

Econ 710
Economic Statistics and Econometrics II
Spring 2002

Course Time: Tuesdays and Thursdays, 9:30 – 10:45. 5208 Social Science.
Office Hours: Wednesdays, 1:30 – 3:30, or by appointment.
Webpage: <http://www.ssc.wisc.edu/~bhansen/710/710.htm>

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This course is designed for first-year Economics Ph.D. students. The basic methods modern econometric methods and theory are covered. The intention is that the material will provide a foundation for applied research in economics

The course prerequisites are Econ 703 and 709, or equivalents. Familiarity with probability, statistics, and matrix algebra is assumed.

Class assignments will be passed out approximately every week. These assignments will include both problem solving and computer tasks. The computer exercises will involve programming in the Gauss programming language. The assignments will be graded by the teaching assistant, and will be reviewed in the discussion sections. Questions regarding computers and software should be directed to the TA

There will be two exams, a mid-term and a final. The grading for the course will be as follows: Assignments: 20%. Midterm: 30%. Final: 50%.

The recommended textbook is *Econometrics* by Fumio Hayashi, and is available in the University Bookstore.

I have typed up my lecture notes for the semester. The notes, around 147 pages, are available as a pdf file on the course webpage. I expect to follow these lecture notes quite closely in class. However, we may not cover every topic, and may add some additional topics, as time permits.

On the next page, I have listed some major textbooks and resources in econometrics. They may be useful as references for further study or for applied projects.

Alternative textbooks:

Arthur S. Goldberger, *A Course in Econometrics* (1991)
William H. Greene, *Econometric Analysis, 4th Edition*, (2000)
Paul A. Ruud, *An Introduction to Classical Econometric Theory* (2000)
James Davidson, *Econometric Theory* (2000)
Russell Davidson and James G. MacKinnon, *Estimation and Inference in Econometrics* (1993)

Advanced Econometrics:

Handbook of Econometrics, Volumes I-V.
James Davidson, *Stochastic Limit Theory* (1994).
Takeshi Amemiya, *Advanced Econometrics* (1985).

The Bootstrap:

Peter Hall, *The Bootstrap and Edgeworth Expansion* (1992).
Bradley Efron and Robert J. Tibshirani, *An Introduction to the Bootstrap* (1993).
A.C. Davison and D.V. Hinkley, *Bootstrap Methods and their Application* (1997).

Panel Data

Cheng Hsiao, *Analysis of Panel Data* (1986).
Badi Baltagi, *Econometric Analysis of Panel Data*
Laszlo Matyas and Patrick Sevestre, eds., *The Econometrics of Panel Data* (1996).
Jeffrey Wooldridge, *Econometric Analysis of Cross Section and Panel Data* (2002)

Time Series

Clive W.J. Granger and Timo Terasvirta, *Modelling Nonlinear Economic Relationships* (1993).
James D. Hamilton, *Time Series Analysis* (1994).
Soren Johansen, *Likelihood-Based Inference in Cointegrated Vector Autoregressive Models* (1995).
Philip Hans Franses and Dick van Dijk, *Non-Linear Time Series Models in Empirical Finance* (2000).

NonParametrics

Wolfgang Hardle, *Applied Nonparametric Regression* (1990).
Adrian Pagan and Aman Ullah, *Nonparametric Econometrics* (1999).

Limited Dependent Variables

G.S. Maddala, *Limited-Dependent and Qualitative Variables in Econometrics* (1983).
Christian Gourieroux, *Econometrics of Qualitative Dependent Variables* (1991).
A. Colin Cameron and Pravin K. Trivedi, *Regression Analysis of Count Data* (1998).

Contents

- 1 Matrix Algebra 2**
 - 1.1 Terminology 2
 - 1.2 Matrix Multiplication 3
 - 1.3 Identity Matrix 4
 - 1.4 Trace of a Matrix 4
 - 1.5 Matrix Inversion 5
 - 1.6 Determinants 5
 - 1.7 Eigenvalues 6
 - 1.8 Positive Definite Matrices 7
 - 1.9 Idempotent Matrices 7
 - 1.10 Projection Matrices 7

- 2 Probability Theory 10**
 - 2.1 Random Vectors 10
 - 2.2 Inequalities 11
 - 2.3 Random Sampling 14
 - 2.4 Weak Law of Large Numbers 15
 - 2.5 Central Limit Theorem 16
 - 2.6 Continuous Mapping Theorem 17

- 3 The Random Sampling Model, Regression, and Projection 18**
 - 3.1 Random Sampling 18
 - 3.2 Regression 18
 - 3.3 Linear Models 20
 - 3.4 Linear Projection 21
 - 3.5 Assumptions on the Regression Error 22

- 4 Multivariate Linear Regression 24**
 - 4.1 Model in Matrix Notation 24
 - 4.2 Method of Moments Estimation 24
 - 4.3 MME is OLS 26
 - 4.4 Gaussian Quasi-MLE 26
 - 4.5 Semiparametric Efficiency 27
 - 4.6 Frisch-Waugh-Lovell (FWL) Theorem 29
 - 4.7 Analysis of Variance 31
 - 4.8 Bias 32
 - 4.9 Variance-Covariance Matrix of Regression Error 33

4.10	Covariance Matrix of OLS Estimator	34
4.11	GLS and the Gauss-Markov Theorem	34
4.12	Estimation of Error Variance	36
4.13	Covariance Matrix Estimation	37
4.14	Standard Errors	38
5	Asymptotic Distribution Theory	40
5.1	Consistency of the OLS Estimator	40
5.2	Asymptotic Distribution of OLS Estimator	42
5.3	Consistent Covariance Matrix Estimation	43
5.4	Studentized Statistic	46
5.5	Asymptotic Confidence Interval	47
5.6	Functions of Parameters	47
5.7	t tests	50
5.8	Wald Tests	51
5.9	F Tests	52
5.10	Quasi-LR Tests	55
6	Exact Distribution Theory	56
6.1	Normal Regression Model	56
6.2	Monte Carlo Simulation	57
6.3	An Example	59
7	The Bootstrap	62
7.1	Definition of the Bootstrap	62
7.2	The Empirical Distribution Function	62
7.3	Computation	64
7.4	Bootstrap Estimation of Bias	64
7.5	Bootstrap Estimation of Variance	65
7.6	Efron's Percentile Interval	66
7.7	Alternative Percentile Interval	67
7.8	One-Sided Hypothesis Tests	67
7.9	Percentile-t Equal-Tailed Interval	68
7.10	Two-Sided Hypothesis Tests	68
7.11	Symmetric Percentile-t Intervals	69
7.12	Vector Tests	69
7.13	Asymptotic Expansions	69
7.14	One-Sided Tests	70
7.15	Symmetric Two-Sided Tests	71
7.16	Percentile Confidence Intervals	72
7.17	Bootstrap Methods for Independent Errors	73
8	Functional Form	74
8.1	Dummy Variables	74
8.2	NonLinearity in Regressors	76
8.3	Testing for Omitted NonLinearity	77
8.4	$\log(Y)$ versus Y as Dependent Variable	78
8.5	Multicollinearity	78

8.6	Omitted Variables	79
8.7	Irrelevant Variables	80
8.8	Model Selection	81
9	NonLinear Regression	85
9.1	NonLinear Regression Models	85
9.2	NLLS Estimation	85
9.3	Concentration	86
9.4	Computation Using Linearization	86
9.5	Asymptotic Distribution	87
9.6	Identification	88
10	Feasible GLS	89
10.1	Skedastic Regression	89
10.2	Estimation of Skedastic Regression	90
10.3	Testing for Heteroskedasticity	90
10.4	Feasible GLS Estimation	91
10.5	Covariance Matrix Estimation	92
10.6	Commentary: FGLS versus OLS	92
11	Generalized Method of Moments	94
11.1	Endogeneity	94
11.2	Instrumental Variables	95
11.3	Reduced Form	96
11.4	Identification	97
11.5	Instrumental Variables Estimation	98
11.6	GMM Estimator	98
11.7	2SLS Estimator	99
11.8	Distribution of GMM Estimator	100
11.9	Optimal Weight Matrix	100
11.10	Estimation of the Efficient Weight Matrix	101
11.11	Over-Identification Test	102
11.12	GMM: The General Case	102
11.13	Hypothesis Testing: The Distance Statistic	103
11.14	GMM as Semiparametrically Efficient	104
11.15	Conditional Moment Restrictions	104
11.16	Continuously-Updated GMM	106
11.17	Empirical Likelihood	106
11.18	Bootstrap GMM Inference	108
11.19	Bekker Asymptotics	109
11.20	Identification Failure	110
12	Univariate Time Series	113
12.1	Stationarity and Ergodicity	113
12.2	Autoregressions	115
12.3	Stationarity of AR(1) Process	115
12.4	Lag Operator	116
12.5	Stationarity of AR(k)	116

12.6	Estimation	117
12.7	Asymptotic Distribution	118
12.8	Bootstrap for Autoregressions	118
12.9	Trend Stationarity	119
12.10	Testing for Omitted Serial Correlation	120
12.11	Model Selection	121
12.12	Autoregressive Unit Roots	121
13	Multivariate Time Series	123
13.1	Vector Autoregressions (VARs)	123
13.2	Estimation	124
13.3	Restricted VARs	124
13.4	Single Equation from a VAR	125
13.5	Testing for Omitted Serial Correlation	125
13.6	Selection of Lag Length in an VAR	126
13.7	Granger Causality	126
13.8	Cointegration	127
13.9	Cointegrated VARs	127
14	Limited Dependent Variables	129
14.1	Binary Choice	129
14.2	Count Data	131
14.3	Censored Data	131
14.4	Sample Selection	132
15	Panel Data	135
15.1	Individual-Effects Model	135
15.2	Fixed Effects	135
15.3	Dynamic Panel Regression	137