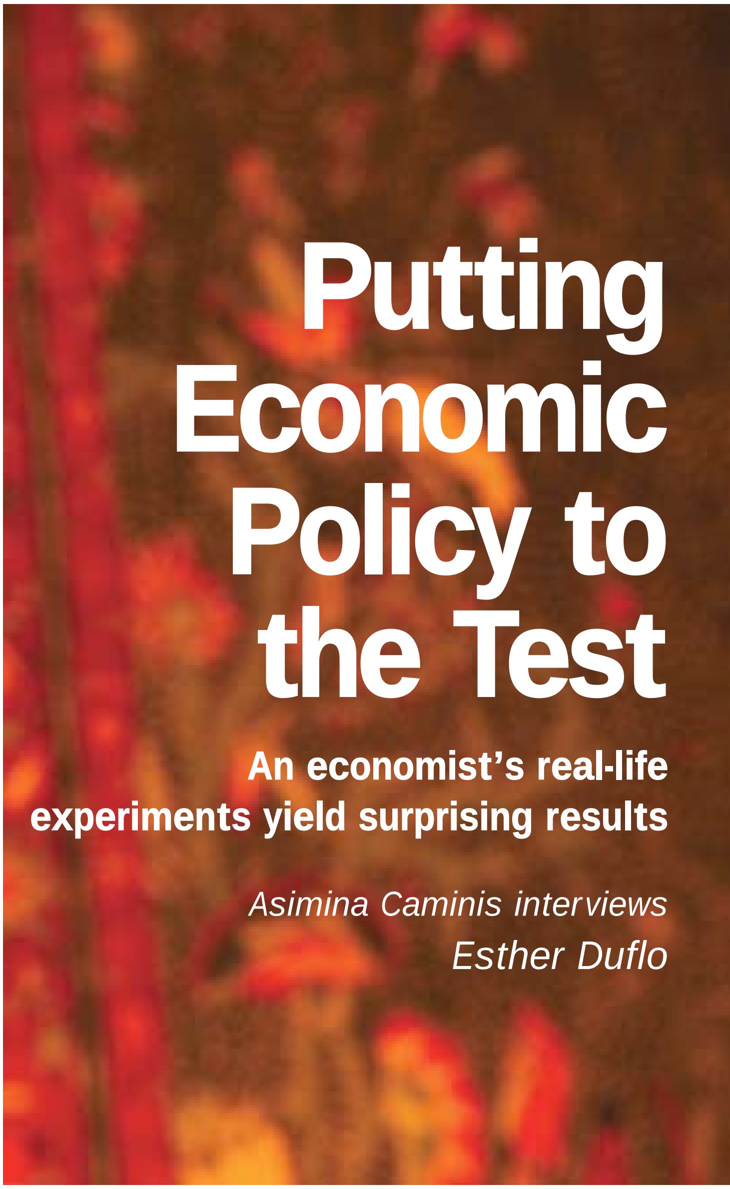

Putting Economic Policy to the Test

An economist's real-life experiments yield surprising results

Asimina Caminis interviews Esther Duflo

"IT IS A CAPITAL MISTAKE to theorize before one has data," Sherlock Holmes remarks to his friend Dr. Watson in "A Scandal in Bohemia." Development economist Esther Duflo would probably agree.

A slight, intense, 31-year-old with dark hair and eyes and the harried air of someone with too much to do in too little time, Duflo, a native of France, is part of a rising group of young economists who are questioning traditional development strategies. Her modest office at the Massachusetts Institute of Technology, where she is Castle Krob Development Associate Professor of Economics, is decorated with textiles from India and Indonesia, two of the developing countries in which she has done research.

Describing her methods, Duflo says that she works "in a very micro way. My projects always consider one simple, stripped-down question having to do with how people react within a certain context." Typically, her question has to do with how a selected program in a developing country has affected the poor people it was designed to benefit. She amasses huge amounts of data in the field, in collaboration with local nongovernmental organizations (NGOs) and academics, and then subjects the data to rigorous econometric analysis to determine the program's impact.

Although she considers her questions "simple," her goal is anything but. Indeed, research carried out by Duflo and her peers is challenging some of the cherished assumptions on which many development policies are based. For example, in a study of Indonesia's massive school construction program (the country built over 61,000 primary schools in 1974–78), Duflo found that, while workers who were educated in the new schools received higher wages, the wages of older workers in the same districts increased more slowly from year to year, apparently because the market was flooded with graduates from the new schools and capital formation did not keep up with the increase in human capital. These findings, she concluded, "are important because, contrary to what is often assumed (on the basis of the experience of Southeast Asian countries), acceleration in the rate of accumulation of human capital is not necessarily accompanied by economic growth."

Studying real people in real environments is central to Duflo's approach. In a paper she wrote in 2003, "Poor but Rational?" she speculates that there may be "more to learn about human behavior from the choices made by Kenyan farmers confronted with a real choice than from those made by American undergraduates in laboratory conditions."

According to Duflo, the field of development economics has experienced a resurgence in the past 10 years. "Development economics was reborn from the understanding that being poor changes people's incentives and the set of constraints in which people operate." Although she still believes that the model of *homo economicus*—the rational, internally consistent, self-interested, and forward-looking agent of neoclassical economics—goes a long way toward explaining economic behavior, she thinks that it does not explain everything. She argues that it is imperative for economists to pay more attention to other forces that affect people's decisions, such as a lack of information, problems processing information, or even inertia.

Duflo studied history and economics at the prestigious Ecole normale supérieure in Paris. She had always been active in NGOs as a volunteer and was planning to become an academic historian, working for NGOs in her leisure time, when she was struck by the absurdity of devoting most of her time to something that no longer satisfied her, while turning her real passion into a hobby. "I asked myself why wouldn't I be active and making a difference 100 percent of my time instead of 20 percent?" So she decided to go into politics. But her life took another turn when she spent a year in Russia working on her master's thesis, on the Soviet Union's first five-year plan. Moonlighting as a research assistant to economists Jeffrey Sachs and Daniel Cohen, who were doing projects there, she discovered that economics was the "best of both worlds" because "it was

to serving on the board of BREAD—the Bureau for Research in Economic Analysis of Development—a nonprofit organization dedicated to encouraging research and scholarship in development economics. In 2002, Duflo won the Elaine Bennett Research Prize in Economics, which is awarded in recognition of outstanding economic research by a woman at the beginning of her career, and, in 2003, she was nominated for best young French economist by Le Cercle des Economistes and the French newspaper *Le Monde*.

Duflo and two of her MIT colleagues, Abhijit Banerjee and Sendhil Mullainathan, recently founded the Poverty Action Lab, whose purpose is to fund randomized evaluations of projects. The objective, she said, is to set a new standard of rigorous evaluation to answer key policy questions, such as "What are the most effective approaches to reducing the spread of AIDS, increasing girls' attendance at school, and promoting food security?" The three economists believe that the use of randomized trials to evaluate social policies—like the medical profession's use of randomized trials to evaluate new drugs—will provide "transparent and scientifically sound answers" and that it has the "potential to dramatically improve the policies we pursue to alleviate poverty and to generate long-term support for these policies." The lab will work with international agencies, NGOs, and governments, to evaluate their poverty relief programs, and will disseminate research results to national and international policymakers and help other entities build their capacity to perform their own randomized evaluations. With financial and administrative support from MIT, the lab is trying to raise an endowment of $5 million; Duflo says $250,000 a year will be needed for staffing and expenses, while projects will be funded individually.

more practically oriented than history" and she could do things that had an impact in a way that made the best use of her specific abilities. "I'm a lousy manager," she says ruefully. She returned to France to do a master's degree in economics and then set off for MIT, where she got her Ph.D.

Both Duflo's mother and her sister, Annie, are also active in development work. Her mother is with a small French NGO, l'Appel, which works with children who are victims of armed conflicts, while Annie, who is one of Duflo's research assistants, will begin working toward a public policy degree at Harvard University's Kennedy School this fall. "She doesn't want to be an academic," Duflo smiles, "she wants to be a doer full time."

If research in the field counts as "doing," Duflo is a big doer. Based on her research, she has produced a large number of papers and articles for journals and won several research fellowships and grants. She writes a regular column for the French newspaper *Libération* and serves on the editorial board of several academic journals. She is a member of the John D. and Catherine T. MacArthur Network on the Costs of Inequality, Faculty Research Fellow at the U.S. National Bureau of Economic Research, and Research Fellow at the Center for Economic and Policy Research, in addition

Although randomized evaluations are costly, "they are no more costly than other types of surveys and are far cheaper than pursuing ineffective policies," points out Michael Kremer, Professor of Economics at Harvard University and an occasional collaborator of Duflo's, in his paper "Randomized Evaluations of Educational Programs in Developing Countries: Some Lessons."

Of the current approaches of international organizations like the World Bank and the IMF to development and poverty alleviation, Duflo warns that the "general budget support" these institutions provide to poor

How do people make decisions?

Although Duflo considers herself a development economist, she has "one little sideline"—retirement savings. This sideline is, however, linked to the rest of what she does because, "first, savings is a big problem in developing countries as well as developed countries, and, second, in the context of retirement savings, we are interested in studying peer effects and learning, which are very important in understanding development problems like technology adoption."

In an experiment in a large university whose employees showed little interest in its 401(k) plan (a retirement saving plan), Duflo and economist Emmanuel Saez offered monetary rewards to randomly selected employees to motivate them to attend a university-sponsored benefits information fair. The attendance rate of those who received the payments tripled, and that of their colleagues doubled, compared with a control group. After the fair, enrollment in the 401(k) was significantly higher in the departments where individuals had received monetary rewards—even among the employees who had not received them. Duflo and Saez found that the decision to participate in the plan was due neither to a sophisticated process of gathering information and considering alternatives nor to "pure economic incentives," but, rather, to peer effects—both norm effects (peer pressure) and learning effects.

Duflo explains that it was not so much the specific lessons learned from these experiments that could be applied to developing countries as the methods used: "I was interested in whether people imitate each other, learn from each other. This is a difficult problem because you see people who are close to each other doing the same thing, but it could be either because they are imitating each other or because they are subject to the same environment. The question is, how are you going to distinguish between the two? Obviously, the answer to this question is important for policy because if there are learning effects there are multiplier effects. That means you can invest a lot in training one person because you know that there are going to be externalities—spillovers to other people."

countries "has limitations." It can be evaluated in a "very useful but narrow sense of accounting for the money and making sure the money didn't go to Switzerland. But you cannot know what difference your actions made because you have no counterfactual—what would have happened had the money not been made available." She finds the Bank and the IMF guilty of "a bit of a logic breach when they say they want to achieve results by providing conditional loans. But they have no way to evaluate whether they were successful or not, so this is open to endless renegotiation." She concedes that the IMF "is in a bit of a bind because it's not going to randomly assign monetary policy." As for the international community's frequently invoked Millennium Development Goals, she says she is surprised "at how useful" they have been, although she sees their primary utility as "a rhetorical device that focuses attention on these problems in the developing world."

Unlike the policies of the Bank and the IMF, she continues, the Bush administration's U.S. Millennium Challenge Account "is internally consistent because it will provide general budget support only to countries that are reasonably well functioning," to ensure that it will be spent well. But she criticizes this approach for "leaving the poor behind" in countries that do not function well—in effect, making people there accountable for the actions of leaders they may not have elected—and for using "ideological, imprecise, and malleable criteria" for determining how well countries are functioning. She asserts that some aid has to continue to flow even to poorly functioning countries, perhaps "through very targeted programs that can be evaluated."

Forging an effective development strategy, Duflo believes, requires rigorous project evaluation. She says that she is not seeking to promote any given program but, rather, to get international organizations "to realize that they have a responsibility to generate knowledge on what works and what doesn't. This knowledge is an international public good, because once you find out that one thing works, you have at least a presumption that it might work somewhere else." Her hope is that the international organizations will step up efforts to have rigorous evaluations of their own projects, as well as the projects of others, "that are not limited to answering the question 'did our program happen the way we wanted it to happen'—obviously a very important question in its own right—but, also, 'did we accomplish what we set out to accomplish?'"

Many of Duflo's projects focus on gender-related issues. She has studied the impact of South Africa's pension reform in the early 1990s, which expanded benefits and coverage for the country's black population, on girls' health (in households with extended families, girls' health improved when grandmothers—but not grandfathers—received pension payments, which suggests that the efficiency of public transfer programs may depend on the recipient's gender); the effect of women's and men's education on fertility and child mortality in Indonesia (women's education produced a decline in fertility and was also more strongly correlated with a decline in child mortality than men's education, but the latter could be due to the fact that "educated women get better husbands"); and the impact of women's leadership on policy decisions in West Bengal, which, in a kind of affirmative action program, reserved one-third of all leadership positions on village councils for women (the women leaders invested more in fuel and water than the male leaders and less in informal education, apparently reflecting the preferences of their female constituents).

Asked whether she thinks women make better leaders than men, she replies that this was not what she was trying to find out with the West Bengal project. "I was interested in whether putting women in these positions had any sort of impact, and it did. So then you have to think, well, do I want that impact? My paper doesn't answer that question. It's the government that has to answer it." In her personal opinion, however, "it's good that sometimes women's preferences get taken into account, because, in my utility function, women and men have about equal weight." In fact, she says that her research has convinced her that some affirmative action in favor of women has a positive impact. "This is where my work has made a difference in the way I think—at least one person who got influenced by my work is myself," she laughs.

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Economics she describes as still a male-dominated field. "I think it's a combination of things. First, it's a bit scientific, and many women are not going into scientific fields to start with. Second, it has a connection to politics and to power, and women are less involved in these fields. Third, I think fields evolve their own culture as a function of who is there, and economics is a relatively macho culture. There is a tradition of being relatively aggressive in seminars, which is not suited to all women." Duflo says that not too many women "are happy to play by the rules of that game, but I happen not to mind." Although she seems refreshingly unassuming for a professional in a field known for big egos, one can easily imagine her holding her own in an economic debate. And clearly she is not afraid of taking risks: she mentions in passing that rock climbing is a current hobby and that she was a gymnast between the ages of 11 and 17 (a broken neck put an end to her gymnastics career).

Duflo travels internationally about 10 weeks a year. This past summer, she went to Kenya to conduct research on fertilizer use by farmers and on HIV prevention. Then she went to India to do research, in collaboration with local NGO Seva Mandir, on teachers' incentives in Udaipur, Rajasthan, a desperately poor area with a 40 percent absenteeism rate. Teachers in informal schools were given cameras and asked to take photos of their pupils twice a day, every morning and every evening; they received a bonus based on how many pictures they took. Duflo's objective was to find out whether financial incentives could reduce teacher absenteeism, and, if so, whether improved teacher attendance would lead to a decline in pupil absenteeism and higher test scores.

Of all the developing countries she has worked in, India, she readily admits, is her favorite. It has "tremendous energy. There is a lot happening in India now. It's growing fast. There are some bad things happening as well—inequality is growing, there are communal tensions—but, on balance, it is a great place to work."

What does she hope to accomplish through her work? She answers without hesitation. "I would like us to know more about what we can do. When someone of good will comes and wants to do something to affect education or the role of women or local governments, I want them to have a menu of things they can experiment with. In the medium term, I want to persuade other people to spend more energy working on that, maybe financing fewer programs, but evaluating the ones they do seriously, using randomized evaluations." Will she continue with her "micro" approach? "For the time being, this is where I am." ■

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