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Empirical Methods in Industrial Organization and Regulatory Economics

These lectures present quantitative techniques used in empirical work in Industrial Organization and Regulatory Economics. These lectures will make extensive use of first-year microeconomic theory, game theory, and econometric theory. Students without this level of training will find the course prohibitively difficult. **Students are expected to read the assigned papers before each lecture.**

1. Introduction to Structural Econometric Modelings

Lecture 1

Reiss, Peter C. and Wolak, Frank A. (2003) "Structural Econometric Modeling: Rationales and Examples from Industrial Organization," *Handbook of Econometrics*, Volume 6A, (edited by James J. Heckman and Edward E. Leamer), 2007, 4277-4415 (draft available at <http://www.stanford.edu/~wolak>) [First Four Sections of Paper]

Porter, Robert (1983), "A Study of Cartel Stability: The Joint Executive Committee, 1880-1886," *Bell Journal of Economics*, 14(2, Autumn), 301-314.

2. Structural Econometric Modeling of Producer Behavior

Lecture 2

Christensen, Laurits and Greene, William H. (1976), "Economies of Scale in U. S. Electric Power Generation," *Journal of Political Economy*, 84 (4, August), 655-676.

McElroy, Marjorie (1987), "Additive General Error Models for Production, Cost, and Derived Demand or Share Systems," *Journal of Political Economy*, 95(4), 737-757.

Evans, David and Heckman, James (1984), "A Test of Subadditivity of the Cost Function with an Application to the Bell System," *American Economic Review*, 74 (4, September), 615-623.

3. Applications of Empirical Models of Producer in Regulated Industries

Lecture 3

Wolak, F. A. (2007) "Public Utility Pricing," available on web-site.

Wolak, (1994), "An Econometric Analysis of the Asymmetric Information Regulator-Utility Interaction," *Annales D'Economie et de Statistique*, 34, 12-69. (draft available on web-site).

4. Multi-Unit Auction Models

Lecture 4

Wolak, "Identification and Estimation of Cost Functions Using Observed Bid Data: An Application to Electricity," *Advances in Econometrics: Theory and Applications, Eighth World Congress, Volume II*, Mathias Detwatripont, Lars Peter Hansen, and Stephen J. Turnovsky (editors), Cambridge University Press, 2003, 133-169. (draft on web-site)

Wolak, F.A. (2007) Quantifying the Supply-Side Benefits from Forward Contracting in Wholesale Electricity Markets, *Journal of Applied Econometrics*. (draft on web-site).

5. Measuring Market Power and Market Performance

Lecture 5

Wolak, Frank A. (2003) "Measuring Unilateral Market Power in Wholesale Electricity Markets: The California Market 1998 to 2000," *AER*, May 2003. (draft on web-site)

Borenstein, Bushnell, Wolak. "Measuring Market Inefficiencies in California's Restructured Wholesale Electricity Market," *AER*, December 2002. (draft on web-site)

Wolak, "Diagnosing the California Electricity Crisis," *Electricity Journal*, Aug./Sept. 2003. (draft on web site)