Fundamentals and methods for impact evaluation of public policies

Course programme

14-19 January, 2019

Department of Sociology and Social Research
Via Verdi, 26 – Trento

<table>
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<tr>
<th>Francesco Billari</th>
<th>Paolo Pinotti</th>
<th>Enrico Rettore</th>
<th>Ugo Trivellato</th>
<th>Sonia Marzadro</th>
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<td>Guest Speaker</td>
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<td>Bocconi University</td>
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FBK-IRVAPP – Istituto per la ricerca valutativa sulle politiche pubbliche
Fondazione Bruno Kessler
Via S. Croce, 77 - 38122 Trento

Istituto Veneto di Scienze, Lettere ed Arti
Campo S. Stefano, 2945
30124 Venezia
**Monday, 14 January**

09.00-12.30  *Ugo Trivellato*

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.

12.30-14.30  lunch and break

14.30-18.00  *Ugo Trivellato*

16.00-16.30  coffee break

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

**Tuesday, 15 January**

09.00-12.30  *Enrico Rettore*

10.30-11.00  coffee break

- Impact evaluation in an experimental setting: design and implementation of randomized experiments; minimum detectable effects.
- Impact evaluation in an observational setting, selection on observables (I): stratification and matching; curse of dimensionality.

12.30-14.30  lunch and break

14.30-18.00  *Enrico Rettore*

16.00-16.30  coffee break

- Impact evaluation in an observational setting, selection on observables (II): propensity score and matching.
- Impact evaluation in an observational setting, selection on observables (III): operationalising matching.
**Wednesday, 16 January**

09.00-12.30  **Paolo Pinotti**
10.30-11.00  coffee break
- The linear model: orthogonality condition and omitted variable bias formula
- Instrumental variables: first stage and exclusion restrictions
12.30-14.30  lunch and break

14.30-16.00  **Paolo Pinotti**
- Instrumental variables, continued: over-identifying conditions test; heterogeneity of the causal effect and characterization of compliers
16.00-16.30  coffee break

16.30-18.00  **Sonia Marzadro**
- Training session – OLS and IV regression.

**Thursday, 17 January**

**Free morning**

15.00-18.00  **Paolo Pinotti**
16.00-16.30  coffee break
- Regression discontinuity designs: Sharp and fuzzy designs, graphical analysis, parametric and non-parametric estimation, the bias-variance trade-off, placebo and falsification tests

**Friday, 18 January**

09.00-12.30  **Paolo Pinotti**
10.30-11.00  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

14.30-18.00  **Keynote speaker: Francesco Billari (Bocconi University)**
16.00-16.30  coffee break
SATURDAY, 19 JANUARY

09.00-12.30  Sonia Marzadro
10.30-11.00  coffee break
- *Training session:* RDD, difference-in-differences and synthetic control methods

12.30-14.00 lunch and break

14.00-16.00  Paolo Pinotti, Enrico Rettore and Ugo Trivellato
- Questions & Answers session.
- Closing