SUMMER SCHOOL

Econometrics of program evaluation and counterfactual causality with Stata

Dr. Giovanni Cerulli
6-8 October 2015
University of Rome III, Italy
Lecturer
Dr. Giovanni Cerulli
CNR-IRCrES:
National Research Council of Italy
Research Institute for Sustainable Economic Growth

Short bio
Dr. Giovanni Cerulli is researcher at the CNR-IRCrES, unit of Rome, Italy. He received a degree in Statistics and Economics and a PhD in Economics at Sapienza University of Rome. His research deals with micro-econometrics, and in particular the analysis of the effects of public policies based on counterfactual econometric modelling. Dr. Cerulli is also Editor-in-chief of the International Journal of Computational Economics and Econometrics.

When & Where
• From October 6, 2015 at 14.00 to October 8, 2015 at 13.00 (2 days)
• University of Rome III, Department of Business Studies, Via S. D’Amico 77, 00145 Rome, Italy

Overall aims and purpose
This course will provide participants with the essential tools, both theoretical and applied, for a proper use of modern micro-econometric methods for policy evaluation and causal counterfactual modeling. The course will cover these approaches: Regression adjustment, Reweighting, Matching, Difference-in-differences, Instrumental-variables, Selection models and Regression Discontinuity Design.

Learning outcomes
After attending the course, the participant will be able to setting up and managing a correct evaluation design on his own: identification of the policy framework, collection and management of suitable datasets, use of appropriate econometric methods, interpretation of results. Potential applications are in different contexts of policy such as: finance and banking, the labor market, the investment activities of enterprises, education policy and regional cooperation, incentives for business research and development, etc., although they can be used in any further field of study aiming at estimating the ex-post impact of a given policy intervention on specific targets. The course will provide various instructional examples on real datasets.
Pre-requisites
Knowledge of basic econometrics: notion of conditional expectation and related properties; point and interval estimation; regression model and related properties; probit and logit regression. Basic knowledge of the Stata software.

Readings
Recommended textbooks for this course are:

Fees*

<table>
<thead>
<tr>
<th>Category</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ph.D students</td>
<td>400 euro</td>
</tr>
<tr>
<td>Young Researchers (up to 35 years old)</td>
<td>600 euro</td>
</tr>
<tr>
<td>Mature Researchers &amp; Professionals</td>
<td>900 euro</td>
</tr>
</tbody>
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Notes
• There is a limited number of places available at computer lab.
• Courses are offered to FINEST members. If you are not a member, fees include the FINEST admission fees.
• Fees also include full lunch during the course, not the accommodation. We have arranged a special allotment of rooms and rates for the courses with some hotels at walking distance from the University of Rome III to facilitate your travel arrangements.
• Textbooks and other references in the reading lists are not included in the fees.
• Any applicant booking more than a course in 2015 will receive:
  o a 10% discount on the overall amount for two courses
  o a 20% discount on the overall amount for three courses
How to register and pay

To register, please send an email to finest@uniroma3.it by attaching the registration form (please, [DOWNLOAD THE FORM HERE]).

Registration is on a first come, first served basis and SPACE IS LIMITED!

After we will have received your registration form, we will confirm you a place in the selected course. Thereafter, you will have to finalize your registration within a week by paying fees via bank transfer.

Please use the following information:

- Bank Name: Banca Unicredit Spa.
- Bank Address: Agenzia 108, Via Ostiense 105, 00154 Rome, Italy
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- SWIFT/BIC code: UNCRITM1B58
- Reasons for the payment to be specified: DSTA - FINEST Summer School + Name and Surname + Title of the course
Program

6 October 2015, from 14.00 to 18.00
Session I: Introduction to the econometrics of program evaluation
• Background: conditional expectation, point estimation and related properties
• Concept of counterfactual causality, randomization and non-random sampling
• Non-random sampling: selection on observables and selection on unobservables
• Definition of treatment effects: types of effects and potential outcome
• Notation and working hypotheses: SUTVA, CIA and CMI

7 October 2015, from 09.00 to 13.00
Session II: Methods based on "selection on observables"
• Regression Adjustment (parametric and nonparametric)
• Matching estimators
• Reweighting
• Applications using Stata

7 October 2015, from 14.00 to 18.00
Session III: Difference-in-differences (DID)
• DID: statistical setting and conceptualization
• DID with longitudinal data
• DID with repeated cross-section
• Description and use on real data of the Stata command: diff. DO-files and ADO files provided by the teacher

8 October 2015, from 09.00 to 13.00
Session IV: Regression-discontinuity-design
• The RDD setting
• Sharp RDD
• Fuzzy RDD
• Application using Stata