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Topic: ***Introduction to HS237***

Dates: **Monday, April 2**

Optional: Chapter 1 and Appendices A-E in Wooldridge J. *Introductory Econometrics: A Modern Approach. Third Edition.* South-Western College Publishing, 2006.

Chapters 1 and 2 in J. Scott Long. *Regression Models for Categorical and Limited Dependent Variables.* Advanced Quantitative Techniques in the Social Sciences Series, Volume 7. Sage Publications, Inc. Thousand Oaks, CA: 1997.

Topic: ***Transformations and retransformations***

Dates: **Monday, April 2 and Wednesday, April 4**

Required: Manning, W. "The Logged Dependent Variable, Heteroskedasticity, and the Retransformation Problem." *Journal of Health Economics*, 1998;17(3):247-382. Available at http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list_uids=10180919

Optional: Duan, N. "Smearing Estimate: A Nonparametric Retransformation Method." *Journal of the American Statistical Association*, 1983;78(383):605-610. Available at <http://www.jstor.org/view/01621459/di985957/98p0935n>

Ai, C. and E. Norton. "Standard Errors for the Retransformation Problem with Heteroskedasticity." *Journal of Health Economics* 2000;19(5):697-718. Available at http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list_uids=11184800

Mullahy, J. "Much Ado about Two: Reconsidering Retransformation and the Two-Part Model in Health Econometrics." *Journal of Health Economics*, 1998;17(3):247-281. Available at http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list_uids=10180918

Topic: ***Generalized linear models (gamma)***

Dates: **Monday, April 9**

Required: Manning WG, Mullahy J. "Estimating Log Models: To Transform or Not to Transform?" *Journal of Health Economics* 2001; 20(4): 461-494. Available at <http://www.library.ucla.edu/libraries/biomed>.

Topic: ***Count data models (Poisson, negative binomial) and zero-inflated count data models***

Dates: **Wednesday, April 11 and Monday, April 16**

Required: Chapter 8 in J. Scott Long. *Regression Models for Categorical and Limited Dependent Variables.* Advanced Quantitative Techniques in the Social Sciences Series, Volume 7. Sage Publications, Inc. Thousand Oaks, CA: 1997.

Optional: Bao Y. "Predicting the Use of Outpatient Mental Health Services: Do Modeling Approaches Make a Difference?" *Inquiry* 2002; 39: 168-183. *On reserve at Biomed Library.*

Grootendorst PV. "A Comparison of Alternative Models of Prescription Drug Utilization." *Health Economics* 1995; 4:183-198. Reprint available at <http://www3.interscience.wiley.com/cgi-bin/booktext/96515717/BOOKPDFSTART>

Chapter 7 in Long JS, Freese J. Chapters 4, 5, 6 and 7 in *Regression Models for Categorical Dependent Variables Using STATA*. STATA Press. College Station, TX: 2001.

Topic: *Two-part models*
Dates: **Wednesday, April 18**

Required: Duan, N., W. Manning, C. Morris, J. Newhouse. "A Comparison of Alternative Models for the Demand for Medical Care." *Journal of Business and Economic Statistics*, 1983;1(2):115-126. Available at <http://www.jstor.org/view/07350015/ap050002/05a00040/0>

Optional: Ettner SL, Argeriou M, McCarty D, Dilonardo J, Liu H. "How Did the Introduction of Managed Care for the Uninsured in Iowa Affect the Use of Substance Abuse Services?" *The Journal of Behavioral Health Services & Research* 2003; 30(1): 26-40. Available at <http://www.library.ucla.edu/libraries/biomed>.

Topic: *Tobit models*
Dates: **Monday, April 23**

Required: Section 17.2 (pp. 595-604) in Wooldridge J. *Introductory Econometrics: A Modern Approach. Third Edition*. South-Western College Publishing, 2006.

Optional: Chapter 7 in J. Scott Long. *Regression Models for Categorical and Limited Dependent Variables*. Advanced Quantitative Techniques in the Social Sciences Series, Volume 7. Sage Publications, Inc. Thousand Oaks, CA: 1997.

Roberts AA. "The Labor Market Consequences of Family Illness." *The Journal of Mental Health Policy and Economics* 1999; 2:183-195. Available at <http://www3.interscience.wiley.com/cgi-bin/fulltext/72502474/PDFSTART>.

Topic: *Sample selection models*
Dates: **Wednesday, April 25**

Required: Section 17.5 (pp. 616-622) in Wooldridge J. *Introductory Econometrics: A Modern Approach. Third Edition*. South-Western College Publishing, 2006.

Optional: Grasdal A. "The Performance of Sample Selection Estimators to Control for Attrition Bias." *Health Economics* 2001; 10(5): 385-398. Available at <http://www3.interscience.wiley.com/cgi-bin/fulltext/85005214/PDFSTART>.

Topic: *Treatment effects and bivariate probit models*
Dates: **Monday, April 30**

Required: Pages 849-855 and 933-934 in Greene WH. *Econometric Analysis*, Fourth Edition. Prentice-Hall, Inc. Upper Saddle River, NJ: 2000.

Optional: Feng W, Zhou W, Butler JS, Booth BM, French MT. "The Impact of Problem Drinking on Employment." *Health Economics* 2001; 10(6):509-521. Available at <http://www3.interscience.wiley.com/cgi-bin/fulltext/82002040/PDFSTART>.

Crown, W., R. Obenchain, L. Englehart, T. Lair, D. Buesching and T. Croghan. "The Application of Sample Selection Models to Outcomes Research: The Case of Evaluating the Effect of

Antidepressant Therapy on Resource Utilization.” *Statistics in Medicine* 1998; 17(17): 1943-1958. Available at <http://www3.interscience.wiley.com/cgi-bin/fulltext/10008021/PDFSTART>.

Topic: *Two-stage least squares*
Dates: **Wednesday, May 2 and Monday, May 7**

Required: Chapters 15-16 in Wooldridge J. *Introductory Econometrics: A Modern Approach. Third Edition.* South-Western College Publishing, 2006.

Harris, K and D. Remler. “Who is the Marginal Patient? Understanding Instrumental Variables Estimates of Treatment Effects.” *Health Services Research*, 1998; 33(5): 1337-1360. Available at <http://www.pubmedcentral.gov/articlerender.fcgi?tool=pubmed&pubmedid=9865223>.

Optional: Hernan MA and Robins JM. “Instruments for Causal Inference: An Epidemiologist’s Dream?” *Epidemiology* 2006; 17(4): 360-372. Available at <http://www.epidem.com/pt/re/epidemiology/pdfhandler.00001648-200607000-00004.pdf;jsessionid=FtGFGBz1yVHv2DY58jPbLT50NDGG16TQ4IfFT1GNnZqhQIZp69qw!2118075020!-949856145!8091!-1>.

Stukel TA, Fisher ES, Wennberg DE, Alter DA, Gottlieb DJ, Vermeulen MJ. “Analysis of Observational Studies in the Presence of Treatment Selection Bias: Effects of Invasive Cardiac Management on AMI Survival Using Propensity Score and Instrumental Variable Methods.” *Journal of the American Medical Association* 2007; 297(3): 278-285. Available at <http://jama.ama-assn.org/cgi/reprint/297/3/278>.

Also see editorial on Stukel et al. article by D’Agostino RB Jr., D’Agostino RB Sr. “Estimating Treatment Effects Using Observational Data.” *Journal of the American Medical Association* 2007; 297(3): 314-316. Available at <http://jama.ama-assn.org/cgi/reprint/297/3/314>.

Topic: *Instrumental variables with nonlinear variables*
Dates: **Wednesday, May 9**

Required: Bhattacharya J, Goldman D, McCaffrey D. “Estimating Probit Models with Self-Selected Treatments.” *Statistics in Medicine* 2006; 25:389-413. Available at <http://www3.interscience.wiley.com/cgi-bin/fulltext/112222622/PDFSTART>.

Optional: Hadley J, Polsky D, Mandelblatt JS, Mitchell JM, Weeks JC, Wang Q, Hwang Y, and the OPTIONS Research Team. “An Exploratory Instrumental Variable Analysis of the Outcomes of Localized Breast Cancer treatments in a Medicare Population.” *Health Economics* 2003; 12(3):171-186. Available at <http://www3.interscience.wiley.com/cgi-bin/fulltext/94515973/PDFSTART>.

Topic: *Survival analysis*
Dates: **Wednesday, May 23, Wednesday, May 30 and Monday, June 4**

Required: Lee ET, Go OT. “Survival Analysis in Public Health Research.” *Annual Review of Public Health*, 1997; 18:105-34. Available at <http://arjournals.annualreviews.org/doi/abs/10.1146/annurev.publhealth.18.1.105>.

Optional: Chapter 20 in Wooldridge J. *Introductory Econometrics: A Modern Approach. Third Edition.* South-Western College Publishing, 2006.

Idler EL, Russell LB, Davis D. “Survival, Functional Limitations, and Self-rated Health in the NHANES I Epidemiologic Follow-up Study, 1992.” *American Journal of Epidemiology* 2000; 152(9):874-883. Available at <http://aje.oxfordjournals.org/cgi/reprint/152/9/874>.

De Bruijne MHJ, le Cessie S, Kluin-Nelemans HC, van Houwelingen HC. "On the Use of Cox Regression in the Presence of an Irregularly Observed Time-Dependent Covariate." *Statistics in Medicine* 2001; 20:3817 –3829. Available at <http://www3.interscience.wiley.com/cgi-bin/fulltext/89011314/PDFSTART>.

Topic: *Propensity scores*
Dates: **Wednesday, June 6**

Required: Becker SO and Ichino A. "Estimation of Average Treatment Effects Based on Propensity Scores." *The Stata Journal* 2002; 2(4): 358-377. Available at <http://www.iue.it/Personal/Ichino/psi7.pdf>.

Optional: Wiles NJ, Lunt M, Barrett EM, Bukhari M, Silman AJ, Symmons DPM, Dunn G. "Reduced Disability at Five Years with Early Treatment of Inflammatory Polyarthritis: Results from a Large Observational Cohort, Using Propensity Models to Adjust for Disease Severity." *Arthritis & Rheumatism* 2001; 44(5): 1033-1042. Available at <http://www3.interscience.wiley.com/cgi-bin/fulltext/81002002/PDFSTART>.

Black DA, Smith JA. "How Robust is the Evidence on the Effects of College Quality? Evidence from Matching." *Journal of Econometrics* 2004; 121(1-2): 99-124. Available at <http://www.sciencedirect.com/science/article/B6VC0-4CC28P3-1/2/8a9c36c5a36deecb12d85f7fd1f820b6>.