

## **Bachelor/Master Boot Camp**

### **“Programming to answer causal Questions: Following the Nobelprize Winners in Economics 2021”**

Less people die while riding a motorbike than people die while lying in bed. Does this imply that beds are dangerous? While in this case, it may be straight forward to understand the statistical fallacy, there are plenty of other interesting questions in which it is hard to disentangle cause and effect. For instance, it is complex to understand the causal effect of education on wages, minimum wages on employment, or immigration on employment, just to name a few relevant questions.

The Nobel prize winners, David Card, Joshua Angrist, and Guido Imbens have developed a statistical toolkit to answer these questions. These causal analysis methods require curiosity to find settings that resemble the experimental ideal – so called natural experiments – and creativity to find the appropriate data. With a natural experiment and the appropriate data at hand the methods to be employed to provide causal answers to interesting and relevant questions are straight forward.

In this seminar, students shall be acquainted with the intuition and the theory of the state-of-the-art causal analysis methods and familiarize themselves with these methods by working hands-on. The seminar will consist of a series of case studies where students will replicate original work by the Nobel prize winners in their early years.

The bootcamp will take place twice. Students can choose between two programming languages, Stata or R. The dates are as follows:

#### **STATA bootcamp:**

- Wednesday, May 24: 3:15pm-8:15pm
- Friday, May 26: 1:30pm - 6:30pm
- Saturday, 27.05, 10:00 am – 6:00pm

#### **R bootcamp:**

- Monday June 5: 10:15 am - 4:45 pm
- Tuesday June 6: 10:15 am - 4:45 pm
- Wednesday June 7: 10:15 am - 4:45 pm

#### **Requirements:**

Basic econometric knowledge is required.

#### **Examination:**

Take-home exam (100%). Students are expected to hand in their code (either in Stata or in R) by June 30, 2023!