

Bavarian Graduate Program in Economics 2019
Econometric Methods to Estimate Causal Effects

Faculty

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Dates and Times

The course meets Monday to Friday, 29.07.2019 to 02.08.2019

There will be a welcome dinner on Sunday 28.07.2019 at 19:00

The daily schedule will be:

07:00-09:00	Breakfast
09:00-10:30	First session Monday to Friday: lecture
10:30-11:00	Coffee break
11:00-12:30	Second session Monday to Friday: lecture
12:30-14:00	Lunch break
14:00-15:30	Third session Monday to Thursday: problem sets Friday: closing remarks and discussion
15:30-16:00	Coffee break
16:00-17:30	Fourth session Monday to Thursday: review problem sets and discussion Friday: none
17:30-19:00	Free time
19:00	Dinner

The course will finish at 15:30 on Friday, 02.08.2019

Course Description

This course considers the econometric estimation of causal effects of policies and programs in partial equilibrium, with a particular focus on randomized control trials and matching and weighting methods that build on an assumption of conditional independence. In each case, we emphasize the complementary roles of the econometrics, the economics, and institutional knowledge in producing plausible and interpretable causal estimates.

Prerequisites

To solve the problem sets you will need a laptop that has the Stata statistical software package installed. Basic familiarity with Stata will be helpful.

Lectures and Problem Sets

Lecture 1: Potential outcomes framework, introduction to RCTs

Lecture 2: Power calculations in RCTs (and beyond)

Problem Set 1: Power calculations

Lecture 3: Analysis of experimental data

Lecture 4: Imperfect compliance and instrumental variables

Problem Set 2: Analysis of experimental data

Lecture 5: Treatment effect heterogeneity

Lecture 6: Non-parametric regression

Problem Set 3: Non-parametric regression

Lecture 7: Matching and weighting estimators

Lecture 8: Matching and weighting estimators

Problem Set 4: Matching and weighting estimators

Lecture 9: Justifying selection on observed variables

Lecture 10: Experiments as benchmarks

Readings

Background references

Angrist, Joshua and Jörn-Steffen Pischke. 2009. *Mostly Harmless Econometrics*. Princeton: Princeton University Press.

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Heterogeneous treatment effects

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Experiments as benchmarks

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