

RUTGERS UNIVERSITY
Graduate Program in Economics

Fall Semester,
2008-2009

Economics 509:
Applied Microeconometrics

Mr. Killingsworth
201-B New Jersey Hall

Office hours: 1-2 pm, Tuesdays and Fridays. Feel free to make an appointment for any mutually-convenient time if regularly-scheduled office hours aren't convenient. You can also call the office at 932-7794 or send e-mail to mrk@rci.rutgers.edu.

Exams and grades: Course grades will be based on an hourly exam (40%); problem sets (20%); and a final exam (40%). (Problem sets and review questions will be distributed before each exam.) Details about the problem sets will be discussed in class. Both exams (i) will consist exclusively of essay questions emphasizing the ability to apply principles of both economics and econometrics developed in the readings and lectures; and (ii) will be open-book and open-notes (so that memorization or rote learning will be deemphasized). Students who miss an exam will be required to take a makeup exam. In addition, students who took the exam but want to improve their exam grade may also take the makeup to that exam at their own option. (Students in this category whose makeup grade is better than their original exam grade will have the makeup grade -- not the original grade -- counted as their actual exam grade. Students whose makeup grade is worse than their original exam grade will have the average of their makeup and original grades counted as their actual exam grade. Students who take the original exam but not the makeup will of course have the original exam grade counted as their actual exam grade.) This policy applies to both the hourly exam and the final exam.

Readings: Readings for the course are listed in the Syllabus below. Note that most of these are available via Jstor (www.jstor.org) or on-line via the RU Library website. Readings not otherwise available will be available in an Econ. 509 binder in the third-floor library. Readings designated as "IW" are chapters from the Imbens-Wooldridge Workshop on Applied Microeconometrics; these readings may be downloaded by visiting <http://www.irp.wisc.edu/newsevents/workshops/appliedmicroeconometrics/schedule1.htm>.

SYLLABUS

0. Preliminaries

William H. Greene, "Probability and Distribution Theory," Appendix B in Econometric Analysis (6th ed.), Upper Saddle River, NJ: Prentice-Hall, 2008.

William G. Dewald, Jerry G. Thursby and Richard G. Anderson, "Replication in Empirical Economics: The Journal of Money, Credit and Banking Project," American Economic Review 76 (1986): 587-603.

PART 1: CROSS-SECTION DATA

1. Discrete dependent variables

IW, Lecture 8

Takeshi Amemiya, "Qualitative Response Models: A Survey," Journal of Economic Literature 19 (1981): 1483-1536.

William H. Greene, "Models for Discrete Choice," Chapter 23 in Econometric Analysis (6th ed.), Upper Saddle River, NJ: Prentice-Hall, 2008.

G. S. Maddala, "Discrete Regression Models," Chapter 2 (pp. 13-58), "Probabilistic-Choice Models, Chapter 3 (pp. 59-78), and "Multivariate Qualitative Variables," Chapter 5 (pp. 93-148) in Limited-Dependent and Qualitative Variables in Econometrics, Cambridge: Cambridge University Press, 1983.

Daniel McFadden, "Conditional Logit Analysis of Qualitative Choice Behavior," Chapter 4 (pp. 105-142) in Paul Zarembka, ed., Frontiers in Econometrics, New York: Academic Press, 1974.

1. Discrete dependent variables (continued)

Daniel McFadden, "The Revealed Preferences of a Government Bureaucracy: Theory," Bell Journal of Economics 6 (1975): 401-416.

Daniel McFadden, "The Revealed Preferences of a Government Bureaucracy: Evidence," Bell Journal of Economics 7 (1976): 55-72.

Wallace E. Huffman and Mark D. Lange, "Off-Farm Work Decisions of Husbands and Wives: Joint Decision Making," Review of Economics and Statistics 71 (1989): 471-480.

Michael Boskin, "A Conditional Logit Model of Occupational Choice," Journal of Political Economy 82 (1974): 389-398.

Peter Schmidt and Robert Strauss, "The Prediction of Occupation Using Multiple Logit Models," International Economic Review 16 (1975): 471-486.

Orley Ashenfelter, "Determining Participation in Income-Tested Social Programs," Journal of the American Statistical Association 78 (1983): 517-525.

Jerry Hausman and David Wise, "A Conditional Probit Model for Qualitative Choice: Discrete Decisions Recognizing Interdependence and Heterogeneous Preferences," Econometrica 46 (1978): 403-426.

William N. Evans, Wallace E. Oates and Robert M. Schwab, "Measuring Peer Group Effects: A Study of Teenage Behavior," Journal of Political Economy 100 (1992): 966-991.

Timothy F. Bresnahan and Peter C. Reiss, "Entry and Competition in Concentrated Markets," Journal of Political Economy 99 (1991): 977-1009.

Michael Mazzeo, "Product Choice and Oligopoly Market Structure," Rand Journal of Economics 33 (2002): 221-242.

Kenneth Hendricks and Robert H. Porter, "An Empirical Study of an Auction with Asymmetric Information," American Economic Review 78 (1988): 865-883.

Jerry Hausman, Bronwyn Hall and Zvi Griliches, "Econometric Models for Count Data with an Application to the Patents-R&D Relationship," Econometrica 52 (1984): 909-938.

2. Censored and Truncated Regression; Multiple-Equation Models

G. S. Maddala, "Censored and Truncated Regression Models," Chapter 6 (pp. 149-196); "Appendix: Some Results on Truncated Distributions," pp. 365-371; "Simultaneous-Equation Models with Truncated and Censored Variables," Chapter 7 (pp. 197-219); "Two-State Estimation Methods," Chapter 8 (pp. 221-256); and Chapter 9 (pp. 257-290) in Limited-Dependent and Qualitative Variables in Econometrics, Cambridge: Cambridge University Press, 1983.

William H. Greene, "Truncation, Censoring, and Sample Selection," Chapter 24 in Econometric Analysis (6th ed.), New York: Prentice-Hall, 2008.

Kenneth Hendricks and Robert H. Porter, "An Empirical Study of an Auction with Asymmetric Information," American Economic Review 78 (1988): 865-883.

James Tobin, "Estimation of Relationships for Limited Dependent Variables," Econometrica 26 (1958): 24-36.

James J. Heckman, "Shadow Prices, Market Wages and Labor Supply," Econometrica 42 (1974): 679-694.

Ray C. Fair, "A Theory of Extramarital Affairs," Journal of Political Economy 86 (1978): 45-61.

Jerry Hausman and David Wise, "The Evaluation of Results from Truncated Samples: The New Jersey Negative Income Tax Experiment," Annals of Economic and Social Measurement 5 (1976): 421-445.

Jerry Hausman and David Wise, "Social Experimentation, Truncated Distributions and Efficient Estimation," Econometrica 45 (1977): 919-938.

2. Censored and Truncated Regression; Multiple-Equation Models (continued)

James J. Heckman, "The Common Structure of Statistical Models of Truncation, Sample Selection and Limited Dependent Variables and a Simple Estimator for Such Models," Annals of Economic and Social Measurement 5 (1976): 475-492.

James J. Heckman, "Dummy Endogenous Variables in a Simultaneous Equation System," Econometrica 46 (1987): 931-959.

IW, Lecture 14

James J. Heckman, "Sample Selection Bias as a Specification Error," Econometrica 47 (1979): 153-161.

Daniel S. Hamermesh, "Labor Demand and the Structure of Adjustment Costs," American Economic Review 79 (1989): 674-689.

Robert A. Nakosteen and Michael A. Zimmer, "Migration and Income: The Question of Self-Selection," Southern Economic Journal 46 (1980): 840-851.

Robert A. Nakosteen and Michael A. Zimmer, "Marital Status and Earnings of Young Men," Journal of Human Resources 22 (1987): 248-268.

Jeffrey A. Dubin and Daniel McFadden, "An Econometric Analysis of Residential Electric Appliance Holdings and Consumption," Econometrica 52 (1984): 345-362.

3. Applications

G. S. Maddala, "Disequilibrium Models," Chapter 10 (pp. 291-346); and "Some Applications: Unions and Wages," Chapter 11 (pp. 347-364) in Limited-Dependent and Qualitative Variables in Econometrics, Cambridge: Cambridge University Press, 1983.

Timothy Bresnahan and Peter Reiss, "Empirical Models of Discrete Games," Journal of Econometrics 48 (1991): 57-81.

PART 2: PANEL DATA

4. Econometric Models for Panel Data

IW, Lectures 3, 4, and 6

William Greene, "Models for Panel Data," Chapter 9, Econometric Analysis (6th ed.), Upper Saddle River, NJ: Prentice-Hall, 2008.

Cheng Hsiao, Analysis of Panel Data, Cambridge: Cambridge University Press, 1986.

Gary Chamberlain, "Analysis of Covariance with Qualitative Data," Review of Economic Studies 47 (1980): 225-238.

IW, Lecture 11

Marianne Bertrand, Esther Duflo, and Sendhil Mullainathan, "How Much Should We Trust Differences-in-Differences Estimates?" Quarterly Journal of Economics 119(2004): 249-276.

Orley Ashenfelter et al., "Econometric Methods in *Staples*," Working Paper 486, Industrial Relations Section, Princeton University (www.irs.princeton.edu/pubs/working_papers.html)

Jacques Mairesse, "Time Series and Cross-Sectional Estimates on Panel Data: Why Are They Different and Why Should They be Equal?" pp. 81-95 in Joop Hartog, Geert Ridder and Jules Theeuwes, eds., Panel Data and Labor Market Studies, Amsterdam: North-Holland, 1990.

Thomas E. MaCurdy, "Interpreting Empirical Models of Labor Supply in an Intertemporal Framework with Uncertainty," Chapter 3 (pp. 111-155) in James J. Heckman and Burton Singer, Longitudinal Analysis of Labor Market Data, Cambridge: Cambridge University Press, 1985.

5. Models of Duration and/or Transition

William Greene, "Models for Duration Data," Chapter 25 (Section 6) in Econometric Analysis (6th ed.), Upper Saddle River, NJ: Prentice-Hall, 2008.

Tony Lancaster, The Econometric Analysis of Transition Data, Cambridge: Cambridge University Press, 1990.

Guido Imbens, "Transition Models in a Non-Stationary Environment," Review of Economics and Statistics 76 (1994): 703-720.

Tony Lancaster, "Econometric Methods for the Duration of Unemployment," Econometrica 47 (1979): 939-956.

Tony Lancaster and Andrew Chesher, "An Econometric Analysis of Reservation Wages," Econometrica 51 (1983): 1661-1676.

Carlo Favero, Hashem Pesaran and Sunil Sharma, "A Duration Model of Irreversible Oil Investment: Theory and Empirical Evidence," Journal of Applied Econometrics 9 (1994): S95-S112.

Kenneth Hendricks and Robert Porter (1996), "The Timing and Incidence of Exploratory Drilling on Offshore Wildcat Tracts," American Economic Review 86 (1996): 388-407.

Jose Mata and Pedro Portugal, "Life Duration of New Firms," Journal of Industrial Economics 42 (1994): 227-245.

PART 3: EXPERIMENTAL AND QUASI-EXPERIMENTAL DATA

6. Experimental and Quasi-Experimental Data

Jeffrey Wooldridge, "Estimating Average Treatment Effects," Chapter 18 in Econometric Analysis of Cross Section and Panel Data, Cambridge, MA: MIT Press, 2002.

Robert J. LaLonde, "Evaluating the Econometric Evaluations of Training Programs with Experimental Data," American Economic Review 76 (1986): 604-620.

Rebecca M. Blank, "The Effects of Double-Blind versus Single-Blind Reviewing: Experimental Evidence from The American Economic Review," American Economic Review 81 (1991): 1041-1067.

David Card and Alan B. Krueger, "Does School Quality Matter? Returns to Education and the Characteristics of Public Schools in the United States," Journal of Political Economy 100 (1992): 1-40.

David Card and Alan B. Krueger, "School Quality and Black-White Relative Earnings: A Direct Assessment," Quarterly Journal of Economics 107 (1992): 151-200.

Joshua Angrist and Alan B. Krueger, "Why Do World War II Veterans Earn More?" National Bureau of Economic Research Working Paper No. 2991, 1989.

7. Instrumental Variables Revisited

IW, Lectures 1, 2, 5, 15

James Heckman and Jeffrey Smith, "Assessing the Case for Social Experiments," Journal of Economic Perspectives 9 (1995): 85-110.

Joshua Angrist and Alan B. Krueger, "Instrumental Variables and the Search for Identification: From Supply and Demand to Natural Experiments," Journal of Economic Perspectives 15 (2001): 69-85.

James Heckman, "Instrumental Variables: A Study of Implicit Behavioral Assumptions Used in Making Program Evaluations," Journal of Human Resources 32 (1997): 441-462; "Addendum," 33 (1998): 247.

Joshua Angrist and Guido Imbens, "Comment," Journal of Human Resources 32 (1999): 823-827.

James Heckman, "Response," Journal of Human Resources 32 (1999): 828-837.