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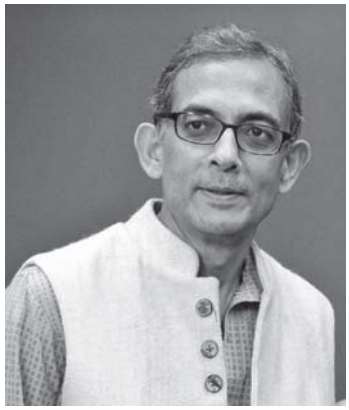
ECONOMICS

This year's (2019) Nobel Prize in Economics was awarded to Abhijit Banerjee (MIT), Esther Duflo (MIT) and Michael Kremer (Harvard University)"for their experimental approach to alleviating global poverty." The choice of the winners' works led to huge amount of discussions in the global economics community. Some years' Nobel prizes were less contentious. This year was not one of them. The main contribution of Banerjee et al. was no less than a revolution in how economists thought about the whole field of development economics. The standard toolkit in applied microeconomics and development economics was much more theory-dependent and was deductive in its core. If a theory does not work in terms of matching data which was notorious in social science for lack of reliability, then economists would simply move on to a new theory. It has now changed due to two major factors. One, credible data started being gathered at an unprecedented rate, leading to data-intensive analysis. Two, economists started experimenting directly in real-life economic scenarios, testing predictions of theoretical models and often going beyond that, testing whether common-sensical policy interventions actually work or not (hint: often they don't; economics is more complex than navel-gazing[1]).



Abhijit Banerjee

None of the winners were initially doing experimental work at the beginning of their careers. In the beginning of 90s, Kremer produced his now famous O-ring theory of economic development (the theory was named after the infamous Challenger shuttle disaster in 1986) along with other influential works on economic growth and technological change. Like many other economists, Abhijit Banerjee's one of the most important works was in theoretical economics, in which he explained why seemingly rational people might simply follow a crowd ignoring their own information, resulting the society collectively getting into an inefficient equilibrium. While these theoretical ideas were popping up, econometricians (econometrics can be roughly summarized as statistical analysis for observational non-experimental and typically small-sized data) just began to go beyond correlation/association and start looking into *causality*. Causality in social science is more complex than it sounds. For example, suppose a school runs an interest survey among its final year students to elicit responses on whether they would like to take up special training for the final exam. Suppose a group of students express their interests and get admitted to a camp for special training and let's assume that eventually they indeed did better on average than the students who did not go for the training. Can we directly attribute the difference in grades between these two groups of students (those who went for the camp and those who did not) to the effect of the training? The answer is a resounding no. The reason is that it is quite possible that only those students expressed interests who were more interested in doing good to begin with and therefore would exert more effort either way. Even in absence of the training camp, probably they would have done better. Technically, such a sample suffers from *selection bias* and the *treatment* is not *randomly assigned*.

Esther Duflo

Michael Kremer

The randomistsas (as now the whole group of people who engage in deliberate intervention to tease out causal effects) took this point very seriously, and Banerjee, Duflo and Kremer became the face of the so-called RCTs or *Randomized Controlled Trials* which aims to randomly assign treatments (in the form of interventions like giving lentils and metal plates for vaccination vs. no treatment in the *control group*)[2] to estimate causal effects of interventions in a credible and statistically robust way. As a toolkit it is not very new and had been in use for quite some time in medicine. Banerjee et al. brought it at the core of economics and essentially

made it the mainstream approach almost simultaneously dethroning other approaches. The tool was very appealing and while the execution is very costly (since one needs to intervene at a region-level with multi-period observations; often these are multi-country studies[3]), the main message can be very easily conveyed to policy-makers. So it gained a lot of tractions worldwide due to its intuitive simplicity and appeal. Thus the Nobel committee noted *'…it involves dividing this issue into smaller, more manageable, questions – for example, the most effective interventions for improving educational outcomes or child health. They have shown that these smaller, more precise, questions are often best answered via carefully designed experiments among the people who are most affected.'*[4]

In the end, we note that like all other methods, RCTs have their own pitfalls and shortcomings which we do not discuss here as we can do justice to the nuances due to lack of space. However, it definitely changed the way development economics is done, the way causality is discussed in economics and social sciences in general and also, how seemingly obvious policies can be dead-wrong. It is noteworthy that Esther Duflo became the youngest Nobel-prize winner in economics and the second female laureate, creating a role model for female economists as was long wanted. Finally, on a personal note, the author of this article was taught by Abhijit Banerjee's father Prof. Dipak Banerjee in Presidency College, Kolkata (now university). DB sir (as we used to call him) is no more, but I am sure he would have been proud as another feather was added to the proverbial hat of Presidency College. An open-ended question one might wonder about is how come such a small economics department produce so many top-rated economists with multiple Nobel-laureates (Abhijit and Amartya Sen). The answer might shed a lot of light on innovations in developing countries, knowledge transmission via social networks and migration of skilled workers, all burning questions of the present day. ❐

[1]https://www.jstor.org/stable/23644707?seq=1#metadata_info_tab_contents

[2]https://www.bmj.com/content/340/bmj.c2220

[3]https://science.sciencemag.org/content/348/6236/1260799

[4]https://www.nobelprize.org/prizes/economic-sciences/2019/press-release/

Anindya S. Chakrabarti

Economics area, IIM Ahmedabad

e-mail : anindyac@üma.ac.in