Econ 890: Partial Identification: Theory and Applications in Industrial Organization

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Spring Semester, 2020  
MW 15:05 – 16:20, Social Sciences 327.

Synopsis

This module will focus on the use of partially identifying models for applications in industrial organization, investigating a mix of methodological, theoretical, econometric and applied issues. Particular areas of application in the IO literature will comprise a selection of research employing various models of auctions, entry, matching, and demand estimation. For each area of application, we will cover both the econometric theory underlying the partial identification analysis employed, as well as the motivation for the use of the partially identifying model in empirical practice. We will discuss what features of these applications have made the use of such models successful, and highlight their ability to aid the credibility of empirical findings, for example by allowing for the possibility of multiple equilibria, or by dispensing with strong restrictions on unobservable heterogeneity that do not follow from economic theory.

Background

This is a class for second year PhD students interested in research in microeconometrics or empirical IO using structural models, or both. We expect all of you to have micro background on the order of what is covered in the first year micro sequence and Mas-Colell, Whinston, and Green (1995), and econometrics background on the order of what is covered in the first years econometrics sequence. In addition, this class will require you to be able to program. You are expected to have a working knowledge of MATLAB and STATA, or equivalent software (such as R, Julia, Java, Python, C++, whatever). However, it will be advantageous for you to settle on software that is part of the current equilibrium in economics.

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Office Hour

Allan Collard-Wexler: Sign up for office hours on website.
Adam Rosen: Thursdays 13:30 – 14:30, Social Sciences 221B.

Assessments

Course grades will be determined by a combination of problem sets, in class presentations of research papers, and a research proposal of approximately three to four pages.

Lecture Plan and Reading List

The schedule is tentative and subject to change.

Allan

- Wednesday 8 January: Introduction and motivation. Multiple equilibria, incomplete models, and partial identification.
  
  Primary references: Ho and Rosen (2017).
  

Adam

  

  

- Problem Set 1: Partial Identification.


Allan

- Wednesday 22 January: Empirical work on auctions (1).
  
  
  

Adam

- Monday 27 January: Empirical work on auctions (2).
  
  Primary references: Laffont, Ossard, and Vuong (1995), Guerre, Perrigne, and Vuong (2000).
  

Allan

- For presentation: Asker (2010).
Allan  • Wednesday 29 January: Empirical work on auctions (3): recent applications.
    Supplementary references: Hortaçsu and McAdams (2010).

Adam  • Monday 3 February: Incomplete models of auctions (1).
    Primary references: Haile and Tamer (2003).

Adam  • Wednesday 5 February: Incomplete models of auctions (2).
    References: Same as previous lecture.
    • Problem Set 2: Auctions.

Adam  • Monday 10 February: Incomplete models of auctions (3).
    References: Same as previous two lectures.

Allan • Wednesday 12 February: Entry models (1).

Allan • Monday 17 February: Entry models (2).
    References: Same as previous lecture.
    For presentation: Backus (2019).

Allan • Wednesday 19 February: Entry models (3).
    Primary references: Berry (1992).
    Supplementary references: none.

Allan • Monday 24 February: Entry models (4).
    Primary references: Mazzeo (2002), Seim (2006).
    Supplementary references: Bajari, Hong, and Ryan (2010)
    For presentation: TBD.

Adam  • Wednesday 26 February: Incomplete models of entry (1).
    Primary references: Tamer (2003), Ciliberto and Tamer (2009).
    Supplementary references: Berry and Tamer (2007), Aradillas-López and Tamer (2008),


- **Problem Set 3: Entry Models.**

  **Adam**
  - Monday 2 March: Inference in incomplete models. (1)
    
    Primary references: Ciliberto and Tamer (2009), Chernozhukov, Hong, and Tamer (2007).


  **Allan**
  - Wednesday 4 March: Application of incomplete entry models using moment inequalities .
    
    Primary references: Holmes (2011).


    For presentation: Ho (2009).

  - Monday 9 March: No class. Spring Break.

  - Wednesday 11 March: No class. Spring Break.

  **Adam**
  - Monday 16 March: Incomplete models of entry (2).
    
    Primary references: Chesher and Rosen (2019).


  **Adam**
  - Wednesday 18 March: Incomplete models of entry (3).
    
    References: Same as last lecture.

    For presentation: Kline and Tamer (2012).

- **Problem Set 4: Inference in Incomplete Models.**

  **Adam**
  - Monday 23 March: Inference in incomplete models. (2)
    


  **Adam**
  - Wednesday 25 March: Inference with conditional moment inequalities.
    

Allan  • Monday 30 March: Partially identifying models of demand.


Adam  • Wednesday 1 April: IV models for discrete choice.

  Primary references: Chesher, Rosen, and Smolinski (2013).


Allan  • Monday 6 April: Partially Identifying Models of Networks.

  Primary references: .

  Supplementary references: Ishii (2005).

  • Wednesday 8 April: Open.

  • Monday 13 April: Open.

  • Wednesday 15 April: Open.

References


