Course Description

We will discuss and employ various statistical techniques to estimate and analyze causal impacts of policies: difference in differences, regression discontinuity design, propensity score matching, randomized control trials, and instrumental variables. The econometrics courses of the program are a prerequisite for this course. While participants may feel free to use the free statistical software R or Python for their own work, they are likely to be confronted with code in Stata as they will replicate examples from the literature and present their insights. In addition, there will be a midterm and a final exam. Participants are expected to have read the indicated literature before the classes and to record their presentations and watch those of others in advance so that in the time together we can focus on questions, discussion, and applications.

For an overview:

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Introduction

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• Okeke, Edward N. (2023). When a Doctor Falls from the Sky: The Impact of Easing Doctor Supply Constraints on Mortality. *American Economic Review*, 113(3):585-627.

Statistical power, surveys and Hawthorne effects

• Bloom, Howard S. (1995). Minimum detectable effects: A simple way to report the statistical power of experimental designs. *Evaluation Review*, 19(5):547–556.
• Blair, Graeme, Jasper Cooper, Alexander Coppock, and Macartan Humphreys (2019). Declaring and diagnosing research designs. *American Journal of Political Science*, 113(3):838–859.
• Deaton, Angus (1997). The Analysis of Household Surveys. a Microeconomic Approach to Development Policy. Johns Hopkins University Press, Baltimore, MD.
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IV and RDD

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Quantile regressions and heterogeneity
• Koenker, Roger and Kevin Hallock (2001). Quantile regression. *Journal of Economic Perspectives*, 15(4):143–156.

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