Fundamentals and methods
for impact evaluation
of public policies

Course programme

17-22 October, 2022

Fondazione Bruno Kessler, Polo Umanistico
Via Santa Croce, 77 – Trento

Enrico Rettore	Paolo Pinotti			
Instructor	Guest Speaker	TBA	TBA	TBA
FBK-IRVAPP University of Padua	Bocconi University			

INTRODUCTION

09.00-12.30   ***THEORETICAL SESSION***

10.30-11.00 coffee break

- 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.
- 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.

12.30-14.30 lunch and break

OLS & PROPENSITY SCORE MATCHING

14.30-18.00   ***THEORETICAL SESSION***

16.00-16.30 coffee break

- 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.
- Selection on observables (III): operationalising matching.

RANDOMIZED CONTROL TRIAL

09.00-12.30   *TEORETICAL AND TRAINING SESSION*

10.30-11.00 coffee break

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

12.30-14.30 lunch and break

14.30-18.00   *TRAINING SESSION*

16.00-16.30 coffee break

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

INSTRUMENTAL VARIABLES

09.00-12.30   *THEORETICAL SESSION*

10.30-11.00 coffee break

- Instrumental variables: first stage and exclusion restrictions.
- Instrumental variables: heterogeneity of the causal effect and characterization of compliers.

12.30-14.30 lunch and break

14.30-18.00   *TRAINING SESSION*

16.00-16.30 coffee break

- Instrumental variables.

DIFFERENCE-IN-DIFFERENCES

09.00-10.30   ***THEORETICAL SESSION***

16.00-16.30 coffee break

- Exploiting longitudinal variation: panel and difference-in-differences models; parallel trends assumption; standard error issues.
- Synthetic control methods: relationship with difference-in-differences, testing through placebos.

12.30-14.30 lunch and break

DIFFERENCE-IN-DIFFERENCES

14.30-18.00   ***TRAINING SESSION***

16.00-16.30 coffee break

- Diff-in-diffs.
- Synthetic control.

REGRESSION DISCONTINUITY DESIGN

09.00-10.30   *THEORETICAL SESSION*

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

10.30-11.00 coffee break

11.00-12.30   *TRAINING SESSION*

- Regression discontinuity designs.

12.30-14.30 lunch and break

14.30-18.00   **KEYNOTE SPEAKER: PAOLO PINOTTI**

16.00-16.30 coffee break

09.00-12.30 *FINAL SESSION*

10.30-11.00 coffee break

- Questions & Answers session
- Closing