COURSE OUTLINE-PROGRAM

The School consists of both theoretical sessions (in the form of lectures) and practical sessions. The practical sessions take place in a computer lab. The goal is to familiarize participants with the theory and application of modern econometric evaluation techniques, including guided lab sessions. **The working language is English.**
Participants will have the opportunity to replicate published studies, learn the instruments and apply econometric technique in STATA to conduct their research on their own.
They will have the chance to replicate existing studies and see the published econometric results. In this way they will obtain the background in STATA to conduct the conometric methods that they are going to learn in their field of interest.

Monday 8 July 2019
09:15-10:30   Lecture 1
10:30-10:45   Coffee break
10:45-12:00   Lecture 2
12:00-14:00   Lunch
14:00-15:30   Lab Session 1

Tuesday 9 July 2019
09:15-10:30   Lecture 3
10:30-10:45   Coffee break
10:45-12:00   Lecture 4
12:00-14:00   Lunch
14:00-15:30   Lab Session 2

Wednesday 10 July 2019
09:15-10:30   Lecture 5
10:30-10:45   Coffee break
10:45-12:00   Lecture 6
12:00-14:00   Lunch
14:00-15:30   Lab Session 3

Thursday 11 July 2019
09:15-10:30   Lecture 7
10:30-10:45   Coffee break
10:45-12:00   Lecture 8
12:00-14:00   Lunch
14:00-15:30   Lab Session 4

Friday 12 July 2019
09:15-10:30   Lecture 7
10:30-10:45   Coffee break
10:45-12:00   Lecture 8
12:00-14:00   Lunch
14:00-15:30   Lab Session 5

Format of sessions:
Some sessions will review the theoretical background, other sessions will deal with (re-)estimation of published papers and understanding the identification strategy and how it is implemented in Stata code. We will re-estimate some classical papers as well as more recent work, some of which covers less commonly used material (e.g. synthetic control groups, basic machine learning) which turns out to be useful in various contexts. Potential list of papers to be covered, sorted by "method":

Instrumental-variables estimation:

main paper for Stata analysis:
Becker, Sascha O. and and Ludger Woessmann (2009) Was Weber Wrong? A Human Capital Theory of Protestant Economic History. *Quarterly Journal of Economics* 124(2), 531–596.
http://qje.oxfordjournals.org/content/124/2/531.short

additional reading(s):
Ashenfelter, Orley and Alan Krueger (1994) Estimates of the Economic Return to Schooling from a New Sample of Twins, *American Economic Review*, 84(5), 1157-1173.
http://www.jstor.org/stable/2117766

Card, David (1995) Using Geographic Variation in College Proximity to Estimate the Return to Schooling, in Louis N. Christofides, E. Kenneth Grant, and Robert Swidinsky, eds., *Aspects of labour market behaviour: Essays in honour of John Vanderkamp*, Toronto, Buffalo and London: University of Toronto Press, 1995, pp. 201–222.
http://www.nber.org/papers/w4483

Difference-in-differences:

main paper for Stata analysis:
Redding, Stephen J. and Daniel M. Sturm (2008) The Costs of Remoteness: Evidence from German Division and Reunification, *American Economic Review* 98(5), 1766–1797.
http://www.jstor.org/stable/29730152
Card, David and Alan Krueger (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.
http://www.jstor.org/stable/2118030

Propensity Score Matching:

main paper for Stata analysis:
Becker, Sascha O. and Andrea Ichino (2002) Estimation of average treatment effects based on propensity scores. *Stata Journal* 2(4), 358–377.
http://www.stata-journal.com/article.html?article=st0026

additional reading(s):
Dehejia, Rajeev H. and Sadek Wahba (1999) Causal Effects in Nonexperimental Studies: Reevaluating the Evaluation of Training Programs. *Journal of the American Statistical Association* 94(448), 1053–1062.
http:// www.jstor.org/stable/2669919

Regression-Discontinuity Design:

main paper for Stata analysis:
Angrist, Joshua and Victor Lavy (1999) Using Maimonides' rule to estimate the effect of class size on scholastic achievement. *Quarterly Journal of Economics* 114(2), 533–575.
http:// www.jstor.org/stable/2587016

additional reading(s):
Becker, Sascha O., Peter H. Egger and Maximilian von Ehrlich (2013) Absorptive Capacity and the Growth Effects of Regional Transfers: A Regression Discontinuity Design with Heterogeneous Treatment Effects. *American Economic Journal: Economic Policy*, 5(4): 29-77.
http://dx.doi.org/10.1257/pol.5.4.29

Lee and Lemieux (2010) Regression Discontinuity Designs in Economics. *Journal of Economic Literature* 48(2): 281–355.
http://www.aeaweb.org/articles.php?doi=10.1257/jel.48.2.281

Synthetic Control Groups:

main paper for Stata analysis:
Billmeier, Andreas and Tommaso Nannicini (2013) Assessing Economic Liberalization Episodes: A Synthetic Control Approach. *Review of Economics and Statistics* 95(3): 983-1001.
http://dx.doi.org/10.1162/REST_a_00324

additional reading(s):
Abadie, Alberto, Alexis Diamond and Jens Hainmueller (2010) Synthetic Control Methods for Comparative Case Studies: Estimating the Effect of California's Tobacco Control Program. Journal of the American Statistical Association 105(490): 493-505.
http://dx.doi.org/10.1198/jasa.2009.ap08746

Basic machine learning:

main paper for Stata analysis:
Becker, Sascha O., Thiemo Fetzer, and Dennis Novy (2017) Who Voted for Brexit? A Comprehensive District-Level Analysis, Economic Policy 32(92): 601-650.
https://doi.org/10.1093/epolic/eix012

Bounding:

bounding for matching estimates:
Becker, Sascha O. and Marco Caliendo (2007) Sensitivity Analysis for Average Treatment Effects. *Stata Journal* 7(1), 71–83.
http://www.stata-journal.com/article.html?article=st0121