Regression Discontinuity Designs
ICPSR – Summer Program
June 15–17, 2015 – Ann Arbor, Michigan
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1 Basic Information

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Schedule: Mon 15–Jun through Wed 17–Jun, 2015 (3 days)
9.00pm–12.00pm & 1.00pm–4.00pm

Website: http://www.icpsr.umich.edu/icpsrweb/sumprog/courses/0187

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2 Overview

The goal of this workshop is to give an introduction to standard and recent methodological developments in the analysis and interpretation of regression discontinuity (RD) designs. The course focuses on methodology and empirical practice, and will not discuss much of the statistical and econometric theory underlying the results. A brief description of the course, along with references to further readings, is given below.

It is assumed that participants have elementary working knowledge of statistics, econometrics and policy evaluation. It would be useful, but not required, if participants were familiar with basic results from the literature on program evaluation and treatment effects at the level of Wooldridge (2010). This course is nonetheless meant to be self-contained and hence most underlying statistics/econometrics concepts and results are introduced and explained in class.

There are several review articles on RD methodology and empirical practices. This course will discuss, and update as appropriate, topics in Imbens and Lemieux (2008) and Lee and Lemieux (2010). Since these reviews do not cover many of the most recent methodological results available in the literature, we are currently working on two up-to-date reviews on RD methodology (Skovron and Titiunik, 2015; Cattaneo and Titiunik, 2015), which will be the main focus of this workshop.
3 Software

The workshop will employ several empirical illustrations, which will be analyzed using Stata. The following Stata modules/commands will be used:

- **rdrobust**: RD inference employing local polynomial and partitioning methods. See Calonico, Cattaneo, and Titiunik (2014a, 2015b) for introductions.
- **rddensity**: Manipulation testing for RD designs. See Cattaneo, Jansson, and Ma (2015b) for an introduction.
- **rdlocrand**: RD inference employing randomization inference methods. See Cattaneo, Titiunik, and Vazquez-Bare (2015b) for an introduction.

Further details (including related R packages) may be found at:

https://sites.google.com/site/rdpackages

Please make sure you have Stata and the above modules/commands installed and fully functional in your personal computer. Datasets and do-files will be provided in advance.

4 Outline, Schedule & Background References

This section gives an overview of the topics covered. We also provide optional readings are (whenever possible only review papers are cited for brevity).


09.00pm – 12.00pm: Causal Inference and Policy Evaluation.
01.00pm – 04.00pm: Introduction to RD designs.


**Day 2 (Tue Jun 16, 2015): Regression Discontinuity Designs**


09.00pm – 12.00pm: Graphical presentation and falsification.
01.00pm – 04.00pm: Standard local polynomial methods and applications.


Recent developments for RD designs. Robust local polynomial methods. Local randomized methods. Examples and applications.

09.00am – 12.00pm: Robust local polynomial methods.
01.00pm – 04.00pm: Randomization inference methods.

Background references: Calonico, Cattaneo, and Titiunik (2014b,a, 2015b), Cattaneo, Frandsen, and Titiunik (2015), Cattaneo, Titiunik, and Vazquez-Bare (2015a,b).

References


