# Special Symposium on Empirical Strategies in International Development Research

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## EMPIRICAL STRATEGIES IN INTERNATIONAL DEVELOPMENT RESEARCH: AN INTRODUCTION

Institutions as rule systems shape actors' incentives, and hence choices. Yet, demonstrating this empirically has proven tricky. Development scholars have increasingly debated whether institutions and, by extension, policies have an independent, causal effect on behavior and, therefore, on outcomes of interest such as health, education, nutrition, access to credit, and capital investments. Researchers have grappled with the possibility that omitted variables and reverse causation confound their ability to make inferences about the ultimate effect of institutions and policies on development.

At the heart of this dilemma is the so-called Riker problem (Riker, 1980). Institutions shape human behavior, but at the same time are themselves the outcomes of human choices. Hence, it can be problematic to claim, based on correlations or anecdotal evidence alone, that they have an independent effect on behavior. Development scholars have since invested considerable effort in trying to pin down the direction of causality from observational data through innovative research strategies. They have drawn on the econometric literature on selection and endogeneity issues (Heckman, 1979), as well as the potential outcomes framework (Rubin, 1974). There has been particular enthusiasm about instrumental variables, matching methods, and regression discontinuity.

However, skeptics question the extent to which these techniques can truly address causal inference. Experimentalists note that analyses that employ observational data do not provide reliable information about the nature and magnitude of the bias that potentially plagues their findings (Gerber, Green, & Kaplan, 2004). Paralleling this development, donors and development practitioners have begun to demand more solid evidence for whether the projects they invest in actually produce the intended outcomes.

The burgeoning area of field experiments that employ randomized control trials (RCTs) has addressed these concerns, while raising new ones. The randomization of interventions provides superior inferences about causality over studies that use observational data. Random assignment ensures that the expected pretreatment level of the outcome of interest will be identical across treatment and control groups, therefore eliminating the possibility that omitted variables will confound the finding that there are statistically significant posttreatment differences between these groups.

Propelled by the work of pioneering researchers affiliated with the Poverty Action Lab at the Massachusetts Institute of Technology, field experiments in development studies have increasingly evaluated a disparate set of policy questions in diverse settings. For example, Chattopadhyay and Duflo (2004) evaluate the effect

of randomly assigned female representation at the village level on public goods provision in West Bengal and Rajasthan, India. Olken (2010) randomly assigned representative institutions versus direct democracy at the local level in Indonesia to evaluate decisions about development projects. Beath, Enikolopov, and Christia (2012) did something similar in Afghanistan. There have been dozens of analyses on the effects of microfinance on economic development and gender equity across the developing world.

Nonetheless, field experiments also present their own weaknesses. Some wonder if concern over omitted variables may have led us to omit the most important questions (Rodden, 2009), and instead relegate attention to questions in which only a narrow set of variables can be manipulated by researchers at a reasonable cost. There have also been concerns voiced about external validity: the potential to scale up findings and extrapolate them from one site to others (in this context, see the debate between Cook [2014] and Pirog [2014] published in JPAM).

Perhaps the thorniest concerns are practical, however. In order to randomize treatment variables in field experiments that are at all meaningful, researchers must partner with governments, aid agencies, and development banks. Yet, the incentives of funders and researchers are not always perfectly aligned. Also, random assignment is ultimately artificial, and usually temporary. This does not parallel the historical evolution of political institutions and practices that are organic and more permanent. For example, how can a researcher possibly randomize an institution like proportional representation, or simulate what it is like for a country to be showered with flows of foreign direct investment or foreign aid, let alone capture their sophisticated interactive effects?

These points are well taken; some researchers have sought to directly investigate the trade-offs between RCT and observational studies. Consider a recent article in this journal. By exploiting within-study comparisons, Bifulco (2012) seeks to find out if nonexperimental techniques can yield estimates that match those generated by RCT studies. In conducting an evaluation of two interdistrict magnet schools, he finds that the estimates from the nonexperimental study only converge to those produced by the experimental one when the former is implemented with pretreatment outcome measures. Yet, this identification strategy does not completely eliminate bias, which is seriously amplified when the comparison group includes students from districts with student body characteristics that differ from those of the treatment group.

This underlines the fact that there really is no silver bullet. Rather than assume that one approach is inherently superior to another, scholars and practitioners should continue to assess the trade-offs of using RCT techniques versus nonexperimental estimators—even when those estimators are implemented against the yardstick of randomization.

The four papers featured in this symposium speak to the issues outlined above. Two papers employ the RCT approach to explore a range of issues. The paper by Feigenberg, Field, Pande, Rigol, and Sarkar asks how meeting frequency (a proxy for social capital) influences repayment levels across multiple lending cycles in microfinance groups located in India. Lucas, McEwan, Ngware, and Oketch ask if so-called Reading to Learn interventions improved early-grade literacy in Kenya and Uganda. The other two papers exploit innovative natural and quasi-natural interventions. Given that Lesotho reserved at random 30 percent of all newly formed single-member local electoral divisions for female candidates, Clayton investigates if these gender quotas affect perceptions about the efficacy of traditional leaders. Baccini, Li, and Mirkina exploit exogenous timing in the rollout of a new fiscal regime and the synthetic counterfactual approach to identify whether tax cuts have increased foreign direct investment in Russia.

We invite readers to enjoy this intellectually stimulating work. We hope this symposium helps move forward our understanding of international development and leads to superior and more effective policy interventions.

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