Topics in Applied Microeconometrics

Instructors: Matthias Westphal and Hendrik Schmitz

Venue: Schloss Overwerries in Hamm https://www.hamm.de/schloss-oberwerries.html

Participants need to be "3G". We might need to switch to an online course if the pandemic does not allow for a course in person.

Aims of the course and general outline

This course aims to provide students with a thorough understanding of some of the most recent innovations in applied microeconometrics. The topics we discuss are

1. Basics and notation
2. Event-Study Settings
3. Marginal Treatment Effects (MTE)
4. Causal Mediation Analysis
5. Using MTEs in Event Studies and Mediation Analysis

The course has lecture- and exercise-parts. While we will stick to a rigorous and also formal discussion of the concepts, there will only be few mathematical proofs or technical derivations of statistical properties. Our focus will be on the general understanding of the methods, their advantages and disadvantages, and suitability given different data at hand. Whenever possible, we will use data and the software Stata to go through practical applications.

Please bring along a laptop with Stata installed! Knowledge of Stata is helpful.

We will supply lecture slides and other class material in advance (by end of September). Students might be asked to watch a couple of introductory videos in advance to have everybody on the same level when we start.

Schedule (including coffee breaks):

Tuesday, 5.10.2021: 10:00 – 13:00 and 14:30 – 17:50

Wednesday, 6.10.2021: 8:30 – 13:00 and 14:30 – 17:50

Thursday, 7.10.2021: 8:30 – 13:00 and 14:30 – 15:30

Office hours: We also offer office hours to talk about your PhD project. Please contact the lecturers for individual appointments if you are interested (hendrik.schmitz@uni-paderborn.de, matthias.westphal@tu-dortmund.de).

References:

The lecture is partly based on the following papers (and some more):

Brinch, C. N., Mogstad, M., andWiswall, M. (2017). Beyond LATE with a discrete instrument. Journal of Political Economy, 125(4):985–1039.

De Chaisemartin, C. and d'Haultfoeuille, X. (2020). Two-way fixed effects estimators with heterogeneous treatment effects. American Economic Review, 110(9):2964–96.

Freyaldenhoven, S., Hansen, C., and Shapiro, J. M. (2019). Pre-event trends in the panel event-study design. American Economic Review, 109(9):3307–38.

Frölich, M. and Huber, M. (2017). Direct and indirect treatment e_ects-causal chains and mediation analysis with instrumental variables. Journal of the Royal Statistical Society: Series B (Statistical Methodology), 79(5):1645–1666.

Goodman-Bacon, A. (2018). Difference-in-differences with variation in treatment timing. Working Paper 25018, National Bureau of Economic Research.

Heckman, J. J. (2010). Building bridges between structural and program evaluation approaches to evaluating policy. Journal of Economic literature, 48(2):356–98.

Huber, M. (2020). Mediation Analysis. In Handbook of Labor, Human Resources and Population Economics, pages 1–38. Springer International Publishing, Cham.

Imbens, G. W. and Rubin, D. B. (1997). Estimating Outcome Distributions for Compliers in Instrumental Variables Models. The Review of Economic Studies, 64(4):555–574.

Kowalski, A (2020): "How to Examine External Validity Within an Experiment." NBER Working Paper 24834.

Schmitz, H. and Westphal, M. (2021a). Causal mediation analysis of the effect of education on cognitive abilities.

Schmitz, H. and Westphal, M. (2021b). The Dynamic and Heterogeneous Effects of Retirement on Cognitive Decline. In Ruhr Economic Papers. Essen.

Sun, L. and Abraham, S. (2020). Estimating dynamic treatment effects in event studies with heterogeneous treatment effects. Journal of Econometrics