

“Microeconometria”

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Materiali del corso: <http://www.cafed.sssup.it/~federico/teaching.html>

Testi di riferimento:

- Cameron and Trivedi (2005), “Microeconometrics: Methods and Applications”, Cambridge University Press (labeled as CT in the following)
- Wooldridge (2002), “Econometric Analysis of Cross Section and Panel Data”, MIT Press (WO in the following)
- Angrist and Pischke (2009), “Mostly Harmless Econometrics”, Princeton University Press (AP in the following)
- Slides e appunti delle lezioni

Il corso introduce le fondamentali nozioni teoriche e l’applicazione delle principali tecniche per l’analisi econometrica dei dati micro e panel. Le lezioni forniscono anche una introduzione all’utilizzo del software STATA, di cui ci si avvale per le applicazioni e gli esempi.

1. Introduction to STATA

- Getting started: interface, the HELP system, general syntax of commands, DO and LOG files
- Datasets and variables management
- Overview of estimation commands

2. Regression analysis and OLS: basics and problems

- Standard OLS model: notation, assumptions, properties and inference (CT Capitolo 4.4)
- Sources of bias: omitted variables, measurement error and endogeneity (AP 3.1, 3.2.2; CT 4.7)
- Overview of Instrumental Variables solution to endogeneity: estimators, properties and related tests (AP 4.1, 4.2, 4.3; CT 4.8,4.9,8.4)

3. Discrete Choice Models for Binary Outcomes (CT 14.1,14.2,14.3):

- Linear Probability Model
- Probit and Logit models: definition, estimation, and interpretation
- Binary outcomes and endogenous regressors

4. Linear Panel Data Models

- The “panel solution” to the omitted variable problem
- Overview of main methods: definition, examples, the strict exogeneity assumption (CT 21.1,21.2)
- Models for strict exogeneity (CT 21, tutto)
 - Introduction: RE vs FE approach
 - Main estimators (POLS, RE-GLS and RE-MLE, LSDV, FE-WG, FE-DIFF, Correlated RE): definition, underlying assumptions, interpretation, and comparisons
 - Issues: non-spherical disturbances; Hausman test for RE; sources of within-variation and parameter identification; multi-dimensional panels
- Relaxing strict exogeneity (CT 22.1,22.2,22.4,22.5; NON FARE 22.4.4, 22.4.5)
 - Introduction: endogeneity of regressors and instruments; basics of GMM estimation
 - Main estimators: GMM-DIFF, GMM-SYS
 - Discussion: dynamic (lagged dependent) as a special case; when apply the estimators; misspecification tests; weak instruments; practical issues

5. Selected Samples

- Definition of Truncation, Censoring and “True” Sample Selection (WO 16.1,16.2,16.3,16.4)
- Inconsistency of OLS
- “True” Sample Selection (CT 16.5; WO 17.1,17.2.1,17.3,17.4)
 - Definition, OLS inconsistency and sources of selection (observables vs. unobservables)
 - Two-equations/Two-steps Heckman procedure
 - Issues: exclusion restriction; incidental parameter problem; endogenous regressors

6. Quantile regressions

- Basics (CT 4.6)
- Endogeneous regressors
- Panel version