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### Poverty Under the Microscope

Once the rage, scientific approaches to development economics now encounter skeptics

*By Beth McMurtrie*

**D**uring the past two decades, something unexpected happened in the field of development economics.

Researchers got out from behind their desks to figure out why, after billions of dollars had been spent on foreign aid, so many poor people were no less poor. They began talking with those they were trying to help: the parents whose babies were dying from contaminated water. The farmers who were eking out an existence. The teachers in communities where children remained illiterate.

These economists figured they could do better than the failed policies put forth by past generations of development experts. By rolling up their sleeves and running experiments, they were going to figure out what worked and what didn't. And through that, they were going to find cures for poverty.

The work of these "randomistas," so called because of their use of randomized control trials, or RCTs, took off with the creation of research centers that provided the infrastructure, financing, and networks to make more experiments possible. Many projects were designed by eager young graduates of doctoral programs, excited by the immediacy of the work. [Innovations for Poverty Action](#), a Connecticut-based nonprofit organization founded by the Yale economist Dean Karlan, has a staff of more than 900 and projects in 48 countries. [The Center for Effective Global Action](#), based at the University of California at Berkeley, includes a network of 50 researchers.

The most famous such network, though, is the Abdul Latif Jameel Poverty Action Lab, or [J-PAL](#), at the Massachusetts Institute of

Technology. Created in 2003 by three star economists, Abhijit V. Banerjee, Esther Duflo, and Sendhil Mullainathan, the network's 95 affiliated professors have completed or are conducting nearly 500 evaluations in 56 countries. J-PAL has lured big-name donors, like the Bill & Melinda Gates Foundation, and partners such as the World Bank, foreign governments, and nonprofit groups.

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Experimentation allows economists to see the complexity of life that theories and models can't capture, says Rachel Glennerster, executive director of the Poverty Action Lab.

"With randomization," she says, "you're forced to work every day with people on the ground. You're not sitting in your office downloading data and working regressions."

But in recent years, a number of prominent scholars in the field have argued that such work, in and of itself, represents a dead end. Poor countries aren't laboratories. Policy makers need advice, not test results. And, most significantly, small interventions won't achieve much if deeper political and economic dysfunction exists.

"The emphasis on field experiments and RCTs, if it doesn't come with an appreciation of why nations fail, risks trivializing the field of development economics," says Daron Acemoglu, an economist who is also at MIT.

Randomistas came along at a time when frustration with foreign-aid policies was running high. But development economics has always been vulnerable to criticism. Ever since President Harry S. Truman proposed the creation of a development-assistance program for the poorer countries of the world—designed in part to promote capitalism over communism—aid has had both a paternalistic and a political dimension, which some felt have undermined its goals.

William Easterly, an economist at New York University and one of the more prominent aid skeptics, argues that international aid agencies are populated with technocrats who treat poor countries as blank slates for their development schemes. Even the World Bank has found fault, in retrospect, with some of its own development projects, saying they were "undertaken in a highly centralized, top-down manner by project managers sitting in distant government ministries and headquarters."

During the 1980s, economists and aid agencies shifted their attention toward market reforms, believing that less regulation, rather than big aid projects, would put poor nations on the path to development. But that effort, too, was criticized for failing to take into account the specific situations of the countries it was purporting to help.

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Randomistas embodied a new approach, promising to use the tools of science to bring rigor to a field that had fallen victim to cookbook thinking and failed to evaluate its actions. The seemingly unsexy idea of running randomized control trials turned development economics on its head. Grand theories were discarded. Complex models involving enormous data sets and cross-country comparisons were no longer needed. Instead, economists would test one intervention at a time, looking for evidence on whether they succeeded or not.

"In my mind, randomistas made two contributions," says Dani Rodrik, a professor of social science at the Institute for Advanced Study and a leading development economist. "One is the experiment itself. Second is this notion that because you don't know what's going to work, you need to be fishing for ideas."

**R**andomized control trials, which have their roots in science, particularly medicine, where they are often used to measure the effects of interventions, such as new drugs. The idea is to

compare a randomly chosen group receiving treatment with a group that does not. The difference between the two marks the effect of the intervention.

Michael Kremer, who was then an economist at MIT, was one of the first to apply the technique to the world of development. In the mid-1990s, he and colleagues began measuring whether providing textbooks to randomly selected rural schools in Kenya improved students' test scores. Their findings—that the textbooks benefited only the strongest students—challenged conventional wisdom and suggested the power that experimentation could have on education policies.

Kremer followed that study with others, which looked at deworming as well as education. In many developing countries, parasitic worm infections are widespread, causing children to lose school time because of illness. Those experiments, done in Kenya, not only determined which deworming efforts were more effective but also demonstrated an increase in adult earnings among former students who had been dewormed. That was hard evidence, to some, that deworming should be part of education policy.

Another powerful randomized study, done in the 1990s in Mexico, demonstrated the effectiveness of giving cash grants to women who send their children to school and participate in preventive health programs.

The appeal of small-scale experimentation is evident in *Poor Economics: A Radical Rethinking of the Way to Fight Global Poverty*, published in 2011 by Duflo and Banerjee, creators of the Poverty Action Lab. In reassuring and accessible prose, they sympathize with those who feel overwhelmed by the challenge of helping the poor. Rather than worry about poverty writ large, they argue, think about the situation as "a set of concrete problems that, once properly identified and understood, can be solved one at a time."

*Poor Economics* illustrates how randomistas burrow into the lives of poor people in developing countries to determine why they often do not do what appears to be in their best interest: vaccinate

their children, buy fertilizer for their crops, chlorinate their water, save money when they can. Through detailed case studies, the economists show the ways in which individual biases, weak systems, lack of accountability, and a host of other challenges hold people back.

Duflo and Banerjee note that Western governments have tried to overcome those challenges for their own citizens in part by designing systems with built-in accountability and incentives, such as forced retirement savings through a social-security tax. Devising programs that "nudge" people and organizations in the right direction could be one way to improve health, education, and agriculture in developing countries.

"To have something more concrete and useful to say to a policy maker" is appealing, says Justin Sandefur, a research fellow at the Center for Global Development, a Washington-based think tank. "There was a sense that cross-country evidence wasn't delivering any actionable answers."

In a speech during a 10th-anniversary celebration of J-PAL, Kremer spoke glowingly of the impact of randomized evaluations on development economics. "This approach has radically changed day-to-day life for many economists," he said. "It's broadened the concept of what economists do—from crunching data and writing models to talking to farmers and inspecting latrines."

**B**ut some economists argue that this kind of work doesn't fit in their field. "We've always tried to develop and test models about human behavior," says Lant Pritchett, a professor of the practice of international development at Harvard University's Kennedy School of Government. "But looking down latrines in order to know whether their construction is effective or not is not what economists have done or should do."

Pritchett is among the economists who have questioned the value and the rigor of randomized control trials. If you limit yourself to studying those things that can be tested, they argue, you restrict the way you think about development and poverty. You may

determine the best price at which to sell insecticide-treated bed nets, but does that tell you why malaria remains prevalent in some countries?

"The method got disconnected from the important questions, and it became an end in itself" says Rodrik, of the Institute for Advanced Study.

In [a review](#) of *Poor Economics*, Mark Rosenzweig, director of Yale's Economic Growth Center, picked apart some of the claims made in the book to argue that highly praised interventions may leave the poor only slightly less poor. Other economists say the randomistas' findings are too narrow: What works in Kenya may not work in Haiti. In technical parlance that's called an external validity problem: Forces outside the zone of experimentation can affect outcomes. For policy makers, they conclude, the promises of randomized control trials are limited.

Such arguments irritate the proponents of experimentation. Glennerster calls it a "slightly phony war," pointing out that her Poverty Action Lab and similar networks do not believe that randomized experiments should be the only tool in an economist's tool kit. "It's never been a large proportion of the way any development project has been analyzed," she says.

Indeed, in *Poor Economics*, Banerjee and Duflo take care to explain how they used trial results to shape further exploration. When studying why children and teachers do not regularly show up for school in parts of rural India, for example, they unearthed complex social beliefs that see education as a lottery that pays off for only an elite few. They used this knowledge to help an Indian nonprofit educational organization create a remedial-education program.

As for whether successful efforts can be replicated elsewhere, Karlan's Innovations for Poverty Action has spun off a nonprofit group to support wider use of successful programs, like deworming. And J-PAL points to its use of researchers' findings to devise options for policy makers. It notes that half a million

people are now served by chlorine dispensers that have been shown, through years of evaluations, to be effective in getting people to purify their drinking water.

Equally important, says Glennerster, experimentation has changed the conversation around some key policy issues. For example, it was commonly believed that charging for insecticide-treated bed nets would make people more likely to use them. But researchers running randomized trials found that not to be true, causing some donor organizations and governments to reconsider their policies.

While none of this has assuaged skeptics, they do credit randomistas with pushing development economists to move toward experimentation and testing.

"I don't think we should understate the importance of the approach. They've helped clarify deep problems with the way systems work," says Nancy Birdsall, president of the Center for Global Development. Where she thinks the work falls short is in its assumption that a simple scientific method can fix real-world problems: "The notion that we could bring more rigor and expertise to a complex and adaptive system doesn't seem right to me."

This argument connects to recent research by macroeconomists, who remain focused on broader questions: Does aid work? Why do nations remain poor? What is the intersection between politics and economics on the path to development? *Why Nations Fail*, by MIT's Daron Acemoglu, and James E. Robinson, of Harvard, is the most prominent work in this recent spate of research, which blends economics, politics, and history.

Looking back centuries, Acemoglu and Robinson argue that countries without sound political systems will not advance steadily. For example, so many Latin American nations have struggled, while the United States has thrived, because their political power is not widely distributed and their economic institutions not inclusive. Without strong property rights, contract enforcement, and the like, the authors conclude, economies

cannot support drivers of growth, such as innovation, investment, and entrepreneurship.

Acemoglu respects the work of his colleagues at MIT's Poverty Action Lab. "It's in the DNA of economists to want to come up with solutions to problems, and we're not saying that interventions are totally irrelevant," he says. "But we're emphasizing that's neither the root cause of the problems, nor do you get at the root growth dynamics, through these surgical interventions."

Other economists have focused on the possible negative impact of aid on development, with some concluding that it fosters corruption, weakens institutions, and makes economies less competitive.

"I don't think you can fix someone else's economy from the outside," says Angus Deaton, a professor of economics and international affairs at Princeton University and author of *The Great Escape: Health, Wealth, and the Origins of Inequality*.

"There's a lot of stuff we can do, but it should not involve pumping large amounts of resources into countries. That has ill effects."

Easterly, of NYU, has been scrutinizing the impact of foreign aid for more than a decade. In his latest book, *The Tyranny of Experts: Economists, Dictators, and the Forgotten Rights of the Poor*, he argues that Western donors too often focus on technocratic solutions to poverty while ignoring the dysfunctional political systems in which the poor must live. Without freedom, development can never take root.

"Rights occupy such a small space in the world of development," he said during a recent Washington debate. Leaders in the aid community, whether Bill Gates or heads of the World Bank, "are doing harm by silencing rights abuses and praising autocrats."

His debate opponent, Owen Barder, a senior fellow at the Center for Global Development, accused Easterly of setting up a "straw-man enemy." Many aid organizations work to promote

democracy, Barder noted. "It's not as if donors are not trying to tackle these things."

Randomistas have little patience for those who argue that nations need to develop on their own, and that aid can do little more than alleviate suffering. "What do we do? Just walk away and say, 'We'll come back when you've got a democracy?'" asks Glennerster. Developing countries, she says, "can benefit from evidence. They have to make decisions. Let's work with them to help make better decisions."

Usually the big-picture thinkers and the small-scale experimenters talk past each other. But if there's one area in which there may be synergy, it's the growing belief that Western experts—be they economists or aid workers—have merely tools to help the poor, not the solutions.

"The emerging 'consensus' revolves not around a specific list of policies, but around how one *does* development policy," wrote Rodrik in a 2008 working paper, "The New Development Economics: We Shall Experiment, But How Shall We Learn?" Practitioners of what he dubbed "new" development economics "tend to be suspicious of claims to *ex ante* knowledge about what works and what does not work."

Aid agencies are taking this approach as well. The World Bank has adopted evidence-based decision making through an in-house project-evaluation team. The U.S. Agency for International Development now runs an innovation fund to support creative and effective development ideas.

Meanwhile, the Poverty Action Lab created a policy group in 2009 to work with governments and aid groups to figure out how to translate evidence into action. In his 10th-anniversary speech, Kremer told a self-deprecating story about how he had presented his deworming studies to seemingly enthusiastic policy makers in Kenya, only to discover later that they had done little with his findings. That inspired him and Duflo to create a nonprofit group, Deworm the World, to work with governments. "While evidence

can play a very important role for certain policy makers," he said, "it's far from enough on its own."

Pritchett, of the Kennedy School, has advocated a similar approach with an idea called problem-driven iterative adaptation. Economists work with practitioners and policy makers in a country to define a problem, organize a possible solution, and build in a quick feedback loop. By refining what works, he says, they can help build "organizational capability" into institutions like postal services and tax-collection agencies.

Another idea, which Birdsall has been promoting at the Center for Global Development, is called [Cash on Delivery](#). It is one of several relatively new programs focused on results-based aid but leaving design up to recipients. "One of the things that's happening in the aid system," she says, "is much more focus on measuring outcomes."

Sandefur, also of the Center for Global Development, is representative of this new type of economist. He is working with the government of Tanzania and a nongovernmental organization to determine whether providing land titles to poor people can encourage entrepreneurship. "In an ideal world, we're providing the ministry of lands with how to price and how to roll out land ownership in urban areas," he says.

Asked if he could have done this work a generation ago, he says no: "There would have been a strong emphasis on building a complex theoretical model on how this would all work out." The way he sees it: "You can ask big questions and not get any real answers, or you can ask smaller questions and get credible evidence."

*Beth McMurtrie is a senior writer at The Chronicle.*

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