ECO 7424 ECONOMETRIC MODELS AND METHODS

Spring 2017

Prof. C. Ai, MAT #336, 2-7859

Office Hour: MW 2 – 3:30

Primary Texts

Jeffrey M. Wooldridge, Econometric Analysis of Cross Section and Panel Data, The MIT Press, 2010.

William H. Greene, Econometric Analysis, 5th ed., Macmillan: New York 2001.

Preparation

Students should be prepared in linear algebra, probability and statistics at the level of Chapters 1-5 of Greene. Chapters 1-3 of Wooldridge provide good review. Course requirements include three in-class exams. Homework will be assigned and graded. Final grades will be based on the scores on the three exams (each exam counts 25%) and homework (25%). The dates for the tests will be announced in class.

Reading Assignments

1. *Linear Regression Model: Single Equation*

   Greene, Ch. 2 – 8, 10 – 12
   Wooldridge, Ch. 4 - 6

   Fisher, F. "Tests of Equality Between Sets of Coefficients in Two Linear Regressions: An Expository Note", Econometrica Mar. 1970

   T. S. Breusch, "Conflict Among Criteria for Testing Hypothesis: Extensions and Comments," Econometrica, 1979

   Hausman, J. "Specification Tests in Econometrics," Econometrica (1978)

   H. White, "A Heteroskedasticity-Consistent Covariance Matrix Estimator and A W. Newey and K. West, "A Simple, Positive Definite Heteroskedasticity and Autocorrelation Consistent Covariance Matrix," Econometrica 1987

2. *Linear Regression: System of Equations*

   Greene, Ch. 14 – 15

   Wooldridge 7 – 9

   Fisher, F.M. The Identification Problem in Econometrics, Ch. 1, 2,

   *Hausman and Taylor "Identification in Simultaneous Equations System

with Covariance Restrictions", Econometrica, pp.1527-1549, 1983

*Hausman, Newey, and Taylor "Efficient Estimation and Identification of Simultaneous Equations Models with Covariance Restrictions" Econometrica, p. 849-854, 865-868, 1987

Fair, "The Estimation of Simultaneous Equation Models with Lagged Endogenous Variables and First Order Serially Correlated Errors," Econometrica, pp507-516,

Harvey and Phillips, "Testing for Serial Correlation in Simultaneous Equation Models," Econometrica 48, 1980

*Godfrey, L. "Testing for Serial Correlation in Dynamic Simultaneous Equation Models," Econometrica 44, 1976.

Byron, "Testing Structural Specification Using the Unrestricted Reduced Form", Econometrica, 1974.

Berndt and Savin, "Conflict Among Criteria for Testing Hypotheses in the Multivariate Linear Regression Model," Econometrica, 1977 pp1263.

Brundy and Jorgenson, "Efficient Estimation of Simultaneous Equations by Instrumental Variables," Review of Economics and Statistics, pp270-224, 1971

Application:

A. Bhargava and J. Sargan, "Estimating Dynamic Random Effects Models from Panel Data Covering Short Time Periods," Econometrica, 51, pp1635-1660, 1983

3. Panel Data

Greene, Ch 13

Wooldridge 10 11

Hausman and Taylor, "Panel Data and Unobservable Individual Effects" Econometrica (1981)

Griliches and Hausman, "Errors in Variables in Panel Data, "Journal of Econometrics

4. Treatment Effect Model

Wooldridge 18