

Introduction to Matching and Weighting Estimators

Outline

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The aim of this class is to give participants an introduction to matching and weighting estimators within the potential-outcome framework. The class will be split in a theoretical session (Thursday, 2-6pm) and a practical Stata session (Friday, 9am-12). This is the extended reading list; papers which will be heavily discussed during the class are indicated with (*).

1. Introduction to Program Evaluation and the Principle of Unconfoundedness

- (a) The Evaluation Framework
- (b) Parameters of Interest and Selection Bias
- (c) Social Experiments
- (d) Linking the Potential-Outcome Framework to Textbook Econometrics
- (e) The Basic Idea of Matching under Unconfoundedness
- (f) Redefining Selection Bias
- (g) How do Matching and Regression under UCF differ?

Blundell and Costa Dias (2002), Caliendo and Hujer (2006), Imbens (2004*), Holland (1986), Heckman, Ichimura, Smith, and Todd (1998), Heckman, LaLonde, and Smith (1999), Heckman and Robb (1985), LaLonde (1986*), Lechner (1999), Rosenbaum and Rubin (1983), Rosenbaum and Rubin (1985b), Rubin (1974)

2. The Implementation of Matching

- (a) The Balancing Property of the Propensity Score
- (b) Estimating the Propensity Score
- (c) Overlap and Common Support
- (d) Choosing a Matching Algorithm
- (e) Assessing the Matching Quality
- (f) Effect Estimation
- (g) Combining Propensity Score Matching with Other Methods
- (h) Sensitivity Analysis

Abadie and Imbens (2006), Caliendo and Kopeinig (2008*), Dehejia and Wahba (1999*), Dehejia (2005), Heckman, Ichimura, and Todd (1998), Hirano, Imbens, and Ridder (2003), Imbens (2000), Lechner (2002), Rosenbaum and Rubin (1985a), Sianesi (2004), Smith and Todd (2005a*), Smith and Todd (2005b),

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