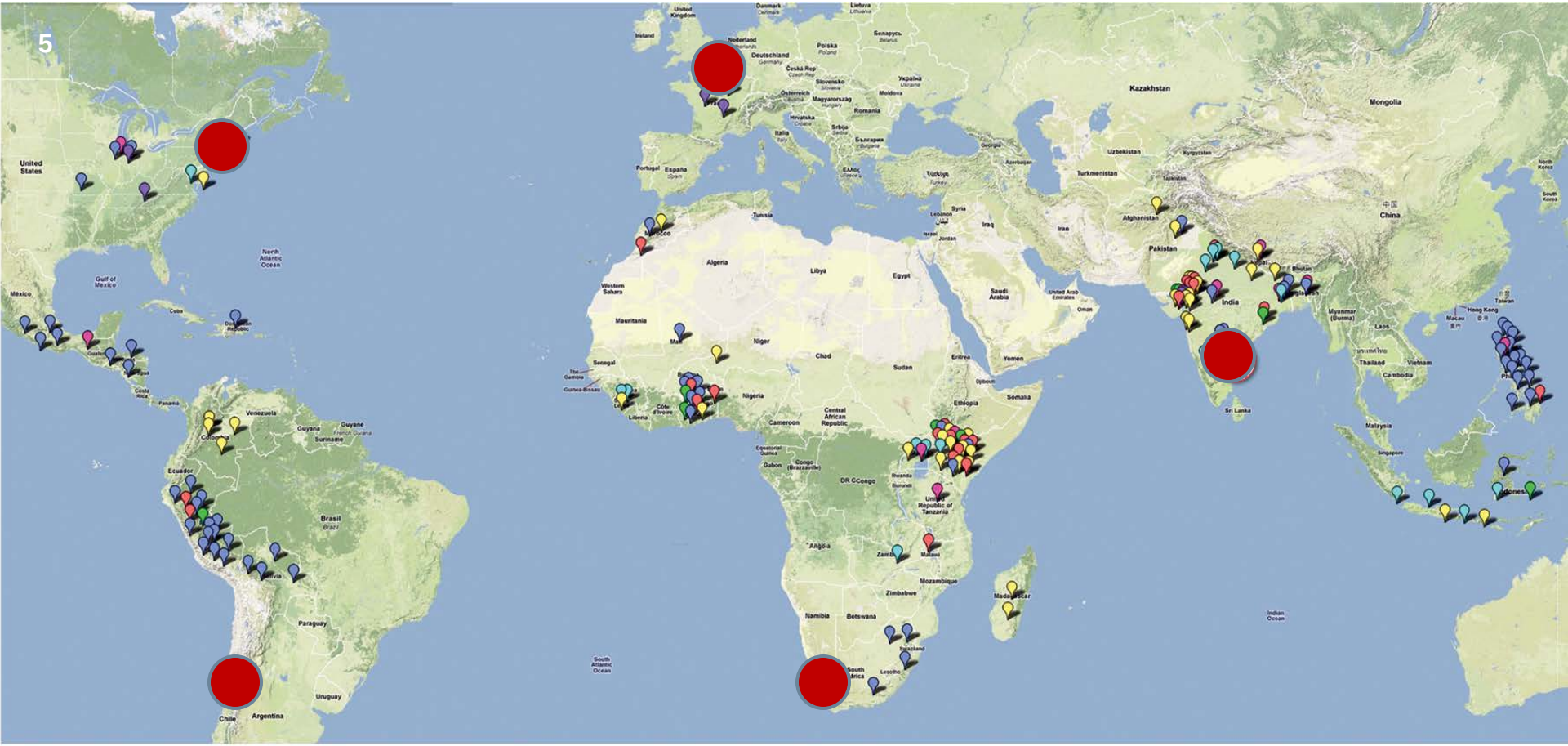
Overview

- Morning
  - Brief introduction to J-PAL and impact evaluations
  - Evidence-based education policy (lessons from Ghana)
  - 30 min discussion
  - Holiday literacy RCT in the Western Cape, Dr Ursula Hoadley
- Afternoon
  - A-Z of randomized impact evaluations
  - Group work

About us

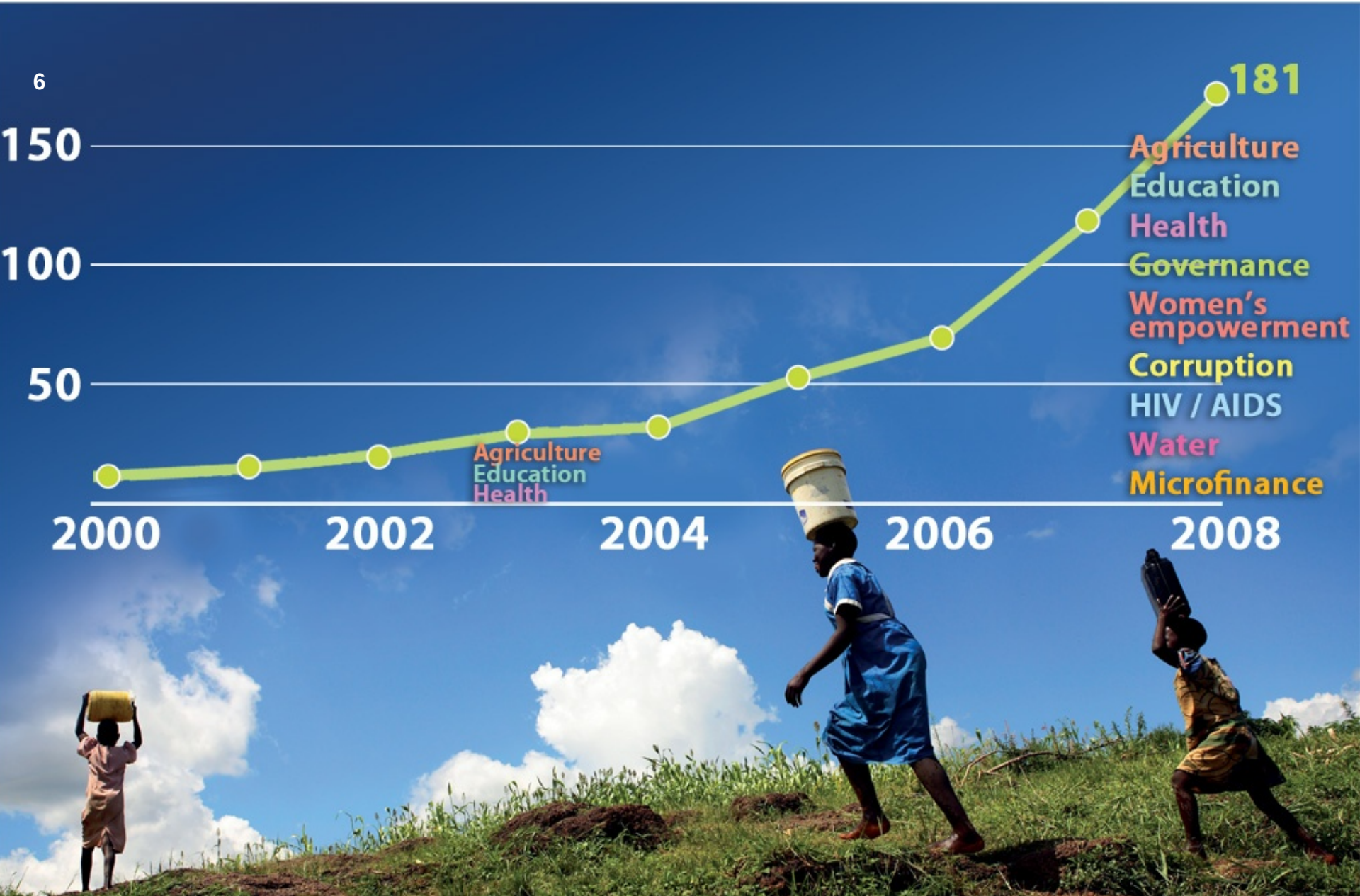
- Established by 3 Professors of Economics at MIT, now a network of 66 researchers throughout the world
- Goal is to promote social programme efficacy by making evidence of high scientific rigour available to policymakers
- We do this by:
  - Running randomized impact evaluations of poverty programs
  - Building capacity of others to do randomized evaluations
  - Disseminating the results
- 334 completed or ongoing evaluations, 31 countries

Where we work



Education
Health
Agriculture
Governance
Microfinance
Discrimination
Other
J-PAL Office

Sectors we work in



Why evaluate?

- Many interesting policy questions, not always answered well
  - Correlations are not necessarily a causal effect
  - Process evaluations stop with outcomes
- Accountability purposes
  - Fiscal incidence studies
  - What is the impact on beneficiaries
    - Short-term, long-term
    - Unintended consequences, positive spillover effects
- Resource allocations:
  - Are there alternative programs that can deliver benefits more efficiently?
- Equip policymakers with real knowledge about programme impacts

What is an impact?

I c..n r …

Intervention

I can read

Confounding factors, incl time

Year 0

Year 1

Definiton

- Take the difference between

  what happened (with the program) …and
  - *what would have happened (without the program)*
  = IMPACT of the program

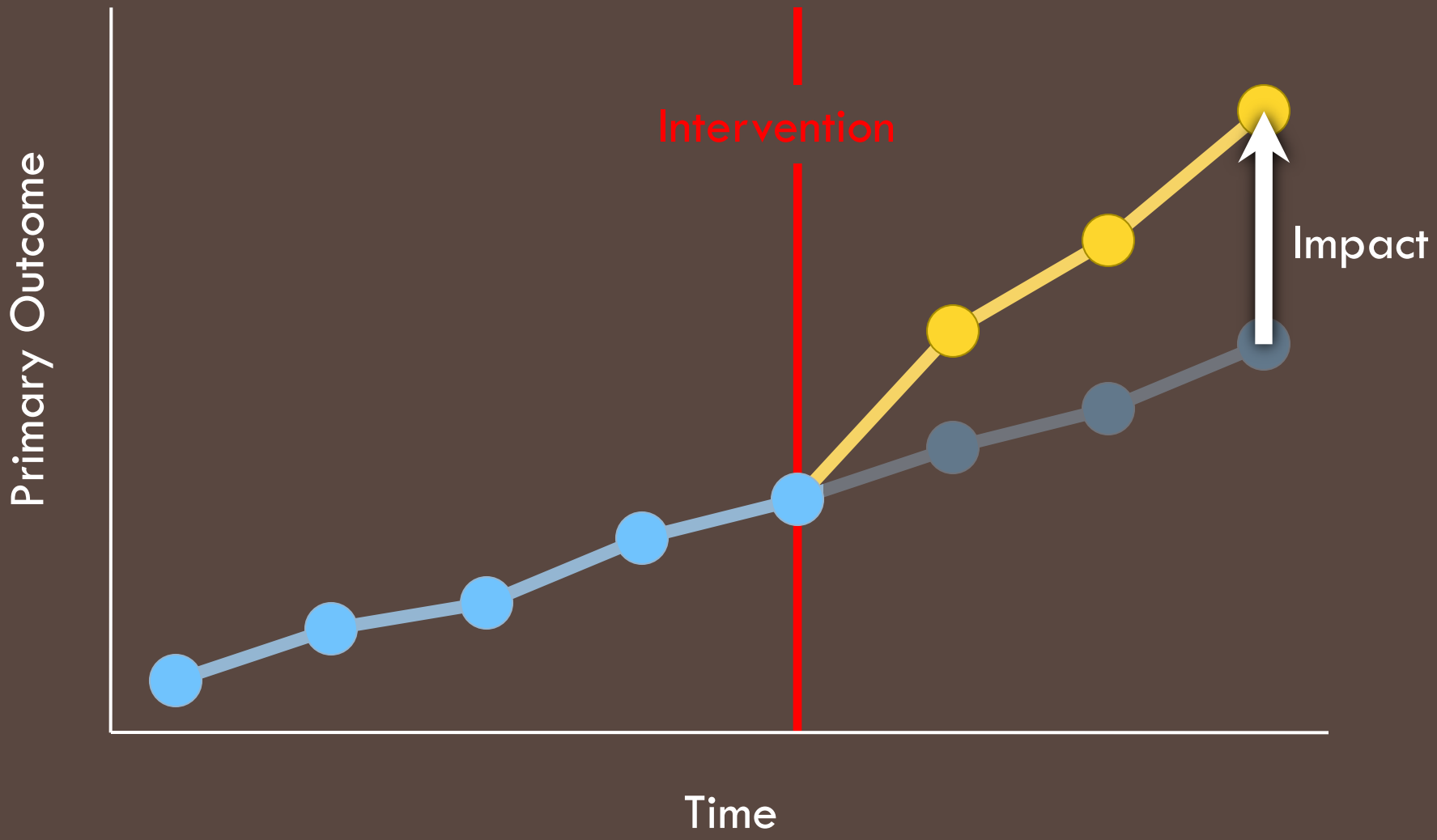
- Two pieces of information
  - What happened with the program
  - What would have happened in the absence of program

Counterfactual

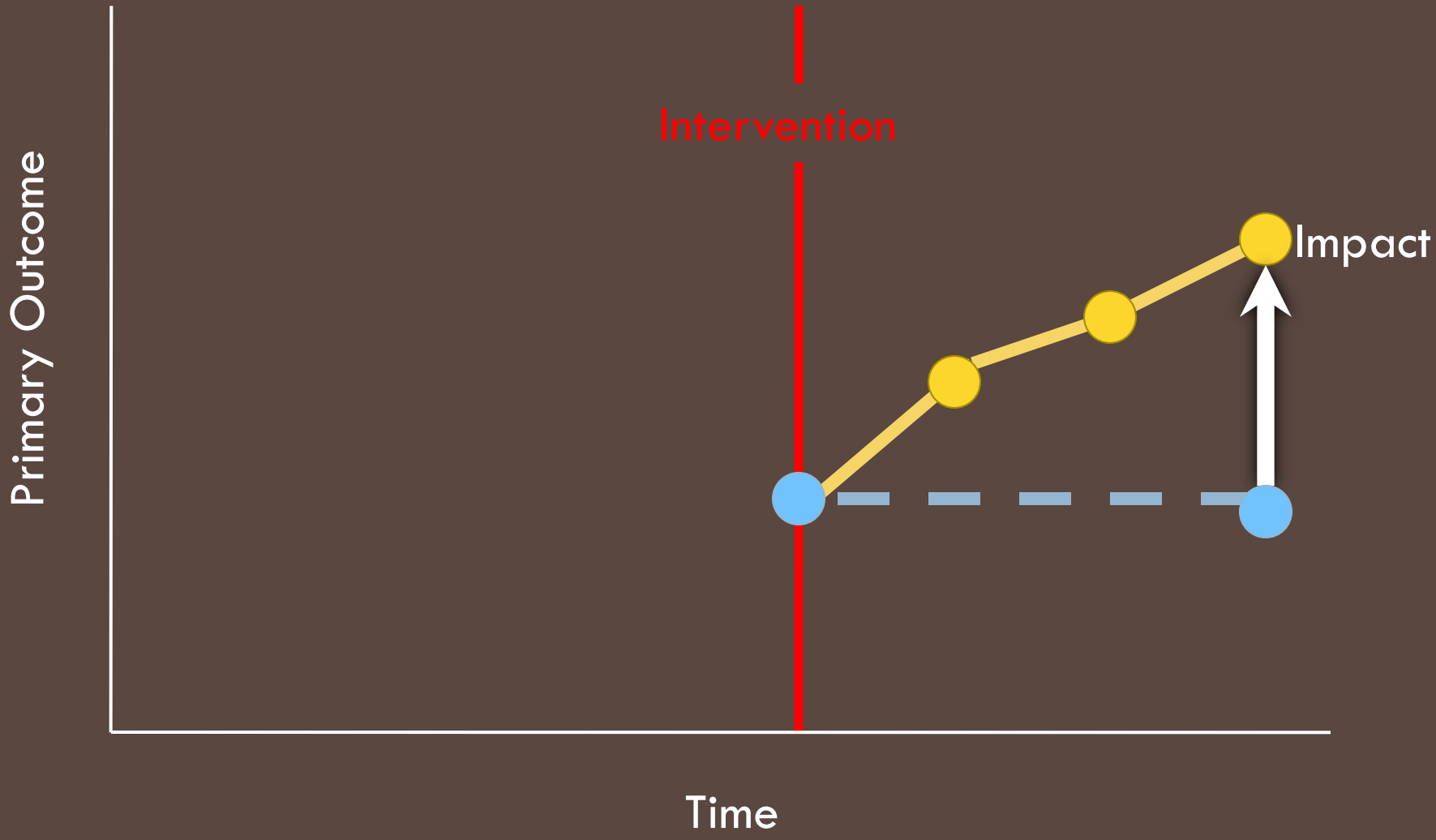
- The ***counterfactual*** represents how program participants would have performed in the absence of the program
- ***Problem***: Counterfactual cannot be observed
- ***Solution***: We need to "mimic" or construct the counterfactual

→ Different impact evaluation methodologies differ in how they construct the counterfactual

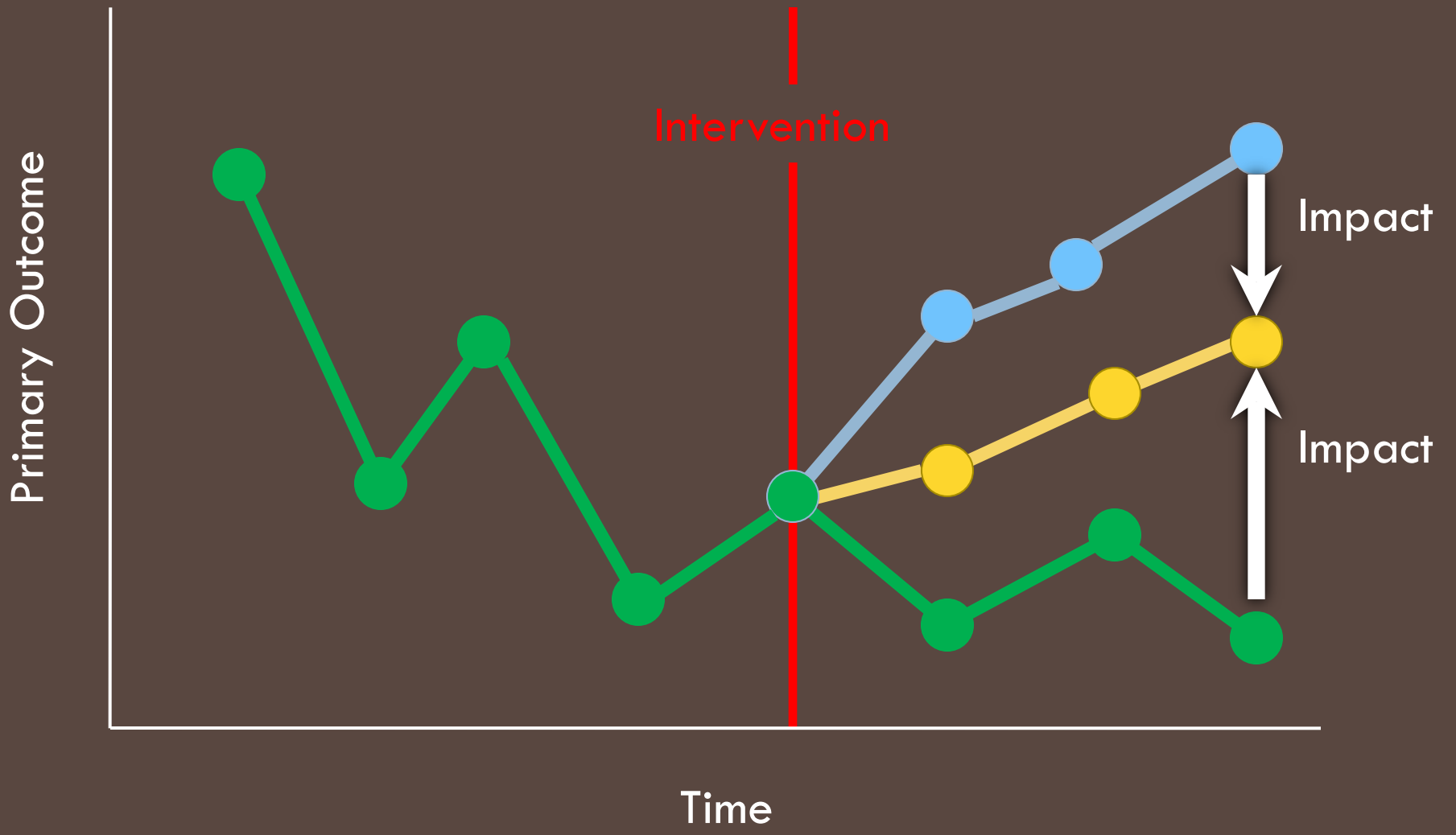
Impact: What is it?



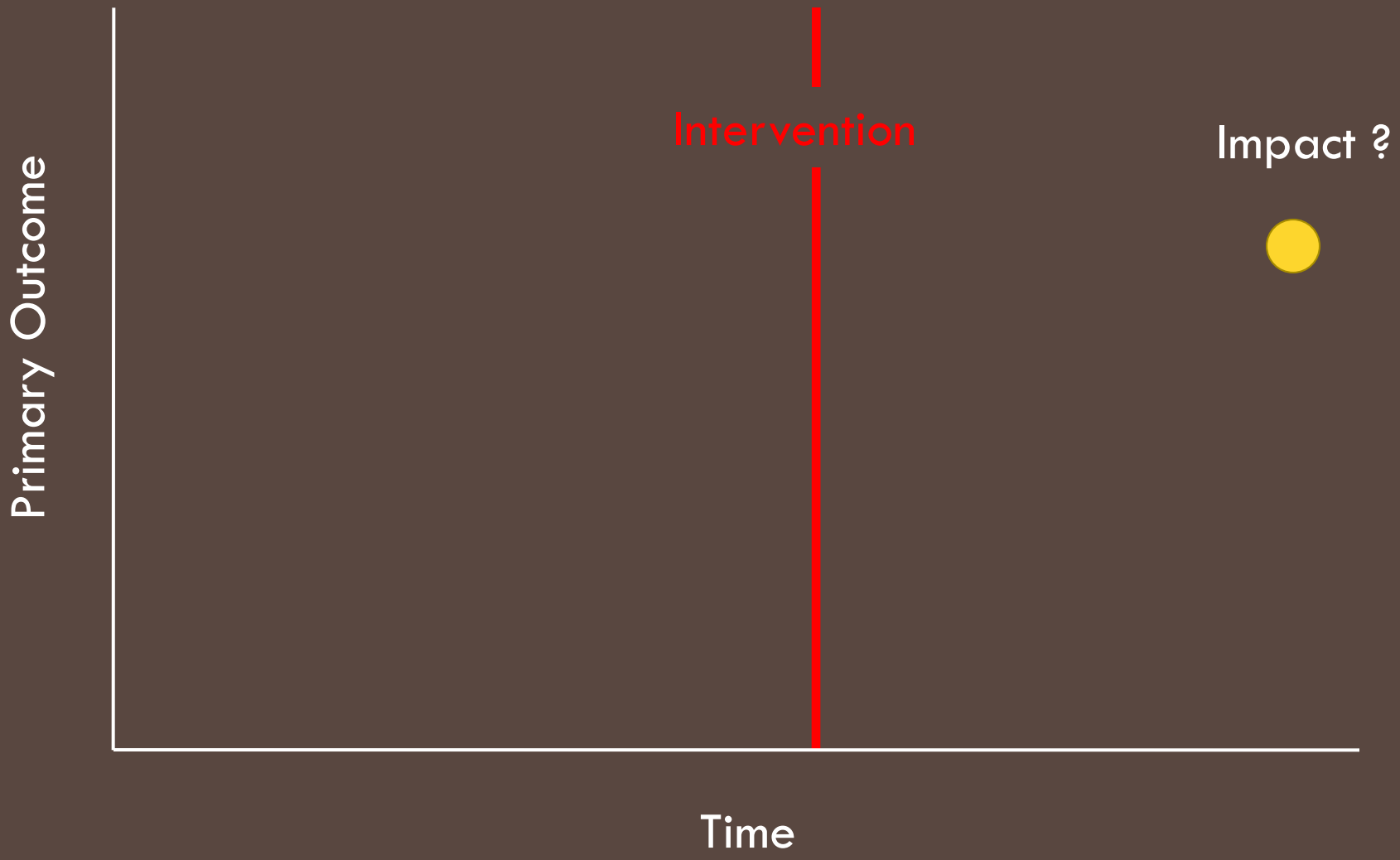
With nobody to compare against



What if?



Ex post studies … we know too little



Why randomized evaluations?

- Standard ways of measuring impact:
  - Changes over time
  - How do beneficiaries compare to non beneficiaries
- But this does not distinguish impact of programme from other factors
  - Children learn over time (with or without a program)
  - First to sign up for a program are not typical (e.g. microfinance)
- Randomized evaluations
  - Adapted from pharmaceutical trials
  - Beneficiaries are nodifferent from non beneficiaries (except for the program)
- Many ways to introduce randomization that are
  - Ethical
  - Fit the needs of implementing agencies
- Randomization is not always appropriate or necessary

When to do an impact study?

- Different evidence for different purposes
- When there is an important question you want/need to know the answer to
  - Uncertainty about which alternative strategy to use
  - Key question that underlies a lot of different programs
  - About to roll out a big new program, important design questions
- Timing--not too early and not too late:
  - Test once basic kinks have been taken out
  - Before rolled out on a major scale
- Time, expertise and money to do it right
  - One good evaluation is better than many bad ones
  - Even if we don't conduct evaluation, we can use evidence to inform policy

Review of evidence for education policy

J-PAL conference
Accra, Ghana

Overview

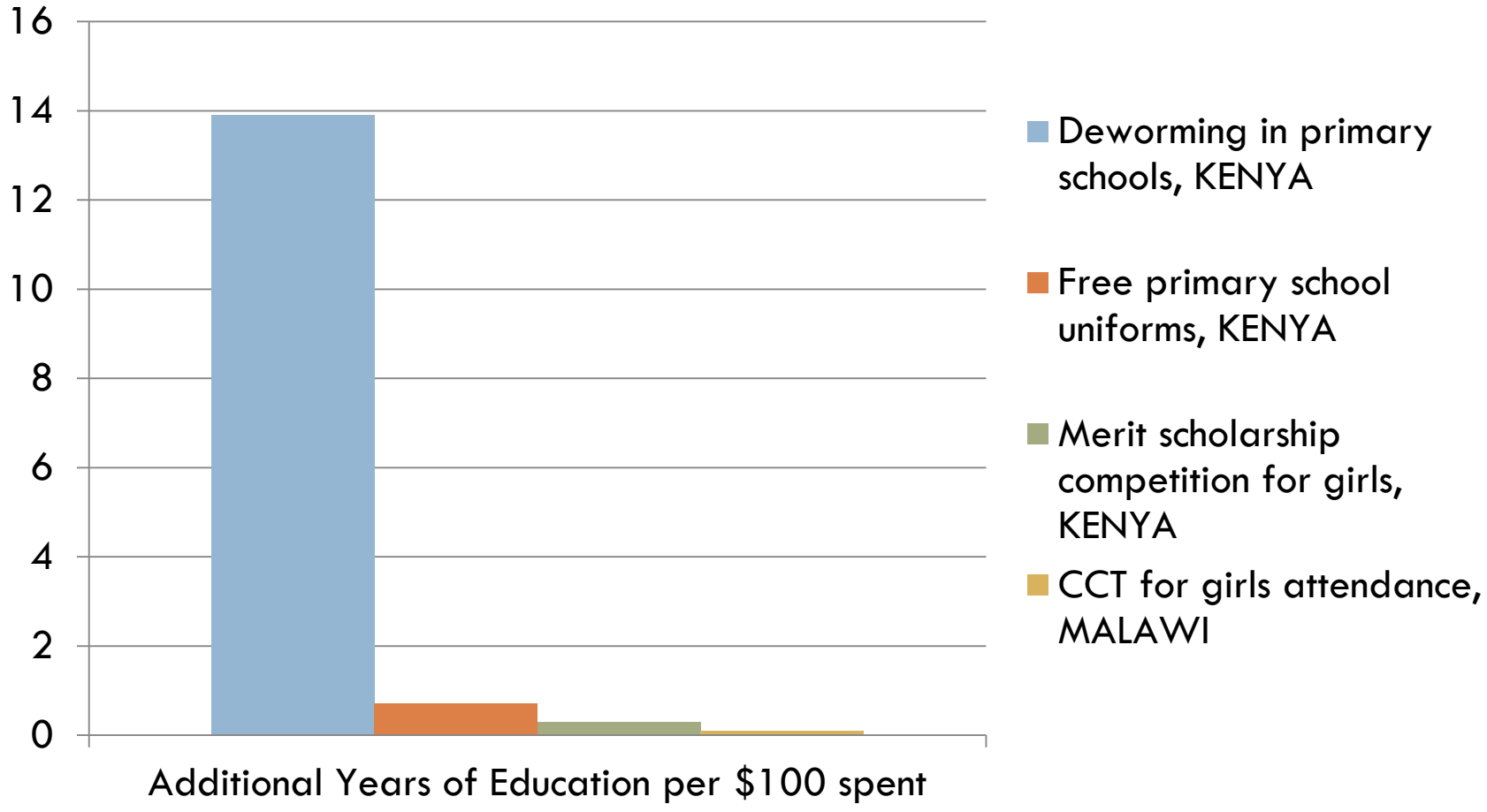
- From enrollment to attendance
- Enabling learning
- Teachers matter (… when they come to work)
- Evidence gaps and scale-up


Showing up is the first step
Vowels
GA SYLLABLES
ba be bi bo

School enrollment

- Major policy success across Africa to increase enrollment
  - No school fees, school meals, other subsidies
  - Cash transfers (conditional or unconditional)
  - Not all interventions are equally cost effective
- Attendance is still a challenge
  - Many reasons to skip school
  - Addressing health barriers can be particularly effective
  - Girls, do they need special interventions?

Cost effectiveness



Deworming

- Treating Kenyan children for worms caused 7 percentage point increase in school attendance
  - Even kids who were not directly treated benefitted from lower rates of infections in the community
    - Peers, younger siblings
  - Programme is extremely cost-effective, buying 14 years of additional education per $100 spent
  - Long-term labour market outcomes too
- Unlimited (but growing) evidence on the importance of non-infectious diseases as impediments to schooling
  - Eyeglasses
  - Micronutrians

Menstruation cups

- Many girls report to skip school during menstruation time
  - Study in Nepal used detailed diaries
  - Showed large degree of absenteeism
  - But not because of menstruation
- High uptake of menstruation cups
  - Girls liked them and used them
  - No reduction in absenteeism
  - Reduced time spent on washing clothes by 22 min

Role models

- Role models
  - 1/3rd of council positions randomly reserved for women in India
- Villages with more female leaders
  - Girls want to marry later (19 pp)
  - Want a better job (8.6 pp)
  - Gender gap in education erased
  - Gender gap in time spent on HH activities reduced by 18 min
- Mechanism?

Investments in girls

- When returns to women's education increase, so does the schooling of girls
- New job opportunities
  - Call centers in India increased enrollment in primary school by 5.7 percent
- Three years of recruiting services offered to young women in randomly selected villages in India
  - Less likely to get married, have children, completed more schooling


What have we learned about improving learning?
Vowels
GA SYLLABLES
ba be bi bo

Enabling learning

- Too many kids are in school but not learning
  - 54% of grade 3 and 45% of grade 6 learners perform at their age/grade norm for literacy in Western Cape
  - Education inputs make little difference
  - Neither does teacher-pupil ratio
  - Textbooks (in Kenya) only benefitted stronger pupils
- Teaching to the right level
  - Remedial education
  - Tracking benefits all
  - Computer-assisted learning (if well designed !)

Remedial education

- Literary for children who fall behind
  - In India, children age 7-14, 39% could not read a grade 1 level story
  - Pratham recruited volunteers to teach evening classes
  - Child who could read letters were 26 percentage point more likely to read and understand story, compared to control
- Pratham trained government teachers to teach literacy
  - Very large gains (1 sd) when these teachers taught summer school
  - Zero gains when they taught regular schools

Can technology help?

- Pratham computer-assisted learning had large gains
  - Supplied fun, interactive, educational computer software
  - Additional *time* to learn
- But evidence is mixed
  - Can improve learning, or the opposite
  - Is not always cost-effective

Early childhood development

- Early-life intervention can have lasting effects on life trajectories
  - Cognitive skills, academic achievements
  - Social and emotional skills, depression and long-term health
  - Participation in criminal behaviour

- Relative cost needs to be assessed
  - Strong benefits of simple nutrition, stimulation interventions
  - Relatively simple, inexpensive
    - but only when institutional infrastructure exists
  - Preventive and hence not well targeted

Large gains, small costs

- Many teachers, parents and learners treat schooling as a lottery with long odds
  - Prioritise curriculum coverage rather than learning
  - Those who fall behind, give up

- Need to focus on basic skills:
  - Commit to the idea that every child can master them as long as she, and her teacher, expends enough effort on it
  - Remedial teachers can be effective with relatively little training and cost, at least in lower grades
  - Many ways to target level to learner






Motivating teachers, parents and parents

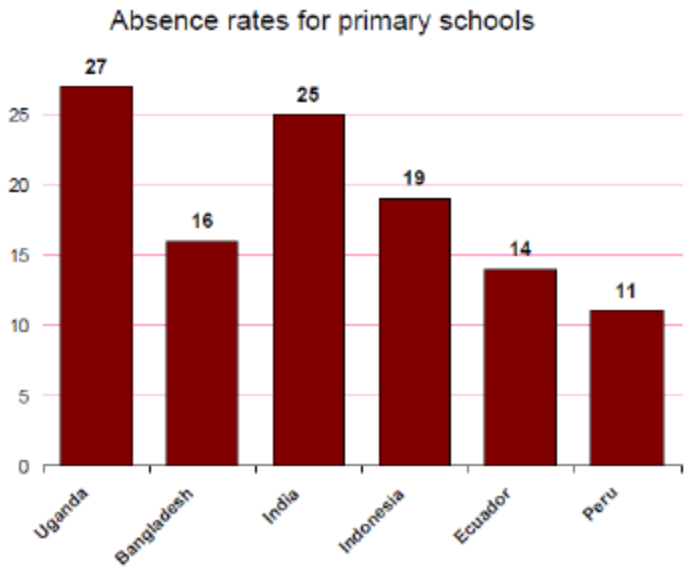





Teachers matters

- But it is hard to get them to come to work
  - Skip on average a day per week

- Mixed evidence on how to motivate teachers
  - Characteristics are poor predictors
  - Student achievements
    - Teaching to the test
  - Supervisor discretion
  - Community monitoring



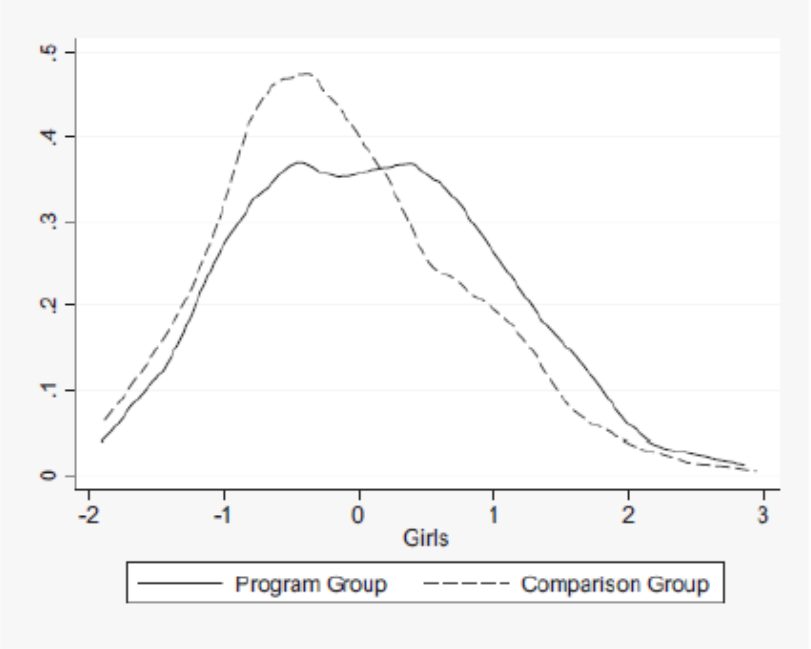
Monitoring absenteeism

- Critical to have objective measure, process that is hard to corrupt
- Twice daily photo with learners, date/time-stamped
  - Wages were dependent on availability of photo
  - 20% decline in teacher absenteeism
  - Significant improvements in student test scores

Motivating stakeholders

- Rewarding students can be effective, but controversial
  - Based on annual exam performance rose test scores substantially in Benin.
  - US study : rewards should be condition on inputs (like effort) rather than output (test score).

- Bringing parents to the education table
  - Girls scholarship competition motivated parents to old teachers accountable, benefitted all (even boys and weak learners)
  - Parent meetings in France improved teen school behaviour, positive spillover effects on peers with parents who did not attend meetings



Evidence gaps

- Secondary education and vocational training
- Motivate efforts of learners, parents, teachers
  - Greater synergies in efforts across these stakeholders
- SGB and school management
- Institutionalise scale-up of highly effective programmes
  - Effective, relatively cheap programmes exist
  - How can we best take them to scale?
  - AfDB, NEPAD, African Union, SADC, group of pilot countries
  - TA fund

Thank You!

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