
Fundamentals and methods for impact evaluation of public policies

Course programme

6-10, 13-15 September 2021

Online

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INTRODUCTION

14:00-15:30 CET **THEORETICAL SESSION**

Enrico Rettore

- Introduction to impact evaluation.
- Potential outcomes and the fundamental problem of causal inference.
- Conditions for learning about the causal effects of a programme.
- Causal parameters and selection bias.

15.30-16.00 CET break

16:00-17:30 CET **THEORETICAL SESSION**

Enrico Rettore

- A taxonomy of selection processes and identification strategies: selection bias as a heterogeneity problem; random assignment; selection on observables; selection on unobservable.
- Internal and external validity of an evaluation design.
- Evaluation strategies and data requirements: prospective vs. retrospective evaluation, data requirements.

TUESDAY, 7 SEPTEMBER

RANDOMIZED CONTROL TRIALS

14:00-15:30 CET **THEORETICAL SESSION**

Enrico Rettore

- Impact evaluation in an experimental setting: design and implementation of randomized experiments; minimum detectable effects.

15.30-16.00 CET break

16:00-17:30 CET **TRAINING SESSION**

Sergiu Burlacu

- Randomized Control Trials.
- Minimum Detectable Effects.

OLS & PROPENSITY SCORE MATCHING (I)

14:00-15:30 CET **THEORETICAL SESSION**

Enrico Rettore

- Selection on observables (I): OLS (orthogonality condition and omitted variable bias formula); stratification and matching;
- Selection on observables (II): the curse of dimensionality; propensity score and matching.

15.30-16.00 CET break

16:00-17:30 CET **TRAINING SESSION**

Alessio Tomelleri

- OLS.
- Blocking with regression adjustment.
- Estimation of propensity score, balancing and common support.

OLS & PROPENSITY SCORE MATCHING (II)

14:00-15:30 CET **THEORETICAL SESSION**

Enrico Rettore

- Selection on observables (III): operationalising matching.
- Instrumental variables: first stage and exclusion restrictions.

15.30-16.00 CET break

16:00-17:30 CET **TRAINING SESSION**

Alessio Tomelleri

- Estimations of propensity score with different types of propensity score matching.

INSTRUMENTAL VARIABLES

14:00-15:30 CET **THEORETICAL SESSION**

Margherita Fort

- Instrumental variables: heterogeneity of the causal effect and characterization of compliers.

15.30-16.00 CET break

16:00-17:30 CET **TRAINING SESSION**

Alessandro Tondini

- Instrumental variables.

MONDAY, 13 SEPTEMBER

REGRESSION DISCONTINUITY DESIGN

14:00-15:30 CET **THEORETICAL SESSION**

Margherita Fort

- Regression discontinuity designs: Sharp and fuzzy designs, graphical analysis, parametric and non-parametric estimation, the bias-variance trade-off, placebo and falsification tests.

15.30-16.00 CET break

16:00-17:30 CET **TRAINING SESSION**

Alessandro Tondini

- Regression discontinuity designs.

DIFFERENCE-IN-DIFFERENCES

14:00-15:30 CET **THEORETICAL SESSION**

Margherita Fort

- Exploiting longitudinal variation: panel and difference-in-differences models; parallel trends assumption; standard error issues.

15.30-16.00 CET break

16:00-17:30 CET **TRAINING SESSION**

Sergiu Burlacu

- Diff-in-diffs.

WEDNESDAY, 15 SEPTEMBER

SYNTHETIC CONTROL

14:00-15:30 CET **THEORETICAL SESSION**

Margherita Fort

- Synthetic control methods: introduction, relationship with difference-in-differences, testing through placebo.

15.30-16.00 CET break

16:00-17:30 CET **TRAINING SESSION**

Sergiu Burlacu

- Synthetic control.