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Outline of *10 Things to Know about External Validity*

This guide will discuss External Validity.

1. What is External Validity?
   1. We get results, and it’s important to understand to whom those results are valid
   2. Classic example of econ or psych lab experiments on college students
   3. Now we think a lot about how a community-driven development program in India might apply in West Africa, or Central America
   4. Particularly important when making policy recommendations that come from research
   5. Definition
   6. Sometimes considered as a cheap shot to take at a well-identified study, but also massively important.
2. How is this different than Internal Validity?
   1. Internal validity is about the quality of causal inferences being made
   2. Link to 10 things about identification
3. Navigating the trade-offs between internal and external validity
   1. Give the basics
   2. Discuss some of the Manski/Imbens debate
4. The easiest way to see to whom your results apply is by comparing covariates
   1. Examine the covariate profile of the units in the study
   2. Examine the covariates of different potential populations of interested
   3. However…
5. Strategic Behavior can scuttle your extrapolations (Partial equilibrium effects)
   1. Even if you have a covariate profile from which you want to generalize effects you have found, you have to be careful that it makes sense that a larger sample or population would act consistently with the dynamic identified
   2. Sometimes effects only work when they are applied to some people; for example, if there’s a jobs program that functions very well (as compared to those who didn’t receive it), what would happen if everyone received the training? If there are constant effects we would expect no effects at all. Perhaps it only works for some people.
   3. This has an ethical component as well
6. A sample from a population
   1. A way to think about external validity: We know that we can make inferences about population averages when we take a random sample
   2. But we know that when the sample is non-random, as in one country out of many potential.
7. Don’t confuse External Validity and Construct Validity
   1. The latter is whether you are actually measuring what you say you are.
8. Don’t confused External Validity and Reliability
   1. The latter is about how well your measurement strategy produces the
9. Replication is important
   1. Try to replicate studies in places that look very different, but also in some that look similar.
10. Thinking beyond average effects
    1. Frequentist paradigm emphasizes means, because this is what we have the most well-developed, consistent and unbiased estimators for. Even for small sub-groups, we are still estimating mean treatment effects
    2. We can make individual level predictions, but again these are in expectation; we know that a person will not be exposed to a program 10,000 times, just once.
    3. It’s also about time (do things we learn about the past extend to the future?). Does an individual’s potential outcomes change over time (of course they do).

Articles to mention (more to come)

* Bisbee, Dehejia, Pop-Eleches and Samii (2015). "Local Instruments, Global Extrapolation: External Validity of the Same-Sex-Fertilty-Labor Supply Local Average Treatment Effect
* Dehejia, Rajeev; Cristian Pop-Eleches & Cyrus Samii. (2015). “From Local to Global: External Validity in a Fertility Natural Experiment.”
* Manski/Deaton and Imbens debate (from 2013); cites here: http://onlinelibrary.wiley.com/doi/10.1111/ecoj.2013.123.issue-570/issuetoc
* Aronow, Peter M., and Cyrus Samii. "Does Regression Produce Representative Estimates of Causal Effects?." American Journal of Political Science (2015).
* Medicine review in Lancet (Rothwell, 2005) : <http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(04)17670-8/abstract?cc=y>=