

ECONOMICS 673: MICROECONOMETRICS READING LIST
(Required readings indicated with Asterisk)

I. Introduction

*[Train, K., \(2003\), *Discrete Choice Methods with Simulation*, Cambridge, MA: Cambridge University Press, Ch. 1.](#)

II. Simulation – Random Numbers, Pseudo-Random Numbers and Integration

Dorfman, J. H., (1997) *Bayesian Economics through Numerical Methods: A Guide to Econometrics and Decision-Making with Prior Information*, New York: Springer-Verlag, Inc., Chapter 3 (New Advances in Numerical Bayesian Techniques).

Gelman, A., J. Carlin, H.S. Stern, and D. B. Rubin (1995), *Bayesian Data Analysis*, London: Chapman & Hall, Ch. 11 (Markov Chain Simulation).

Geweke, J., (1991), "Efficient Simulation from the Multivariate Normal and Student-t Distributions Subject to Linear Constraints," in E. U. Keramidas and S. U. Kaufman (eds.) *Computing Science and Statistics: Proceedings of the 23rd Symposium on the Interface*. Interface Foundation of North America, pp. 571-576.

Geweke, J., (1996), "Monte Carlo Simulation and Numerical Integration," in H. M. Amman, D. A. Kendrick, and J. Rust (Eds.) *Handbook of Computational Economics Volume I*, Amsterdam: Elsevier, pp. 731-800.

Greene, W. H., (2000) *Econometric Analysis*, 4th edition, Upper Saddle River, New Jersey: Prentice-Hall, Inc., Sections 5.1 through 5.4.

*Judd, K L. (1998) *Numerical Methods in Economics*, Cambridge, MA: The MIT Press, Ch. 8-9.

Koop, G., D.J. Poirier and J.L. Tobias (2007). *Bayesian Econometric Methods*, Cambridge, Cambridge University Press, Ch. 11.

Lancaster, T. (2004). *An Introduction to Modern Bayesian Econometrics* Malden, MA: Blackwell Publishing, Chapter 4.

Mittelhammer, R. C., G. G. Judge, and D. J. Miller (2000), *Econometric Foundations*, Cambridge, MA: Cambridge University Press, Appendix Sections A.1, A.2, and A.4.

*[Stern, S., \(1997\) "Simulation Based Estimation," *Journal of Economic Literature*, 35: 2006-2039, Sections 1 through 3.1.](#)

*[Train, K., \(2003\), *Discrete Choice Methods with Simulation*, Cambridge, MA: Cambridge University Press, Ch. 9.](#)

III. Numerical Maximization

Greene, W. H., *Econometric Analysis*, 4th edition, Upper Saddle River, New Jersey: Prentice-Hall, Inc., Sections 5.4 through 5.6.

Ruud, P., *An Introduction to Classical Econometric Theory*, New York: Oxford University Press, 2000, Ch. 16.

[*Train, K., \(2003\), *Discrete Choice Methods with Simulation*, Cambridge, MA: Cambridge University Press, Ch. 8.](#)

IV. Properties of Discrete Choice Models

McFadden, D. (1981), "Econometric Models of Probabilistic Choice", in C. Manski and D. McFadden (eds.) *Structural Analysis of Discrete Data with Econometric Applications*, Cambridge MA: MIT Press, pp. 198-272.

[*Train, K., \(2003\), *Discrete Choice Methods with Simulation*, Cambridge, MA: Cambridge University Press, Ch. 2.](#)

V. Binary Choice Models (Logit/Probit)

A. Estimation

Boyles, R., (1983) "On the Convergence of the EM Algorithm," *Journal of the Royal Statistical Society, B* 45(1): 47-50.

Albert, J. H., and S. Chib (1993), "Bayesian Analysis of Binary and Polychotomous Response Data," *Journal of the American Statistical Association*, **88**: 669-679.

*Greene, W. H., *Econometric Analysis*, 4th edition, Upper Saddle River, New Jersey: Prentice-Hall, Inc., Sections 19.1 through 19.4.

[*Train, K., \(2003\), *Discrete Choice Methods with Simulation*, Cambridge, MA: Cambridge University Press, Ch. 3.](#)

Ruud, P., (1991) "Extensions of Estimation Methods Using the EM Algorithm," *Journal of Econometrics* 49: 305-341.

Wu, D., (1983) "On the Convergence Properties of the EM Algorithm," *Annals of Statistics* 11: 95-103.

B. Specification Tests, Goodness of Fit, Inference

*Greene, W. H., *Econometric Analysis*, 4th edition, Upper Saddle River, New Jersey: Prentice-Hall, Inc., Section 19.4.

[*Train, K., \(2003\), *Discrete Choice Methods with Simulation*, Cambridge, MA: Cambridge University Press, Section 3.8.](#)

C. Recent Developments

Brownstone, D., and K. E. Train, "Forecasting New Product Penetration with Flexible Substitution Patterns," *Journal of Econometrics*, **89**(1999): 109-129.

Butler, J., and R. Moffitt (1982), "A Computationally Efficient Quadrature Procedure for the One Factor Multinomial Probit," *Econometrica* **50**: 761-764.

Chen, H., and A. Randall. (1997) "Semi-Nonparametric Estimation of Binary Response Models with An Application To Natural Resource Valuation." *Journal of Econometrics* **76**: 323-340.

Gerfin, M., (1996) "Parametric and Semi-parametric Estimation of the Binary Response model of Labour Market Participation," *Journal of Applied Econometrics*

*Greene, W. H., *Econometric Analysis*, 4th edition, Upper Saddle River, New Jersey: Prentice-Hall, Inc., Sections 19.5.

Manski, C. (1975), "The Maximum Score Estimator of the Stochastic Utility Model of Choice," *Journal of Econometrics* **3**: 205-228

[*McFadden, D., and K. E. Train, "Mixed MNL Models for Discrete Response," *Journal of Applied Econometrics*, **15**\(2000\): 447-470.](#)

[*Revelt, D., and K. E. Train, "Mixed Logit with Repeated Choices: Households' Choices of Appliance Efficiency Level," *Review of Economics and Statistics*, **80**\(1998\): 647-657.](#)

Tauchien, H., A. D. Witte, and H. Griensinger (1994), "Criminal Deterrence: Revisiting the Issue with a Birth Cohort," *The Review of Economics and Statistics*, **76**: 399-412.

Train, K. E., "Recreation Demand Models with Taste Differences Over People," *Land Economics* **74**(1998): 230-39.

Train, K. E., "Mixed Logit Models for Recreation Demand." in *Valuing Recreation and the Environment: Revealed Preference Methods in Theory and Practice* (J. A. Herriges and C. L. Kling, eds.) Edward Elgar Publishing Ltd., Aldershot (1999a).

VI. Extensions of the Binary Choice Model

A. Ordered Probit/Logit

*Greene, W. H., *Econometric Analysis*, 4th edition, Upper Saddle River, New Jersey: Prentice-Hall, Inc., Sections 19.8.

[*Train, K., \(2003\), *Discrete Choice Methods with Simulation*, Cambridge, MA: Cambridge University Press, Section. 7.4.](#)

B. Multinomial Logit

*Greene, W. H., *Econometric Analysis*, 4th edition, Upper Saddle River, New Jersey: Prentice-Hall, Inc., Sections 19.7.1.

[*Train, K., \(2003\), *Discrete Choice Methods with Simulation*, Cambridge, MA: Cambridge University Press, Ch. 3.](#)

C. Conditional and Nested Logit

*Greene, W. H., *Econometric Analysis*, 4th edition, Upper Saddle River, New Jersey: Prentice-Hall, Inc., Sections 19.7.2 through 19.7.4.

[*Herriges, J., and C. Kling \(1997\) "The Performance of Nested Logit Models When Welfare Estimation is the Goal," *The American Journal of Agricultural Economics*, 79: 792-802.](#)

[*Herriges, J., and D. Phaneuf, \(2003\) "Inducing Patterns Correlation and Substitution in Repeated Logit Model of Recreation Demand," *The American Journal of Agricultural Economics* 84: 1076-1090.](#)

Herriges, J., and C. Kling (1996) "Testing the Consistency of Nested Logit Models with Utility Maximization," *Economics Letters*, 50: 33-40.

Morey, E. R. "Two RUMS Uncloaked: Nested-Logit Models of Site Choice and Nested-Logit Models of Participation and Site Choice," in *Valuing Recreation and the Environment: Revealed Preference Methods in Theory and Practice* (J. A. Herriges and C. L. Kling, eds.) Edward Elgar Publishing Ltd., Aldershot (1999).

[*Train, K., \(2003\), *Discrete Choice Methods with Simulation*, Cambridge, MA: Cambridge University Press, Ch. 4.](#)

D. Multinomial Probit

Bunch, D. S., (1991), "Estimability in the Multinomial Probit Model," *Transportation Research-B*, 25B: 1 – 12.

*Chen, H. Z., F. Lupi, and J. P. Hoehn, (1999) "An Empirical Assessment of Multinomial Probit and Logit Models for Recreation Demand," in *Valuing Recreation and the Environment: Revealed Preference Methods in Theory and Practice* (J. A. Herriges and C. L. Kling, eds.) Edward Elgar Publishing Ltd., Aldershot, pp. 141-161.

Greene, W. H., *Econometric Analysis*, 4th edition, Upper Saddle River, New Jersey: Prentice-Hall, Inc., Sections 19.7.5.

[*Train, K., \(2003\), *Discrete Choice Methods with Simulation*, Cambridge, MA: Cambridge University Press, Ch. 5.](#)

E. Mixed Logit

[*Herriges, J., and D. Phaneuf, \(2003\) "Inducing Patterns Correlation and Substitution in Repeated Logit Model of Recreation Demand," *The American Journal of Agricultural Economics* 84:1076-1090.](#)

McFadden, D., and K. E. Train, "Mixed MNL Models for Discrete Response," *Journal of Applied Econometrics*, 15(2000): 447-470.

Revelt, D., and K. E. Train, "Mixed Logit with Repeated Choices: Households' Choices of Appliance Efficiency Level," *Review of Economics and Statistics*, 80(1998): 647-657.

Train, K. E., "Recreation Demand Models with Taste Differences Over People," *Land Economics* **74**(1998): 230-39.

Train, K. E., "Mixed Logit Models for Recreation Demand." in *Valuing Recreation and the Environment: Revealed Preference Methods in Theory and Practice* (J. A. Herriges and C. L. Kling, eds.) Edward Elgar Publishing Ltd., Aldershot (1999).

[*Train, K., \(2003\), *Discrete Choice Methods with Simulation*, Cambridge, MA: Cambridge University Press, Ch. 6.](#)

F. Latent Class (Finite Mixture) Models

Bhat, C. (1997), "An Endogenous Segmentation Mode Choice Model with an Application to Intercity Travel," *Transportation Science* **31**: 34-48.

[Boxall, P., and W. Adamowicz \(2002\), "Understanding Heterogeneous Preferences in Random Utility Models: A Latent Class Approach," *Environmental and Resource Economics* **23**: 421-46.](#)

[*Greene, W., and D. Hensher \(2003\), "A Latent Class Model for Discrete Choice Analysis: Contrasts with Mixed Logit," *Transportation Research Part B* **37**: 681-98.](#)

Hu, W., A. Hünneimyer, M. Veeman, W. Adamowicz, and L. Srivastava (2004), "Trading off Health, Environmental and Genetic Modification Attributes in Food," *European Review of Agricultural Economics* **31**: 389-408.

[* Provencher, B., K. Baerenklau, and R. Bishop \(2002\), "A Finite Mixture Logit Model of Recreational Angling with Serially Correlated Random Utility," *American Journal of Agricultural Economics* **84**:1066-1075.](#)

Swait, J. (1994), "A Structural Equation Model of Latent Segmentation and Product Choice for Cross-Sectional Revealed Preference Choice Data," *Journal of Retail and Consumer Services* **1**:77-89.

G. Dynamic Discrete Choice

[*Train, K., \(2003\), *Discrete Choice Methods with Simulation*, Cambridge, MA: Cambridge University Press, Section 7.7.](#)

VII. **Estimation with Simulation**

[*Stern, S., \(1997\) "Simulation Based Estimation," *Journal of Economic Literature*, 35: 2006-2039.](#)

[*Train, K., \(2003\), *Discrete Choice Methods with Simulation*, Cambridge, MA: Cambridge University Press, Ch. 10.](#)

VIII. **Limited Dependent Variable Models**

A. Truncation

*Greene, W. H., (2000) *Econometric Analysis*, 4th edition, Upper Saddle River, New Jersey: Prentice-Hall, Inc., Sections 20.1, 20.2, and 20.4.

Ruud, P., (2000) *An Introduction to Classical Econometric Theory*, New York: Oxford University Press, Ch. 28.

Maddala, G. S., (1983) *Limited-Dependent and Qualitative Variables in Econometrics*, Cambridge: Cambridge University Press, Ch. 6.

Mittelhammer, R. C., G. G. Judge, and D. J. Miller (2000), *Econometric Foundations*, Cambridge, MA: Cambridge University Press, Section 20.4.

B. Censoring – Univariate Case

*Greene, W. H., (2000) *Econometric Analysis*, 4th edition, Upper Saddle River, New Jersey: Prentice-Hall, Inc., Sections 20.3.

Ruud, P., (2000) *An Introduction to Classical Econometric Theory*, New York: Oxford University Press, Ch. 28.

Maddala, G. S., (1983) *Limited-Dependent and Qualitative Variables in Econometrics*, Cambridge: Cambridge University Press, Ch. 6.

Mittelhammer, R. C., G. G. Judge, and D. J. Miller (2000), *Econometric Foundations*, Cambridge, MA: Cambridge University Press, Section 20.4.

*Chib, S., (1992), “Bayes Inference in the Tobit Censored Regression Model,” *Journal of Econometrics*, **51**: 79-99.

*Amemiya, T., (1984), “Tobit Models: A Survey,” *Journal of Econometrics* **24**: 3-61.

C. Censoring – Multiivariate Case

Amemiya, T., (1974), “Multivariate Regression and Simultaneous Equation Models when the Dependent Variables are Truncated Normal,” *Econometrica* **42**: 999-1012.

Heien, D., and C. Wessells (1990), “Demand Systems Estimation with Microdata: A Censored Regression Approach,” *Journal of Business and Economic Statistics*, **8**: 365-71.

Lee, L., and M. Pitt (1986), “Microeconomic Demand Systems with Binding Non-negativity Constraints: The Dual Approach,” *Econometrica* **54**: 1237-1242.

[*Phaneuf, D., C. Kling, and J. Herriges \(2000\), “Estimation and Welfare Calculations in a Generalized Corner Solution Model with an Application to Recreation Demand,” *The Review of Economics and Statistics*, **82**: 83-92.](#)

[*Phaneuf, D., \(1999\), “A Dual Approach to Modeling Corner Solutions in Recreation Demand,” *Journal of Environmental Economics and Management*, **37**: 85-105.](#)

[*Shonkwiler, J. S., and S. Yen \(1999\), “Two-Step Estimation of a Censored Demand System of Equations,” *American Journal of Agricultural Economics* **81**: 972-982.](#)

*Wales, T., and A. Woodland (1983), “Estimation of Consumer Demand Systems with Binding Non-Negativity Constraints,” *Journal of Econometrics* **21**: 263-285.

IX. Count Data Models

*Cameron, A., and P. Trivedi (1998), *Regression Analysis of Count Data*, New York: Cambridge University Press, Chapter 1, Sections 3.1 to 3.5.

Englin, J., and J. Shonkwiler (1995), "Estimating Social Welfare Using Count Data Models: An Application to Long-run Recreation Demand Under Conditions of Endogenous Stratification and Truncation," *Review of Economics and Statistics* **77**: 104-112.

Greene, W. H., (2000) *Econometric Analysis*, 4th edition, Upper Saddle River, New Jersey: Prentice-Hall, Inc., Section 19.9.

Ruud, P., (2000) *An Introduction to Classical Econometric Theory*, New York: Oxford University Press, Section 27.2.2.

[*von Haefen, R., and D. Phaneuf \(2003\), "Estimating Preferences for Outdoor Recreation: A Comparison of Continuous and Count Data Demand Systems," *Journal of Environmental Economics and Management* **45\(1\)**: 612-630.](#)

X. Panel Data

*Greene, W. H., (2000) *Econometric Analysis*, 4th edition, Upper Saddle River, New Jersey: Prentice-Hall, Inc., Chapters 14 and 15.

XI. Quasiexperimental Methods