



Field Experiments and the practice of Economics

Esther Duflo

Nobel Lecture | December 8, 2019 | Stockholm



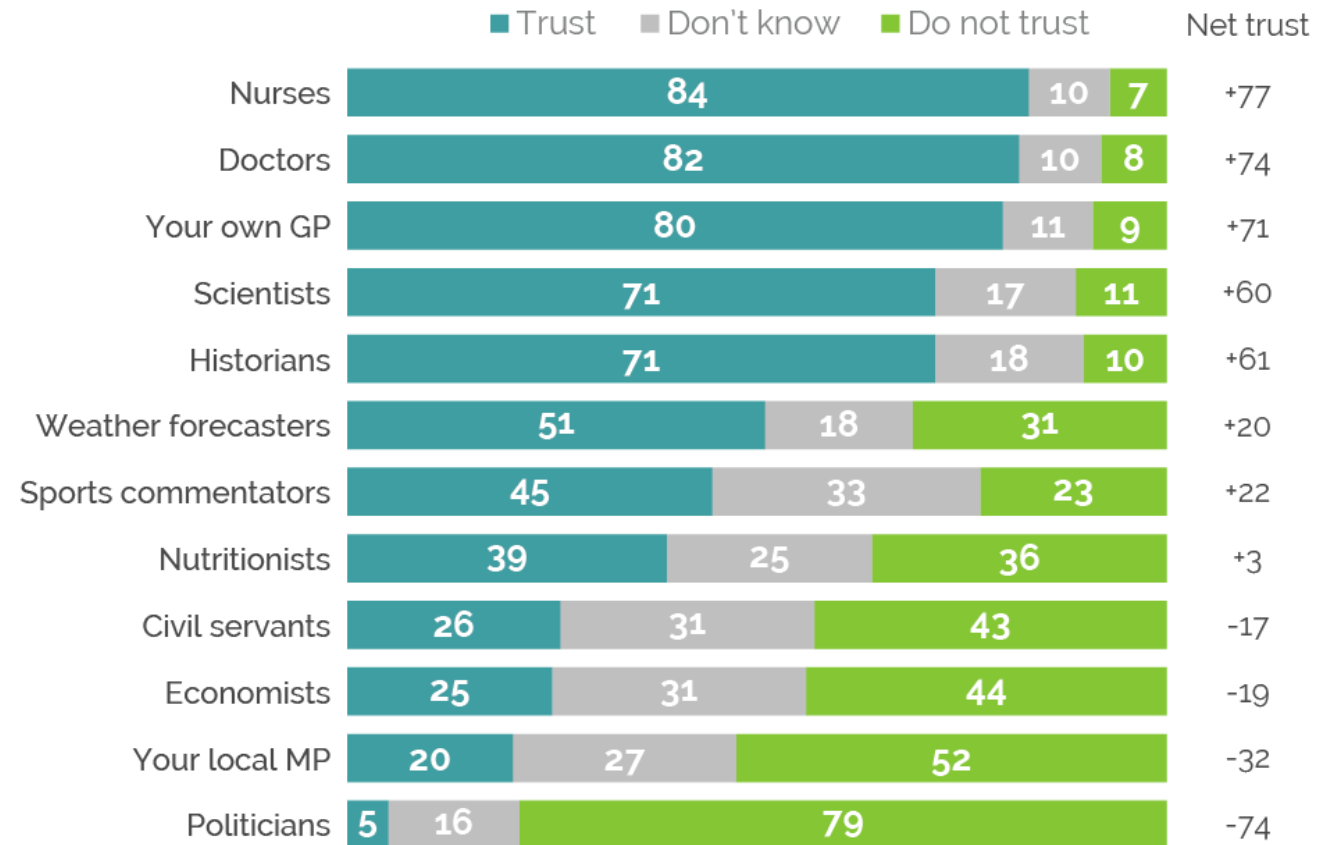
As an undergraduate student,
I was not destined to become an economist...



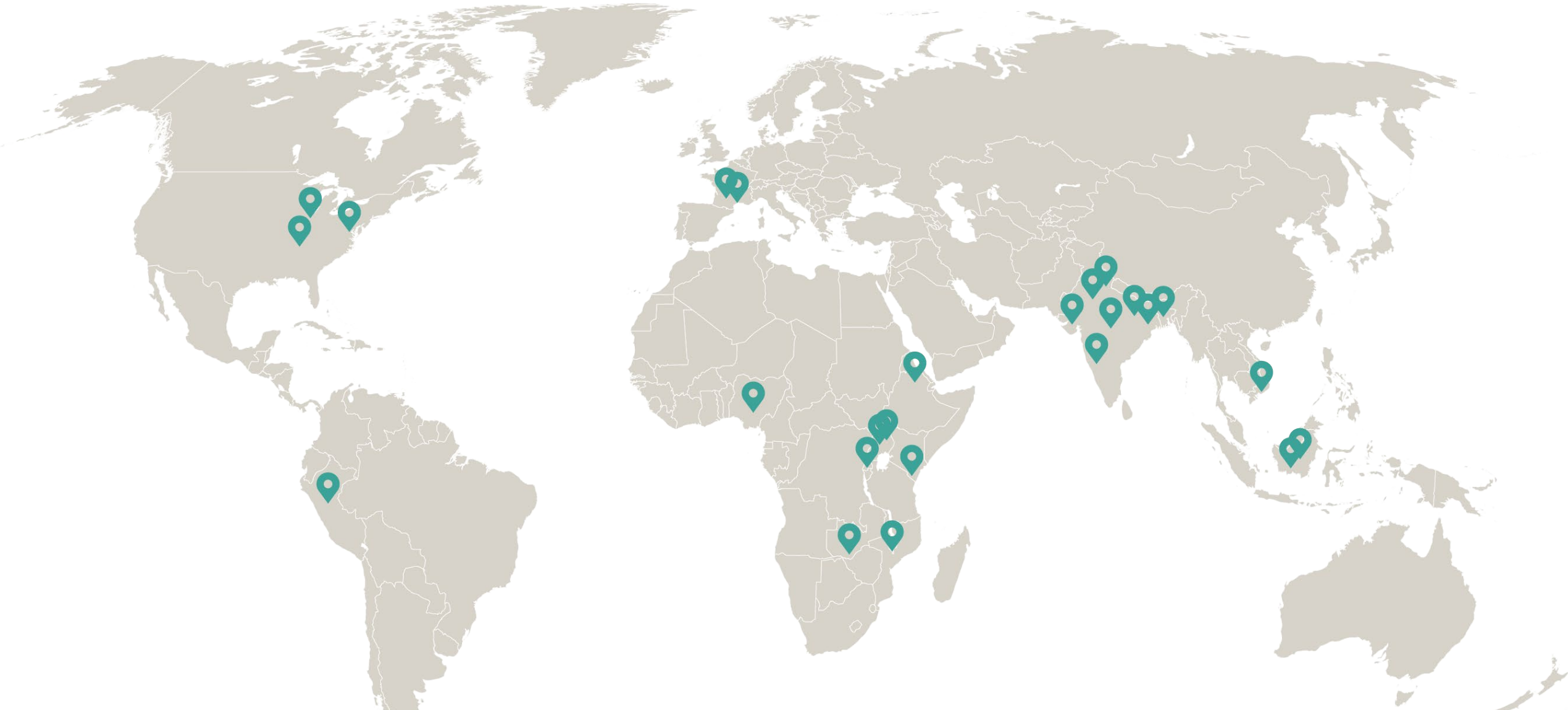
Like many people, I did not think most economists were to be trusted

Public trust in experts

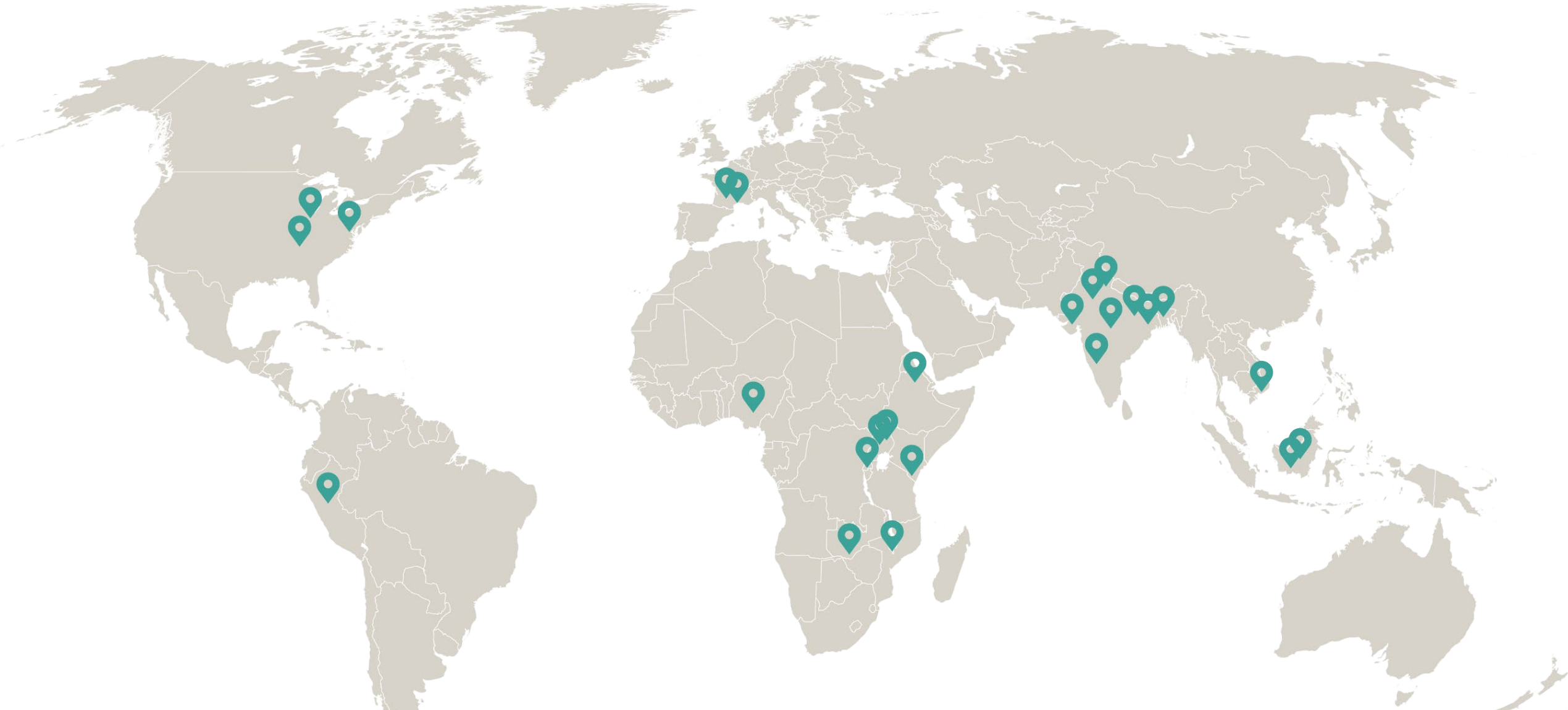
Of the following, whose opinions do you tend to trust when they talk about their fields of expertise? %



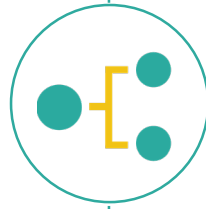
And yet... 28 years later...



**J-PAL directly affected policy in numerous ways,
and almost all continents**



The strawman



Run a small, well controlled experiment



Get the results

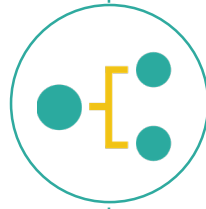


Prepare a shiny policy brief and peddle to policy makers



Get full scale adoption

The strawman subject to all sorts of critics



Run a small, well controlled experiment

“Gold plated experiments”—samples are too small



Get the results

Results only valid in one place, might not replicate elsewhere; might not even be internally valid (imperfect take up, spillovers on non beneficiaries)



Prepare a shiny policy brief and peddle to policy makers

May not fit with the policy makers interest at the time



Get full scale adoption

Results will be quite different if adopted at scale: equilibrium effects, Political economy effects

But really, it is not the way policy influence works

The Miracle of Microcredit?



Microcredit in the 2000s

The Seattle Times

Opinion

Microfinancing changes lives around the world — measurably

Originally published April 7, 2010 at 10:21 am | Updated April 7, 2010 at 12:31 pm

Microfinancing can help poor people around the world with small loans that can change their lives, writes guest columnist Brigit Helms. The anecdotes are plentiful but a new study shows the benefit.

By Brigit Helms

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The Nobel Peace Prize 2006 Muhammad Yunus, Grameen Bank

Today, Grameen Bank gives loans to nearly 7.0 million poor people, 97 percent of whom are women in 73,000 villages in Bangladesh.

Grameen Bank gives collateral-free income generating, housing, student and micro-enterprise loans to poor families and offers a host of attractive savings, pension funds and insurance products for its members. Since it introduced them in 1984, housing loans have been used to construct 640,000 houses. The legal ownership of these houses belongs to the women themselves. We focused on women because we found giving loans to women always brought more benefits to the family.

In a cumulative way the bank has given out loans totaling about US \$6.0 billion. The repayment rate is 99%. Grameen Bank routinely makes profit. Financially, it is self-reliant and has not taken donor money since 1995. Deposits and own resources of Grameen Bank today amount to 143 percent of all outstanding loans. According to Grameen Bank's internal survey, 58 percent of our borrowers have crossed the poverty line.

Then the tone shifted...

Trapped in micro debt

Peace Prize winner Yunus' famous microcredit bank Grameen Bank takes 30 percent interest and brings many poor women into a debt spiral.



Focal point documentary "[Trapped in micro-debt](#)" shows a very different side of microcredit than Muhammad Yunus and his peace-prize-winning bank Grameen Bank enjoy in public.

debt Spiral

Surveys Danish journalist Tom Heinemann has done for NRK Brennpunkt through several trips to Bangladesh and talks with a number of international experts around the world, shows that Grameen Bank leads many poor women into a devastating debt spiral.

The women pay about 30 percent interest on the loans, which they must already start paying back after a week. In the documentary, the poor tell about hard collection methods from Grameen Bank, which received NOK 400 million in assistance from Norway.

*Food First*Press RoomBlog

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A photograph of a woman in a green sari with white polka dots, holding a young child. Another child is visible behind her. They are outdoors, and the background is slightly blurred.

The Limits of Microcredit: A Bangladesh Case

Jason Cons and Kasia Paprocki | 12.01.2008

“

In rural Bangladesh, microcredit is not achieving its core goals of poverty alleviation, financial independence, and gender equality.

”

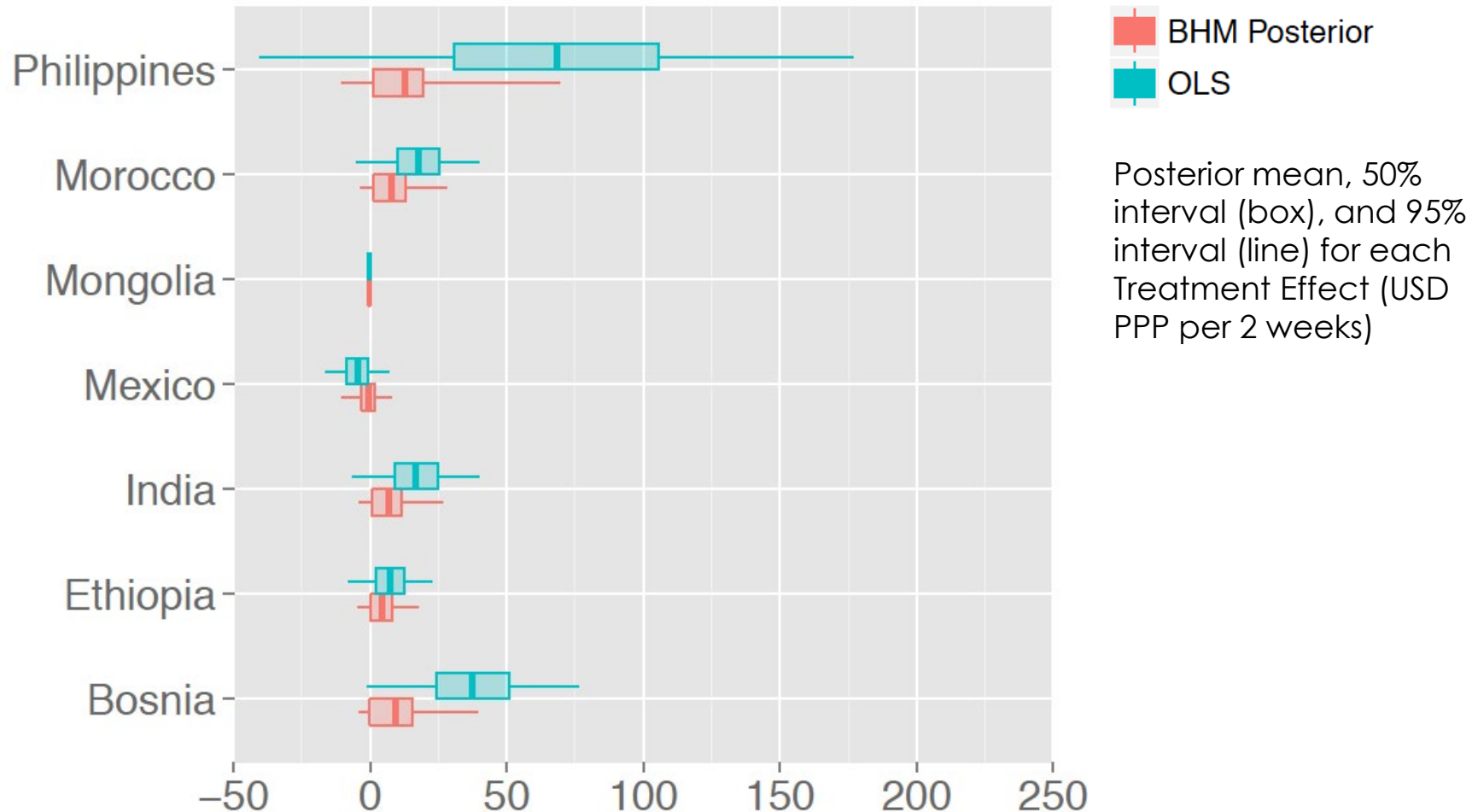
The evaluations

- The first evaluations conducted where in India and in the Philippines.
 - Philippines: rather good
 - India: rather weak
- India is a very unique context: hotbed of microfinance
- To get a useful answer, we had to wait...
- Until seven studies came out together, all in different contexts and carried out by different teams
- But published together with the same outcomes.



Photo: iStock.com

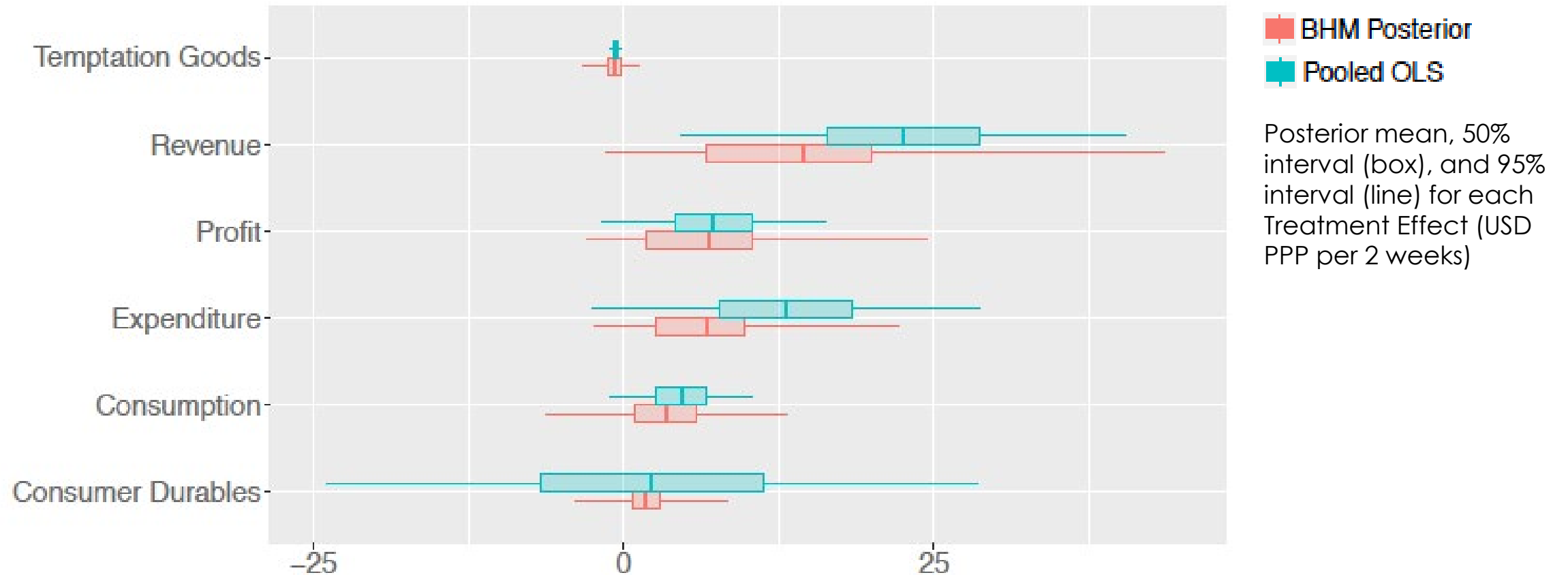
Bayesian Hierarchical Modelling of all the MF results: Profits



Rachel Meager
LSE

Meta-analysis: Average estimated effect and range, 6 countries

Posterior distribution of average effect



Changing the debate


THE WALL STREET JOURNAL

TUESDAY, MAY 22, 2012

e-Paper

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Posted: Tue, Oct 26 2011

The Microfinance Mess

While the current attacks on microfinance are unwarranted, overblown claims about it also need to be tempered


 THE FINANCIAL EXPRESS

Small is smart

Maitreesh Ghatak

Posted online: 2009-08-24 21:49:32+05:30

Microfinance is big these days. It may be called 'micro' but there is nothing small-time about it. It serves more than 1 billion people worldwide through various microfinance programmes (MFPs). While its true origins are lost in the mists of time, the microfinance institution (MFI) of the modern era, the Grameen Bank of Bangladesh. In 2006, Yunus and the Grameen Bank won the Nobel Peace Prize for their work in microfinance.

 FINANCE & ECONOMICS
ECONOMICS FOCUS

Economics focus

A partial marvel

Jul 16th 2009
From The Economist print edition

Microcredit may not work wonders but it does help the entrepreneurial poor

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Small change

Billions of dollars and a Nobel Prize later, it looks like 'microlending' doesn't actually do much to fight poverty

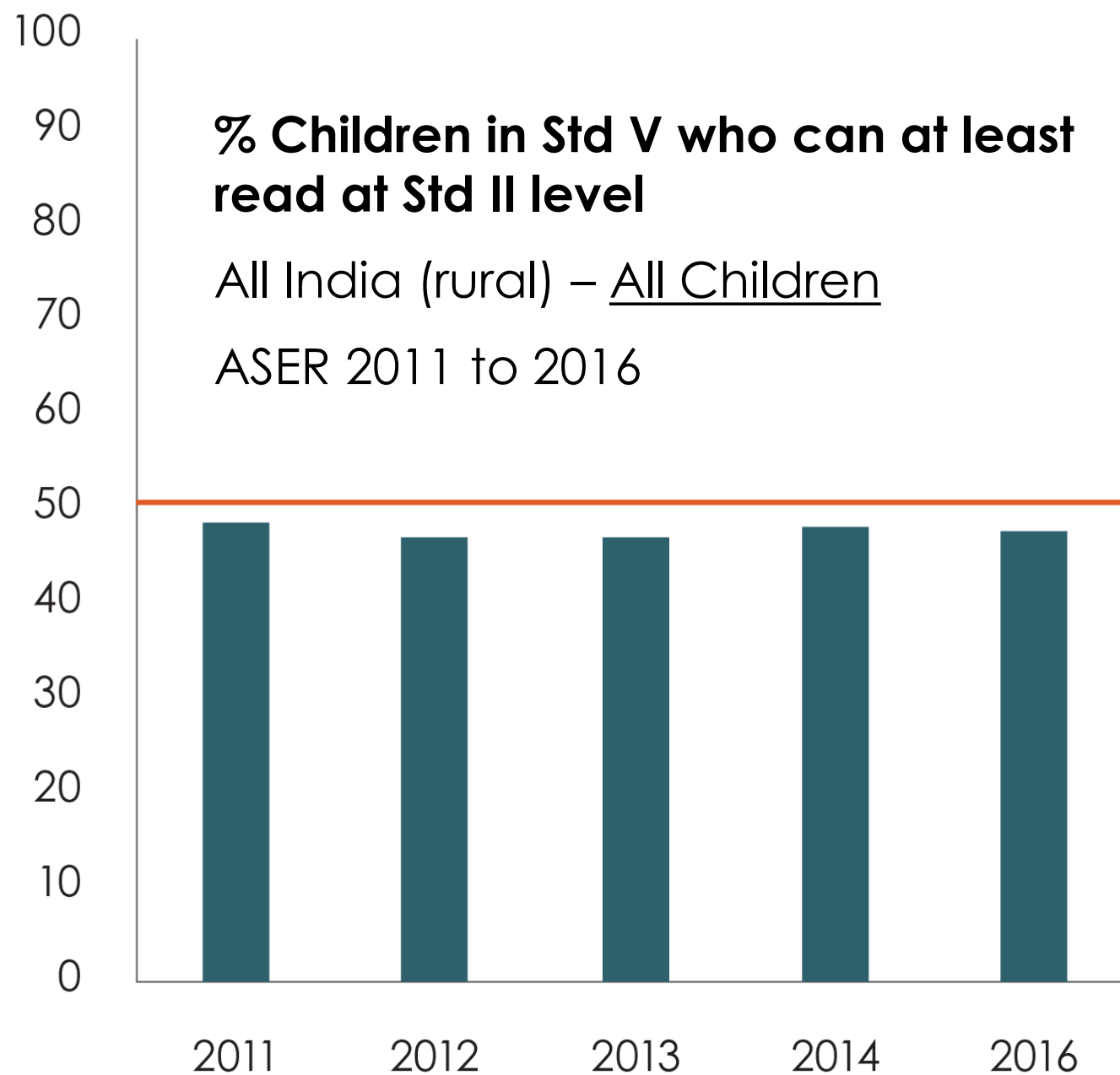
The Boston Globe

Changing microfinance

- One sized approach (small term loan) does not work for all.
- Many experiments since then have focused on the terms of lending.
- Focus on all the financial services the poor need, and the right fit for each
 - Transaction
 - Savings
 - Insurance
 - Ultra poor programs
- Focus on heterogeneity: Creating methods to identify real entrepreneurs who will benefit from a microcredit.
- Interplay between theory and experiments is what makes economics useful to policy (and policy useful to economics)

Teaching at the right level



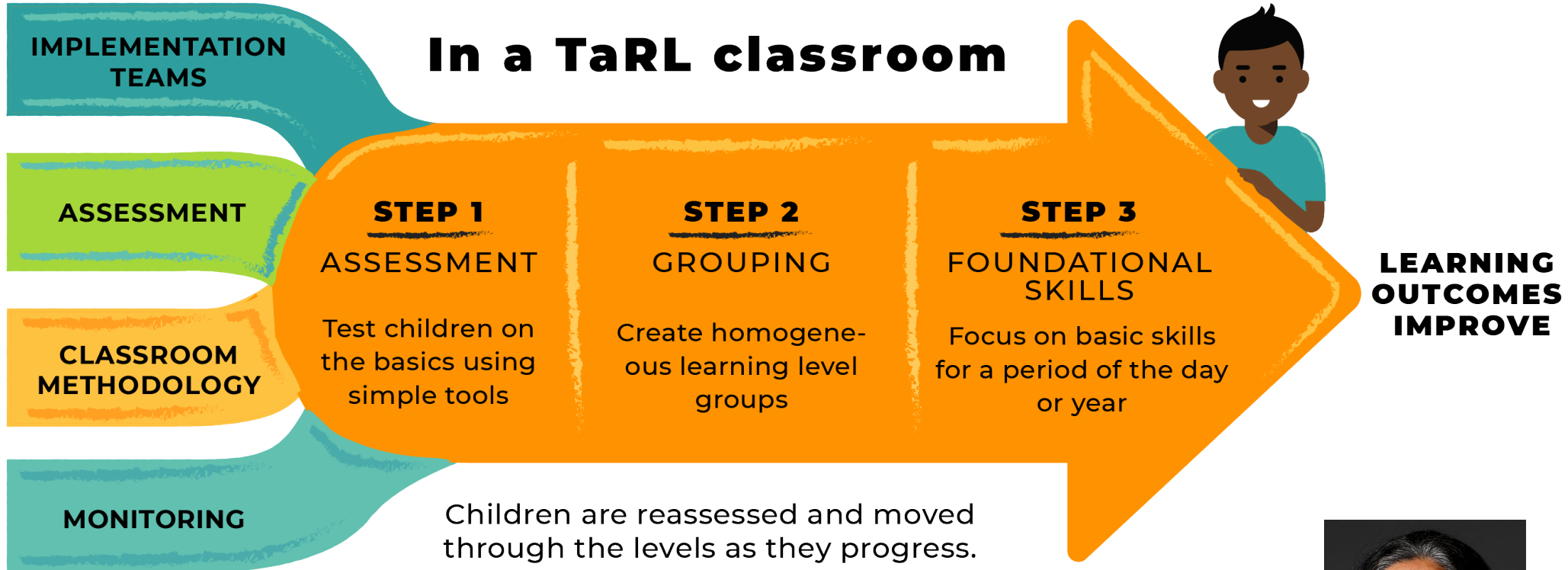


What is the problem?

- Teachers can teach
- Salaries are sufficient
- Computers can help
- Parents care
- Children can learn
- Inputs alone don't help
- Teachers are willing to do better



TaRL Support Pieces



Dr. Rukmini Banerji



Dr. Mdhav Chavan

For 15+ years of experimentation

2001-2003

"Balsakhi" program; Pratham community volunteer "pull out" remedial program in urban schools



2008

In-school one month gov't teacher-led summer camp with support by rural village volunteers

2010-2013

Ghana trials of teacher-led vs. tutor-led in school and out of school



2013-2014

"Learning Camps" in gov't primary schools; led by Pratham teams supported by village volunteers

2000

2005

2010

2015

2005-2006

Village volunteers conducted community classes for rural primary school children



2008-2010

In-school gov't teacher-led learning improvement program & support by Pratham volunteers (rural)

2012-2013

Teacher-led model; onsite mentoring by gov't academic officials



Teaching at the right level today



Improving programs that run at scale



Helping government address
the “plumbing problems”

Evaluating programs at scale: Targeted information to improve rice distribution



Raskin Social Assistance ID Cards

- Raskin is Indonesia's US\$2.2 billion rice subsidy program for poorest families
- Problem:
 - Poor receive just 30% of the intended subsidy
 - Pay 25% more for Raskin



Photo: J-PAL



**Kartu Perlindungan Sosial (KPS)
Hanya Untuk Yang Miskin!**

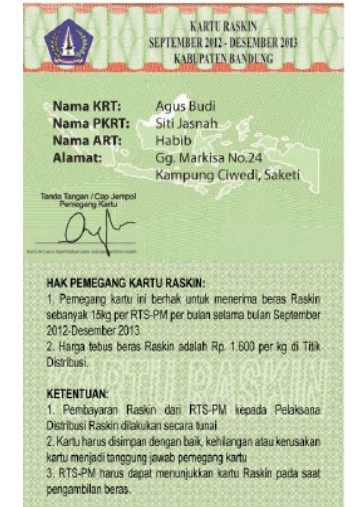
Selengkapnya mengenai KPS [...]

**KARTU PERLINDUNGAN SOSIAL
(KPS)**

Experimental design

The experiment varied 4 aspects of the cards

- Information on the cards
- Who gets the card
- Common knowledge through posters
- Create impression of accountability



Researchers:



Abhijit Banerjee



Rema Hanna



Jordan Kyle



Benjamin A. Olken



Sudarno Sumarto

Results

Banerjee, Hanna, Kyle, Olken, Sumarto

- Poor families get 26% increase in subsidy
- Driven by reduction in leakage
- Cost Effective: \$1 for ~\$8 increase in subsidy



Photo: Ben Olken | J-PAL

Scale-up

- Government rolled out “social protection” cards in 2013 to 15.5 million poor families, reaching 66 million people
- Continued partnership to improve service delivery, with planned evaluations of a new reformed social benefit scheme to be implemented through electronic vouchers



Photo: Ritwik Sarkar | J-PAL

Reforming the auditing of firms in Gujarat



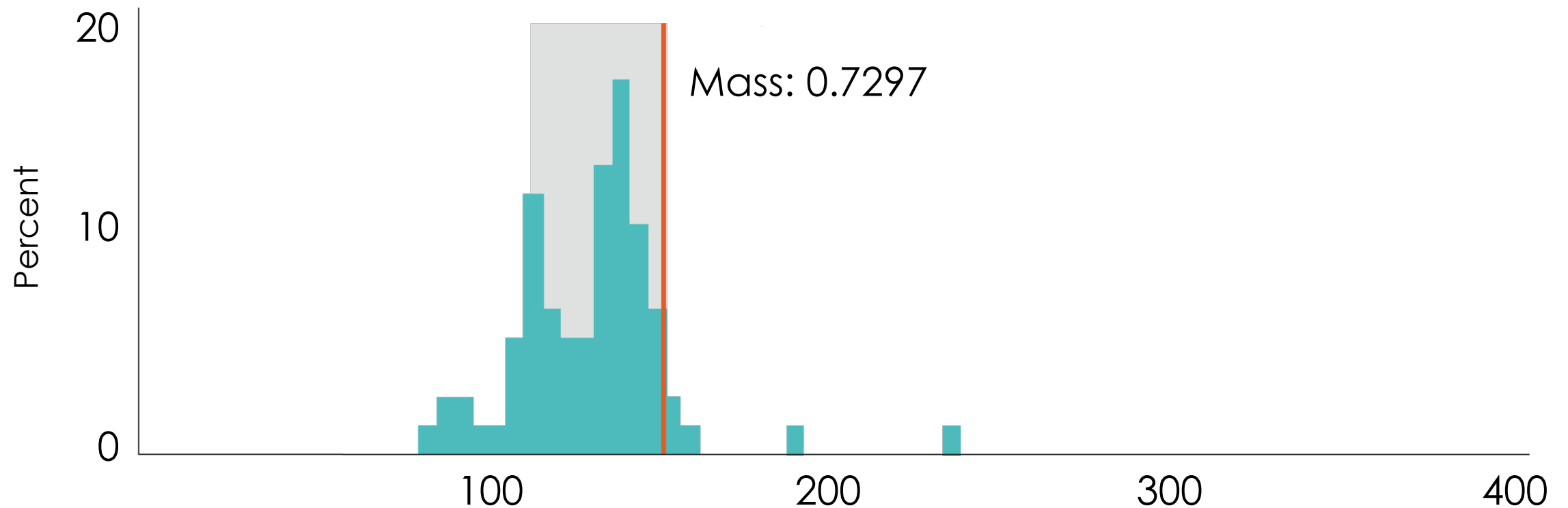
Third party audit



Photos: Vipin Awatramani | J-PAL

Audit system performance

Suspended particulate matter, mg/Nm³ | *A. Control, Midline*



The reform we proposed

Duflo, Greenstone, Pande, Ryan

1. Random assignment of auditors and fixed payments from a central pool
2. Back check auditors for accuracy
3. Payment (or continuation with the scheme) based on accuracy
 - Ideas based on basic economics, and a solid understanding of the institutions

Researchers:



Esther Duflo



Michael Greenstone



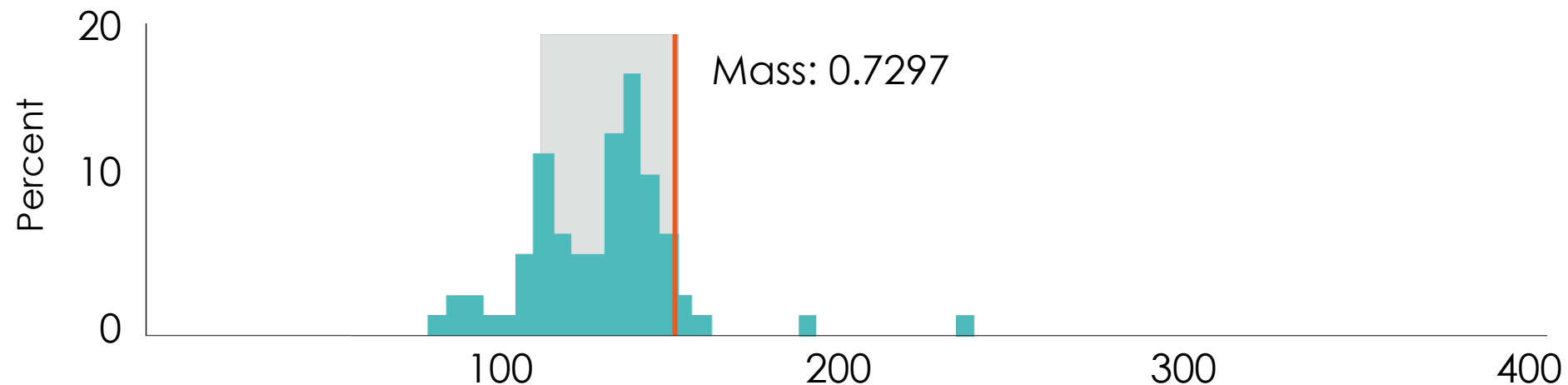
Rohini Pande



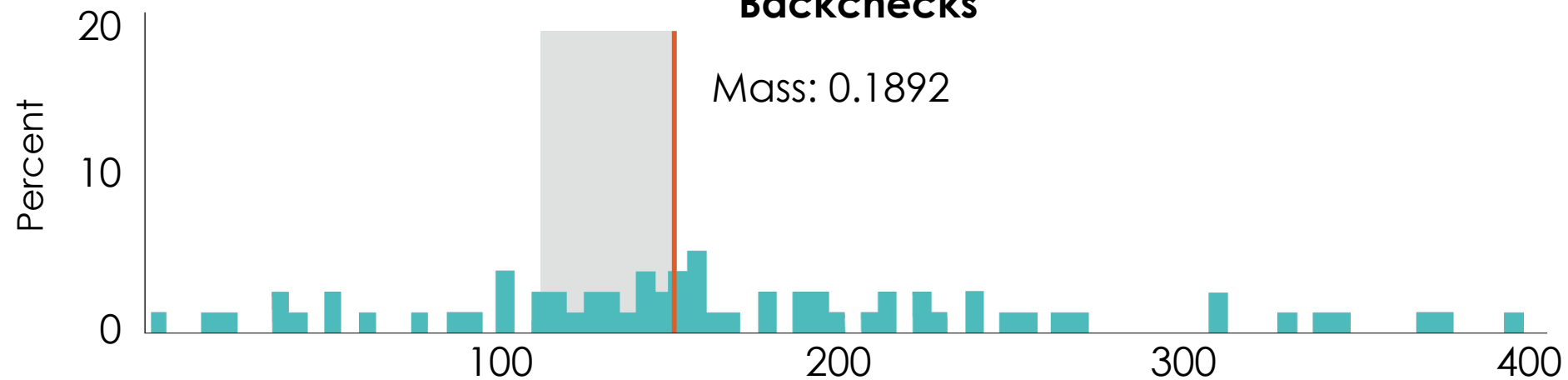
Nicholas Ryan

Impact of the reform

Suspended particulate matter, mg/Nm³ | A. Control, Midline



Backchecks



Fostering a culture of learning inside Governments

- Many governments have launched either long run partnership with J-PAL or their own “learning units” (e.g. Minedulab in Peru, Tamil Nadu research partnership).
- World Bank Supports hundreds of RCT and training with various governments
- Many of the governments we meet want us to run an RCT, rather than listen to any evidence we might bring.
- May be one day we can make ourselves irrelevant...

