

ECONOMETRICS FOR PROGRAM EVALUATION: THEORY AND PRACTICE USING STATA

Providing effective evaluation of economic, social and medical programs has become an increasingly important requirement for both public and private institutions. The course seeks therefore to provide participants with the requisite tools, both theoretical and applied, for the correct implementation of modern micro-econometric methods for implementing program evaluation using Stata.

The course's program is characterized by theoretical and applied structure. Each individual session, is composed of both a theoretical component (in which the techniques and underlying principles behind them are explained), and an applied (hands-on) segment, during which participants have the opportunity to implement the techniques using real data under the watchful eye of the course tutor.

Theoretical sessions are reinforced by case study examples, in which we discuss current research issues, highlighting potential pitfalls and the advantages of individual techniques. The intuition behind the choice and implementation of a specific technique is of the utmost importance. In this manner, we aim at bridging the “often difficult” gap between abstract theoretical methodologies, and the practical issues one encounters when dealing with real data.

Instructor:

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PROGRAM

DAY 1

INTRODUCTION TO THE ECONOMETRICS OF PROGRAM EVALUATION

- Concept of counterfactual causality
- Experimental and quasi-experimental settings
- Non-random sampling: selection on observables and selection on unobservables
- Definition of treatment effects: types of effects and potential outcome
- Notation and working hypothesis: SUTVA, CIA and CMI
- Available econometric methods: limits and advantages
- Stata for effective program evaluation: user-written commands and the TEFECES package

REGRESSION ADJUSTMENT

- The control function regression approach
- Non-linear models
- Stata implementation

MATCHING

- The selection on observable setting
- Identification conditions for Matching
- Matching in practice: tests and sensitivity analysis
- Stata implementation

DAY 2

INSTRUMENTAL-VARIABLES

- The logic of IV
- Endogeneity and consistent estimation
- Types of IV methods
- Stata implementation

SELECTION MODEL (HECKIT)

- Dealing with selection-on-unobservables
- Heckman selection model (*Heckit*)
- Stata implementation

DIFFERENCE-IN-DIFFERENCES (DID)

- DID: statistical setting
- DID with longitudinal data
- DID with repeat cross-section
- Stata implementation

SESSION III: POLICY EVALUATION IN PRACTICE

- Ex-post policy evaluation: logical structure and statistical design
- The choice of the evaluation method
- Limitations and open questions