Business 326
Introduction to Econometrics

Course Information

Business 326 course meetings will be held on Tuesdays, 6:00-9:00 PM in Rosenwald Hall, Room 15. The course is designed to give students an introduction to econometric methods and their applications to business and economic problems. There will be mid-quarter and end-of-quarter examinations. In addition, problem sets will be assigned that will be discussed at weekly problem section meetings (to be arranged) with Jeff Currie, Teaching Assistant who will assist you with computer programs, data bases, etc.

The text for the course is: D.N. Gujarati, Basic Econometrics (2nd ed.), McGraw Hill, 1988, denoted DNG below. Also, papers included in the Bus 326 Course packet will be assigned for reading.

Office Hours: Mondays, 1:30-3:00, Ro 205D and by appt.
Email: FAC_AZELLNER@GSBVAX.UCHICAGO.EDU (for pressing questions)

Course Topics and Reading Assignments

I. Econometrics and Business

A. Definition of Econometrics

1. Measurement, Data, Economic and Business Theory, Statistics and Computers
   a. Accuracy of measurements (Get the Facts!)
   b. Measurement without theory and theory without measurement
   c. Usual, unusual and ugly facts
   d. Data \( \rightarrow \) Theory

2. Objectives: Learning from Data and Experience and Solving Practical Problems
   a. Generalizations and models that are reliable in explanation, prediction and solution of practical problems
      (1) KISS (keep it sophisticatedly simple)

3. Examples of Econometric Analyses in Business
   a. What is the problem?
   b. Why is it important?
   c. How can the problem be solved?
Readings: DNG, 1-9
A. Zellner, "The Philosophy and Objectives of Econometrics"
"Statistical Analysis of Econometric Models" Section 1.2.1.4 Comments
and Rejoinder.
Background references: R.L. Epstein, A History of Econometrics, North-
Holland, 1987, and M.S. Morgan, The History of Econometric Ideas,

II. Econometric Models for One or Two Variables

A. Models to Represent "Random Variation"
("All variation is random unless shown otherwise.")
1. Random sequences and random walk models for stock prices and exchange
   rates
2. Coin-flipping and forecasting turning-points
3. "Benchmark" models

B. Simple Correlation (x → y) and Two Variable or Simple Regression (x → y) with
   Applications
1. Correlation, regression and causation
2. Interpretation of correlation and regression models
   a. "Descriptive" versus "Causal"
Readings: DNG, Chs. 1-2
A. Zellner, "Notes on Simple Correlation and Regression"
A. Zellner, "Some Properties of the Durations of Economic Expansions
   and Contractions."
F.X. Diebold, "Are Long Expansions Followed by Short Contractions?"

C. Estimation of Parameters and Goodness of Fit
1. Random walk models
2. Two variable regression
3. Methods of estimation
   a. Least-squares, etc.
   b. Maximum-likelihood
   c. Bayes
   d. Bayesian and Non-Bayesian Method of Moments

*Included in Course Packet.
Readings: DGN, Chs. 14-15
Y. Mundlak, "Empirical Production Function Free of Management Bias."

D. Autoregressive, Distributed Lag and Forecasting Models

Readings: DGN, Ch. 16
A. Garcia-Ferrer, et al., "Macroeconomic Forecasting Using Pooled International Data."
A. Zellner and C. Hong, "Forecasting International Growth Rates Using Bayesian Shrinkage and Other Procedures."

VI. Simultaneous Equation Model
A. Interpretation of Model and Examples
B. Identification Problem
C. Estimation, Testing and Prediction Procedures
D. Applications and Evaluation

Readings: DGN, Chs. 17-19

VII. Summary and Overview


Additional General References

*Included in Course Packet.

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