

Economics 229

Empirical Methods

Winter 2009

Reading List

Items with asterisks (***) in front are required reading.

Cameron and Trivedi is shorthand for **Microeconometrics**, by Colin Cameron and Pravin Trivedi.

Deaton is shorthand for **The Analysis of Household Surveys**, by Angus Deaton.

MHE is shorthand for **Mostly Harmless Econometrics**, by Angrist and Pischke.

- Data and using data

- *** Freed, D. “Statistical Models and Shoe Leather”. *Sociological Methodology* **21**, 1991, 291–313.
- *** Kennedy, P.E. “Sinning in the Basement: What Are the Rules? The Ten Commandments of Applied Econometrics.” *Journal of Economic Surveys* **16**:4, 2002, 487–620.
- *** Duncan, G.T. and G. Kalton. “Issues of Design and Analysis of Surveys across Time.” *International Statistical Review* **55**:1, 1989, 97–117.
- Bound, J., Brown, C., and Mathiowetz, N. “Chapter 59 Measurement Error in Survey Data,” in J.J. Heckman and E. Leamer, eds., *Handbook of Econometrics, Volume 5*, Amsterdam: North-Holland. 2001. 3705–3843.
- Deaton, A. “Chapter 33 Data and Econometric Tools for Development Analysis,” in Jere Behrman and T.N. Srinivasan, eds., *Handbook of Development Economics Volume 3, Part 1*, Amsterdam: North-Holland. 1995.
- Cameron and Trivedi. Chapters 24 (Stratified and Clustered Samples), 26 (Measurement Error Models), and 27 (Missing Data and Imputation).
- Deaton. Chapter 1 (The Design and Content of Household Surveys). Chapter 2, sections 1 (survey design and regressions) and 2 (The econometrics of clustered samples).

- Weighting and Unit Non-Response
 - *** Kalton, Graham and Ismael Flores-Cervantes. “Weighting Methods.” *Journal of Official Statistics* **19**: 2, 2003, 81–97. (Click on full text in menu to left of abstract.)
 - *** U.S. Census Bureau. Current Population Survey Design and Methodology Technical Paper 66, Chapter 10, Weighting and Seasonal Adjustment for Labor Force Data, 10-1–10-16.
 - *** U.S. Census Bureau. Public Use Microdata Sample 2000 Census Technical Documentation, Chapter 5 Sample Design and Estimation.
 - Survey Nonresponse. Robert Groves, Don Dillman, John Eltinge, and Roderick Little, eds. Wiley. 2001.

- Item Non-Response
 - Langerman, Lawrence, Land, Kenneth, and Pieper, Carl. “An Empirical Evaluation of the Predictive Mean Matching Method for Imputing Missing Values.” *Sociological Methods Research* **26**:3, 1997, 3–33.
 - Quality Measures: American Community Survey. Item Allocation Rates (Item non response). Same site has other interesting information about response rates, and coverage rates.
 - Shafer, Joseph. “Multiple Imputation: A Primer.” *Statistical Methods in Medical Research* **8**, 1999, 3–15.
 - Rubin, Donald. “Multiple Imputation After 18+ Years.” *Journal of the American Statistical Association* **91**: 434, 1996, 473–489. (Same issue has a number of comments by other statisticians.)

- Measurement Error

- *** Bollinger, Chris and Barry Hirsch. “Match Bias from Earnings Imputations in the Current Population Survey: The Case of Imperfect Matching.” *Journal of Labor Economics* **24**:3, 2006, 483–520.
- Bollinger, Chris and Barry Hirsch. “How Well Are Earnings Measured in the Current Population Survey? Bias from Nonresponse and Proxy Respondents.” Mimeo, 2007.
- *** Hausman, Jerry. “Mismeasured Variables in Econometric Analysis: Problems from the Right and Problems from the Left” *Journal of Economic Perspectives* **15**:4, 2001, 57–67.
- Black, Dan, Sanders, Seth, and Taylor, Lowell. “Measurement of Higher Education in the Census and Current Population Survey” *Journal of the American Statistical Association* **98**:463, 2003, 545–554.
- Bollinger, Chris and Amitabh Chandra. “Idiogenic Specification Error: A Cautionary Tale of Cleaning Data” *Journal of Labor Economics* **23**:2, 2005, 235–257.

- Attrition

- Fitzgerald, John, Gottschalk, Peter, and Moffitt, Robert. “An Analysis of Sample Attrition in Panel Data: The Michigan Panel Study of Income Dynamics.” *Journal of Human Resources* **33**:2, 1998, 251–299. (Note that this volume of the JHR has other articles on attrition in panels, and discusses the NLSY and SIPP as well.)

- Experiments and Causal Effects

- *** MHE Chapters 1 and 2.
- Skim *** Ashenfelter, Orley and Card, David. “Using the Longitudinal Structure of Earnings to Estimate the Effect of Training Programs.” *Review of Economics and Statistics* **67**: 4, 1985, 648–660.
- Skim *** LaLonde, Robert. “Evaluating the Econometric Evaluations of Training Programs with Experimental Data.” *American Economic Review* **76**:4, 1986, 604–620.

- Skim *** Heckman, James J. and Hotz, V. Joseph. “Choosing Among Alternative Nonexperimental Methods for Estimating the Impact of Social Programs: The Case of Manpower Training” *Journal of the American Statistical Association* **84**: 408, 1989, 862–874. (Note there are also 2 comments and a rejoinder.)
- *** Duflo, Esther, Dupas, Pascaline, and Kremer, Michael. “Peer Effects and the Impact of Tracking: Evidence from a Randomized Evaluation in Kenya” Mimeo, 2008.
- Angrist, J. ”Treatment Effects.” Forthcoming in the New Palgrave Dictionary of Economics.
- Angrist, J. and A. Krueger. “Chapter 23 Empirical Strategies in Labor Economics,” in O. Ashenfelter and D. Card, eds. *Handbook of Labor Economics, Volume 3a*, Amsterdam: North-Holland, 1999, 1277–1366.
- Heckman, J., R. LaLonde, and J. Smith. “Chapter 31 The Economics and Econometrics of Active Labor Market Programs,” in O. Ashenfelter and D. Card, eds. *Handbook of Labor Economics, Volume 3a*, Amsterdam: North-Holland, 1999, 1865–2097.
- Imbens, G. “Nonparametric Estimation of Average Treatment Effects Under Exogeneity: A Review.” *Review of Economics and Statistics* **86**:1, 2005, 4–29.
- Linear regression, selection on observables, matching, propensity scores
 - *** MHE Chapter 3
 - *** Rosenbaum, P. and Rubin, D. “The Central Role of the Propensity Score in Observational Studies for Causal Effects.” *Biometrika* **70**:1, 1983, 41–55.
 - *** Heckman, J.J., Ichimura, H., and Todd, P. “Matching as an Econometric Evaluation Estimator.” *Review of Economic Studies* **65**:2, 1998, 261–294.
 - *** Smith, J.A., and Todd, P. “Does Matching Overcome LaLonde’s Critique of Nonexperimental Estimators?” *Journal of Econometrics* **125**:1–2, 2005, 305–353. (Also see the comment from Dehejia and Smith and Todd’s rejoinder in the same volume of the journal. These are all linked to at Jeff Smith’s web page.)

- Caliendo, M. and S. Kopeinig. “Some Practical Guidance for the Implementation of Propensity Score Matching.” *Journal of Economic Surveys* **22**:1, 2008, 31–71.
 - Abadie, A., Drukker, D., Herr, J., and Imbens. G. “Implementing Matching Estimators for Average Treatment Effects in Stata.” *The Stata Journal* **4**, 2004, 290–311.
 - Abadie, A., and Imbens. G. “Large Sample Properties of Matching Estimators for Average Treatment Effects.” *Econometrica* **74**, 2006, 235–267.
 - Abadie, A., and Imbens. G. “On the Failure of the Bootstrap for Matching Estimators” *Econometrica* **76**:6, 2008, 1537–1557.
 - Hirano, K., Imbens, G., and Ridder G. “Efficient Estimation of Average Treatment Effects Using the Estimated Propensity Score.” *Econometrica* **71**, 2003, 1161–1189.
- Instrumental variables
 - *** MHE Chapter 4
 - Abadie, A. “Bootstrap Tests for Distributional Treatment Effects in Instrumental Variable Models.” *Journal of the American Statistical Association* **97**, 2002, 284–292.
 - *** Angrist, J., Imbens, G., and Rubin, D. “Identification of Causal Effects using Instrumental Variables.” *Journal of the American Statistical Association* **91**: 434, 1996, 444–455. (See also comments and rejoinder.)
 - Imbens, G. and Angrist, J. “Identification and Estimation of Local Average Treatment Effects.” *Econometrica* **62**: 2, 1994, 467–475.
 - Angrist, J., and Imbens, G. “Two Stage Least Squares Estimation of Average Causal Effects in Models with Variable Treatment Intensity.” *Journal of the American Statistical Association* **90**: 430, 1995, 431–442.
 - Heckman, J., Urzua, Sergio, and Vytlačil, E. “Understanding Instrumental Variables in Models with Essential Heterogeneity.” *Review of Economics and Statistics* **88**:3, 2006, 389–432.

- Angrist, J. and A. Krueger. “Instrumental Variables and the Search for Identification: From Supply and Demand to Natural Experiments.” *Journal of Economic Perspectives* **15**:4, 2001, 69–85.
- Angrist, J., Graddy, K., and Imbens, G. “The Interpretation of Instrumental Variables Estimates in Simultaneous Equations Models with an Application to the Demand for Fish.” *Review of Economic Studies* **67**:3, 2000, 499–527.
- Imbens, G., and Rubin, D. “Estimating Outcome Distributions for Compliers in Instrumental Variables Models.” *Review of Economic Studies* **64**:5, 1997, 555–574.
- * * * Flores-Lagunes, A. “Finite Sample Evidence of IV Estimators under Weak Instruments.” *Journal of Applied Econometrics* **22**, 2007, 677–694.
- Conley, T., Hansen, C., and Rossi, P. “Plausibly Exogenous.” Forthcoming, *Journal of Business and Economic Statistics*, 2007.
- Moreira, M. and Poi, B. “Implementing Conditional Tests with Correct Size in the Simultaneous Equations Model.” *The Stata Journal* **3**:1, 2003, 57–70. (Also available from Moreira’s web page.)
- Baum, C., Schaffer, M., and Stillman, S. “Enhanced Routines for Instrumental Variables/Generalized Method of Moments Estimation and Testing.” *Stata Journal* **7**:4, 465–506.
- Andrews, D., Moreira, M., and Stock, J. Web supplement to weak instruments papers..
- Angrist, J. “Estimation of Limited Dependent Variable Models with Dummy Endogenous Regressors: Simple Strategies for Empirical Practice.” *Journal of Business and Economic Statistics* **19**:1, 2001, 2–16. (See also many comments in same issue.)
- Hotz, V.J., Mullin, C., and Sanders, S. “Bounding Causal Effects Using Data from a Contaminated Natural Experiment: Analysing the Effects of Teenage Childbearing.” *Review of Economic Studies* **64**:4, 1997, 575–603.
- * * * Altonji, J., Elder, T., and Taber, C. “An Evaluation of Instrumental Variables Strategy for Estimating the Effects of Catholic Schooling.” *Journal of Human Resources* **40**:4, 2005,

791–821.

- Panel data, Differences, and Fixed Effects

- *** MHE Chapter 5
- Meyer, B. “Natural and Quasi-Experiments in Economics.” *Journal of Business and Economic Statistics* **13**:2, 1995, 151–161.
- Rosenzweig, M. and Wolpin, K. “Natural ‘Natural’ Experiments in Economics” *Journal of Economic Literature*, **38**, 827–874.
- *** Taber, C., and Conley, T. “Inference with “Differences in Differences” with a Small Number of Policy Changes.” Mimeo, 2008.
- Abadie, A., Diamond, A., and Hainmueller, J. “Synthetic Control Methods for Comparative Case Studies: Estimating the Effect of California’s Tobacco Control Program”, Mimeo, 2007.
- *** (Summary due Monday.) Dave, D., Reichman, N., and Corman, H. “Effects of Welfare Reform on Educational Acquisition of Young Adult Women”, NBER Working Paper 14466, 2008.
- *** McKinnish, T. “Welfare-Induced Migration at State Borders: New Evidence from Micro-Data.” *Journal of Public Economics* **91**: 3–4, 2007, 437–450.
- *** Read this or Rothstein. Royer, H. “Separated at Girth: U.S. Twin Estimates of the Effects of Birthweight”, Forthcoming, *AEJ–Applied*.
- *** Rothstein, J. “Teacher Quality in Education Production: Tracking, Decay, and Student Achievement.”, Mimeo, 2008.

- Regression Discontinuity

- *** MHE Chapter 6
- Imbens, G. and T. Lemieux. “Regression Discontinuity Designs: A Guide to Practice.”. *Journal of Econometrics* **142**:2, 2008, 615–635.

- Lee, D. and T. Lemieux. “Regression Discontinuity Designs in Economics.”, NBER WP 14723. 2009.
- *** Lee, D. and A. Mas. “Long-Run Impacts of Unions on Firms: New Evidence from Financial Markets, 1961–1999.”, NBER WP 14709. 2009.

- Distributional methods

- Quantile regression: Basics

- * *** MHE Chapter 7
- * *** Koenker, R., and Hallock, K. “Quantile Regression: An Introduction” *Journal of Economic Perspectives* **15**:4, 2001, 143–156.
- * *** Angrist, J., Chernozhukov, V., and Fernandez-Val, I. “Quantile Regression under Misspecification, with an Application to the US Wage Structure.” *Econometrica* **74**:2, 2006, 539–563.
- * Chernozhukov, V., Fernandez Val, I., and Melly, B. “Inference on Counterfactual Distributions.” MIT Working Paper 8–16. 2008.
- * *** Athey, S., and Imbens, G. “Identification and Inference in Nonlinear Difference-in-Differences Models.” *Econometrica* **74**:1, 2006, 235–267.
- * Application: *** Bitler, M., Gelbach, J., and Hoynes H. “What Mean Impacts Miss: Distributional Effects of Welfare Reform Experiments.” *American Economic Review* **96**:4, 2006, 988–1012. (Link to last pre-publication draft.)

- Quantile IV

- * *** Abadie, A., Angrist, J., and Imbens, G. “Instrumental Variables Estimation of the Effect of Subsidized Training on the Quantiles of Trainee Earnings” *Econometrica* **70**:1, 2002, 91–117.
- * *** Chernozhukov, V., and C. Hansen “An IV Model of Quantile Treatment Effects.” *Econometrica* **73**:1, 2005, 245–261.