

REAL 945: Urban Economics and Real Estate
Spring 2012
Fridays, 1 to 4pm, at JMHH F36

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Introduction

This course covers fundamental and cutting-edge topics in urban economics and real estate, as well as the most important econometric issues that arise in the estimation of urban economics and real estate models. The course focuses on the application of modern econometric methods to analyze empirical questions in the broad urban economics field. This includes topics in public economics and local finances, such as household sorting and valuation of public goods. The course also examines economic modeling and the intuition behind a range of topics in urban economics and real estate, such as spatial equilibrium, supply and demand of space, house prices and cycles. In addition, special emphasis is given to how the understanding of economic theory and institutions can help empirical analyses.

Requirements:

The course assumes that students have familiarity with standard first year econometrics and microeconomics. The following econometric books are useful references to supplement the journal articles covered in class: “Econometric Methods” (Johnston and Dinardo), “Mostly Harmless Econometrics: An Empiricist’s Companion” (Angrist and Pischke), and “An Introduction to Classical Econometric Theory” (Ruud).

Students should read all assigned readings before class. The articles are available on Webcafe. **Non-Wharton students** will need to apply for a Wharton account in order to get access to the Web Café. Check out: https://accounts.wharton.upenn.edu/account_user/.

Grades

There will be 2 or 3 applied exercises during the semester. Late problem sets will not be accepted. The students will also present an original empirical research paper at the end of the semester. Topics will be discussed with the Professor during the semester. 1/3 of the grade is based on problem sets, and 2/3 of the grade is based on the presentation.

Topics and Reading List

Part I: Econometric Tools and Selected Applications in Urban and Public Economics

Part II: Racial Segregation, Spatial Equilibrium, Agglomeration Economies, and Housing

Part I:

1. Regression Analysis as a Statistical Tool and Causal Inference

Freedman, David (1991) "Statistical Models and Shoe Leather," *Sociological Methodology*, v. 21, pp. 291-313.

Holland, Paul (1986) "Statistics and Causal Inference," *Journal of the American Statistical Association*, v. 81, No. 396, pp. 945-960.

Angrist, Joshua and Alan Krueger (1998): "Empirical Strategies in Labor Economics," *The Handbook of Labor Economics*, eds. O. Ashenfelter and D. Card, v. III, North Holland.

Application: Does Neighborhood Matter?

Katz, Lawrence, Jeffrey Kling, and Jeffrey Liebman (2001): "Moving to Opportunity in Boston: Early Results of a Randomized Mobility Experiment," *Quarterly Journal of Economics*, v. 116 (2), pp. 607-654.

2. Selection on Observables and Program Evaluation

Ashenfelter, Orley and David Card (1985): "Using the Longitudinal Structure of Earnings to Estimate the Effect of Training Programs," *Review of Economics and Statistics*, v. 67 (4), pp. 648-660.

Rosenbaum and Rubin (1984): "Reducing Bias in Observational Studies Using Subclassification on the Propensity Score," *Journal of the American Statistical Association*, v. 79, (387), pp. 516-524.

Lalonde, Robert (1986): "Evaluating the Econometric Evaluations of Training Programs with Experimental Data," *American Economic Review*, v. 76 (4), pp. 604-620.

Application: Evaluation of Governmental Programs:

Busso, Matias, Jesse Gregory, and Patrick Kline (2011): "Assessing the Incidence and Efficiency of a Prominent Place Based Policy," mimeo, University of California, Berkeley.

3. Regression Discontinuity Design

Cook, Thomas D. and Donald T. Campbell (1979): *Quasi-Experimentation, Design & Analysis Issues for Field Settings*, Boston: Houghton Mifflin.

Lee, David (2008): "Randomized Experiments from Non-random Selection in U.S. House Elections," *Journal of Econometrics*, v. 142 (2), pp. 675-697.

Lee, David and Thomas Lemieux (2010): "Regression Discontinuity Designs in Economics," *Journal of Economic Literature*, vol. 48, p. 281-355.

Application: Local Valuation of Investments in School Infrastructure:

Cellini, Stephanie, Fernando Ferreira and Jesse Rothstein (2010) "The Value of School Facilities: Evidence from a Dynamic Regression Discontinuity Design," *The Quarterly Journal of Economics*, vol. 125(1), p. 215-261.

4. Selection on Unobservables

- Angrist, Joshua, Guido Imbens and Don Rubin (1996): "Identification of Causal Effects Using Instrumental Variables," *Journal of the American Statistical Association*, v. 91, pp. 444-455.
- Bound, John, David Jaeger and Regina Baker (1995): "Problems With Instrumental Variables Estimation When the Correlation Between the Instruments and the Endogenous Explanatory Variable is Weak," *Journal of the American Statistical Association*, v. 90 (430), pp. 443-450.
- Ahn, Hyungtaik, and James Powell (1993) "Semiparametric Estimation of Censored Selection Models with a Nonparametric Selection Mechanism," *Journal of Econometrics* 58: 3-29.
- Garen, John (1984) "The Returns to Schooling: A Selectivity Bias Approach with a Continuous Choice Variable," *Econometrica* 52: 1199-1218.

Application 1: Causes of Suburbanization

- Baum-Snow, Nathaniel (2007): "Did Highways Cause Suburbanization," *Quarterly Journal of Economics*, v. 122 (2), pp. 775-805.

Application 2: Valuation of Air Quality

- Chay, Kenneth and Michael Greenstone (2005): "Does Air Quality Matter? Evidence from the Housing Market," *Journal of Political Economy*, v. 113 (2), pp. 376-424.

5. Discrete Choice Models

- McFadden, Daniel (1974): "Conditional Logit Analysis of Qualitative Choice Behavior," *Frontiers in Econometrics*, P. Zarembka (ed.), Academic Press: New York, 1974, pp. 105-142.
- Berry, Steven, James Levisohn and Ariel Pakes (1995): "Automobile Prices in Market Equilibrium," *Econometrica*, v. 63 (4), pp. 841-890.
- Petrin, Amil and Kenneth Train (2010): "A Control Function Approach to Endogeneity in Consumer Choice Models," *Journal of Marketing Research*, vol. 47, p. 3-13.

Application: Tiebout Sorting and Valuation of Schools and Neighborhoods:

- Ferreira, Fernando (2010): "You Can Take it With You: Proposition 13 Tax Benefits, Residential Mobility, and Willingness to Pay for Housing Amenities," *Journal of Public Economics*, vol. 94, p. 661-673.
- Bayer, Patrick, Fernando Ferreira and Robert McMillan (2007): "A Unified Framework for Measuring Preferences for Schools and Neighborhoods," *Journal of Political Economy*, vol. 115(4), p. 588-638.

Part II:

6. Residential Segregation and Discrimination

- Yinger, John (1986): "Measuring Racial Discrimination with Fair Housing Audits: Caught in the Act," *The American Economic Review*, v. 76 (5), pp. 881-893.
- Card, David, Alexandre Mas and Jesse Rothstein (2008): "Tipping and the Dynamics of Segregation," *The Quarterly Journal of Economics*, v. 123(1), pp. 177-218.

7. Spatial Equilibrium Across Housing Markets

- Rosen, Sherwin (1979): "Wage-Based Indexes of Urban Quality of Life". In *Current Issues in Urban Economics*, edited by Peter Mieszkowski and Mahlon Straszheim. Baltimore: Johns Hopkins University Press, 1979.
- Roback, Jennifer (1982): "Wages, Rents, and the Quality of Life," *Journal of Political Economy*, v. 90(6), pp. 1257-78.
- Moretti, Enrico (2011): "Real Wage Inequality", mimeo, University of California, Berkeley.

8. Agglomeration Economies in Production

- Krugman, Paul (1991): "Increasing Returns and Economic Geography," *Journal of Political Economy*, v. 99(3), pp. 483-499.
- Rosenthal, Stuart S. and William C. Strange (2004): "Evidence on the nature and sources of agglomeration economies," *Handbook of Regional and Urban Economics*, in: J. V. Henderson & J. F. Thisse (ed.), *Handbook of Regional and Urban Economics*, edition 1, volume 4, chapter 49, pages 2119-2171 Elsevier.
- Greenstone, Hornbeck, and Moretti (2010) "Identifying Agglomeration Spillovers: Evidence from Winners and Losers of Large Plant Openings", *Journal of Political Economy*, vol. 118(3).

9. Housing Demand, Supply and Prices

a. User Cost and Taxes

- Poterba, James (1984): "Tax Subsidies to Owner-Occupied Housing: An Asset Market Approach", *Quarterly Journal of Economics*, v. 99 (4), pp. 729-52.
- Poterba, James (1992): "Taxation and Housing: Old Questions, New Answers," *American Economic Review*, v. 82 (2), pp. 237-242.

b. Hedging/Portfolio Aspects

- Sinai, Todd and Nicholas Souleles (2005): "Owner-Occupied Housing as a Hedge Against Rent Risk," *Quarterly Journal of Economics*, v. 120 (2), pp. 763-789.

c. Supply of Housing

- Glaeser, Edward and Joseph Gyourko (2005): "Urban Decline and Durable Housing," *Journal of Political Economy*, v. 113 (2), pp. 345-375.
- Glaeser, Edward, Joseph Gyourko and Raven Saks (2005): "Why Is Manhattan So Expensive? Regulation and the Rise in House Prices," *Journal of Law & Economics*, v. 48 (2), pp. 331-370.
- Saiz, Albert (2010): "The Geographic Determinants of Housing Supply", *Quarterly Journal of Economics*, vol. 125(3), p. 1253-1296.

d. Prices in the Long Run

- Van Nieuwerburg, Stijn, and Pierre-Olivier Weill (2010): "Why Has House Price Dispersion Gone Up," *Review of Economic Studies*, vol. 77, p. 1567-1606.
- Case, Karl and Robert Shiller (1989): "The Efficiency of the Market for Single-Family Homes," *The American Economic Review*, v. 79 (1), pp. 125-137.

e. Prices in the Short Run

- Case, Karl and Robert Shiller (2003): "Is There a Bubble in the Housing Market?," *Brookings Papers on Economic Activity*, v. 2, pp. 299-362.
- Ferreira, Fernando and Joseph Gyourko (2011): "Anatomy of the Beginning of the Housing Boom: U.S. Neighborhoods and Metropolitan Areas, 1993-2009", mimeo, The Wharton School, University of Pennsylvania.