CS & IC Treatment Evaluation (Econometrics II)
0.Organization

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Objective

- ▶ for students with an interest in econometric methods for the evaluation of (public) policies
- ▶ old name: Econometrics II
- ▶ builds on the courses *Empirische Wirtschaftsforschung* and *Econometrics I*
- ▶ students should be familiar with basic probability theory, statistics, regression analysis and Stata
- ▶ course (CS): theory and methods
- ▶ intensifying course (IC): applications, working with data
- ▶ highly recommended to take both course and intensifying course in the same semester!

Topics

- what is Treatment Evaluation?
- Rubin causal model (RCM)
- randomized control trials (RCT)
- matching
- fixed-effects estimation (FE)
- difference-in-differences estimator (DiD)
- instrumental variable (IV) approach
- regression discontinuity design (RDD)

Grading and attendance

- ▶ course
  - ▶ exam (30 %)
  - ▶ classroom presentation (20 %)
  - ▶ Part A of the article report (50 %)
- ▶ intensifying course
  - ▶ homework exercises (40 %)
  - ▶ Part B of the article report (60 %)
- ▶ participants should be present at every meeting
- ▶ active participation during the lecture is rewarded with extra points

Article report and classroom presentation

- ▶ each students has to prepare a classroom presentation and write an article report of a published article of his/her choice
- ▶ content of presentation and report
  - ▶ concise statement of the evaluation (outcome, treatment, theory of change, hypothesis)
  - ▶ brief discussion of related literature and existing evidence
  - ▶ short discussion of the institutional background
  - ▶ summary of how the author goes about achieving those goals (data, evaluation method)
  - ▶ critical discussion of the identifying assumptions (critiques, praise, open questions)
  - ▶ short summary of the results (focus on the main results of the article; do not go over every robustness check & every specification)
  - ▶ discussion of potential policy implications
- ▶ presentation: 25 minutes, following a short discussion with audience
- ▶ written article report (Part A): 5 pages (about 2,200 to 2,400 words)

Replication excercise (Part B of article report)

- ▶ AIM: replicate the empirical results of your selected article
- ▶ describe what material you found and where (data and program code?)
- ▶ try to replicate the 'most important' figures and tables (some papers provide dozens of robustness and specification checks, you do not have to do all of them)
- ▶ describe your success: what did you manage to replicate excactly? what not?
- ▶ provide log-files

How to find an article

- ▶ should be published recently in a peer-reviewed economic journal
- ▶ empirical evaluation of a policy/program
- ▶ data available for replications
- ▶ method: randomized trial or natural experiment (IV, DiD, RDD), or a combination of these
- ▶ send me an email not later than <u>November 3</u> with a suggestion
  $\rightarrow$ I will check whether your suggested article is suitable, and ensure that we have a sufficient mix of methods
- ▶ recommended journals:
    - ▶ so-called Top 5: American Economic Review, Quarterly Journal of Economics, Journal of Political Economy, Econometrica, Review of Economic Studies
    - ▶ general interest journals: American Economic Journal: Applied Economics / Economic Policy, Economic Journal, Journal of the European Economic Association, Review of Economics and Statistics
    - ▶ leading field journals: Journal of Labor Economics, Journal of Health Economics, Journal of Public Economics, Journal of Development Economics, Journal of Economic History

Required Readings

1. Gertler, P.J., Martinez, S. Premand, P. Rawlings, L.B. and Vermeersch, C. M. J. (2011). *Impact Evaluation in Practice*. Washington, DC: The World Bank.

2. Angrist, J.D. and Pischke J.-S. (2010). The Credibility Revolution in Empirical Economics: How Better Research Design is Taking the Con out of Econometrics. *Journal of Economic Perspectives*, 24(2): 3–30.

3. Heckman, J.J. and Smith, J.S. (1995). Assessing the Case for Social Experiments. *Journal of Economic Perspectives*, 9(2): 85–110.

4. Angrist, J.D. and Pischke J.-S. (2008). *Mostly Harmless Econometrics: An Empiricist's Companion*. Princeton University Press, Princton, NJ.

5. Card, D.E. and Krueger, A.B. (1994). Minimum Wages and Employment: A Case Study of the Fast-Food Industry in New Jersey and Pennsylvania. *American Economic Review*, 84(4), 772–793.

6. Angrist, J.D. (2005). Instrumental Variables Methods in Experimental Criminological Research: What, Why and How. *Journal of Experimental Criminology*, 2, 1–22.

Schedule

- CS: Room K 153C, Do 10:15–11:45

Date	Topic	Readings
Oct 4	Organization, Intro	-
Oct 11	Intro	1 (Chs. 1 - 3), 4 (Ch. 2)
Oct 18	RCT	2, 3
Oct 25	RCT	2, 3
Nov 8	ExM & PSM	1 (Ch. 8)
Nov 15	FE & DiD	4 (Chs. 5.1 - 5.2), 5
Nov 22	IV	6, 4 (Ch. 4)
Nov 29	RDD	1 (Ch. 6), 4 (Ch. 6)
Dec 6	Buffer	
Dec 13	Exam	
Jan 10	Presentations	tba
Jan 17	Presentations	tba
Jan 24	Presentations	tba
Jan 31	Presentations	tba

- IC: Room BA 9908, Do 12:00-13:30; Schedule: Oct 11 (Room BA 9912!), Oct 25, Nov 15, Nov 29, Dec 13, Jan 17, Jan 31