DEFAP – Research Methods 2024

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Course Aims

The objective of this course is to provide students with in-depth knowledge of recent advances in the analysis of micro data. This course deals with the econometric and statistical tools that have been developed to estimate the causal impact on one or more outcomes of interest of any generic 'intervention' in the presence of selection decisions by agents. In particular, the course will focus on randomized evaluations, quasi-natural experiments, discontinuity designs, and difference-in-differences. The course will present strengths and weaknesses of each approach in terms of internal and external validity. Each empirical method will be presented and illustrated using applications in the areas of labor, health, education, development, and political economy. Tutorials and laboratory sessions, in which students can apply the techniques using micro-econometric software packages, complete the course.

Course outline - Modules

1 The evaluation problem and randomized control trials
2 Instrumental variables and LATE
3 Regression discontinuity design – sharp, fuzzy, spatial
4 Difference-in-differences – canonical, two-way fixed effects and difference-in-differences with variation in treatment timing

Structure and assessment

The course is structured in modules. Each module contains lectures and tutorials, concerning both the presentation of the economic problems and application of econometric techniques (in lab) under the supervision of a tutor, using Stata.

The assessment involves:

1. Final project (70% of the final mark): 5-10 pages and focus on the research question, data, empirical strategy, results, and conclusions.
2. Presentation of a paper in class (30%)

References

Angrist, J.D and J-S. Pischke, (2009) Mostly Harmless Econometrics: An Empiricist Companion, Princeton University Press, Princeton, MA. (http://www.mostlyharmlesseconometrics.com/)

A further reading list of articles will be given at the beginning of the course for each module.