

MEMORIAL UNIVERSITY OF NEWFOUNDLAND

ECONOMICS 4551 Econometrics II

Winter Semester 2009

Dr. N. Roy

E-mail: noelroy@mun.ca

WWW: <http://www.uccs.mun.ca/~noelroy/4551.html>

COURSE DESCRIPTION

Further problems in econometric theory and technique: multicollinearity, autocorrelation, nonlinear estimation, and the identification and estimation of systems of equations. Published empirical research will be discussed and each student will be expected to perform an original empirical study.

Prerequisite: Economics 4550.

COURSE OBJECTIVES

The objectives of the course are fourfold:

- Establish a basic understanding of the theoretical properties of the frequently used basic and advanced econometric techniques under non-classical conditions commonly encountered with economic data and models.
- Examine the implementation of these techniques in the context of specific econometric problems.
- Supply 'hands-on' exposure to the techniques through the utilization of a general econometrics computer software package.
- Provide experience in designing and implementing your own econometric study.

The econometric modelling package SHAZAM has been site-licensed at MUN, and can be freely installed on any University computer or any home computer owned by a University student. An installation disk for the program may be borrowed from the Departmental Office at A3077. SHAZAM will be used for the homework assignments. Instruction in using the program will be provided as part of the course. Also posted on the Web page for this course are SHAZAM programs which implement the empirical examples contained in the textbook for this course.

The Empirical Project is an important component of this course, and planning for it should begin at an early stage. You will be entirely responsible for: defining the problem to be studied; constructing the model to be estimated; collecting the data necessary for estimation; estimating the model, running model diagnostics, and reestimating the model based on these diagnostics; and reporting the results. The report on your empirical project is due on April 8, and should include a copy of your computer output in an Appendix. Late papers will be penalized at the rate of 2 percent per day.

TEXTBOOKS

Ramanathan, Ramu, *Introductory Econometrics with Applications*. Fifth Edition. Harcourt, 2002.
Kennedy, Peter, *A Guide to Econometrics*. Fifth Edition. MIT Press, 2003.
SHAZAM User's Reference Manual version 9. Northwest Econometrics, 2003.

METHOD OF EVALUATION

Homework Assignments (2).	20%
Mid Term Exam.	15%
Empirical Project.	25%
Final Examination.	40%

COURSE OUTLINE

Dates are subject to change.

1. Empirical Project (due April 8)
Ramanathan, chapter 14.
Kennedy, chapter 21.
Tomas Dvorak, "An Annotated Sample Paper in Econometrics", *Journal of Economic Education*, 38(1) (Winter 2007), online at http://www.union.edu/PUBLIC/ECODEPT/dvorakt/43/sample_paper.htm
2. Heteroskedasticity (January 14, 19, 21 and 26)
Ramanathan, chapter 8.
Kennedy, sections 8.1-8.3.
SHAZAM Manual, chapter 14: pp. 184-85 (Tests for Heteroskedasticity); pp. 188-89 (Goldfeld-Quandt Test); pp. 191-92 (Jackknife Estimator).
Chapter 7, pp. 95-97 (Weighted Regression).

HOMEWORK ASSIGNMENT #1 (due around February 6)

3. Serial Correlation (January 28 and February 2 and 4)
Ramanathan, chapter 9.
Kennedy, section 8.4.
SHAZAM Manual, chapter 11.

HOMEWORK ASSIGNMENT #2 (due around February 20)

4. Distributed Lag Models (February 9, 11, 16, and 18, March 4 and 9)
Ramanathan, chapter 10.
Kennedy, section 9.4, chapters 18, 17.
SHAZAM Manual, chapter 15, 13, 24.

MIDTERM EXAM (around March 2)

5. Forecasting Models (March 11, 16 and 18)
Ramanathan, chapter 11.
Kennedy, chapter 19.
SHAZAM Manual, chapters 16 and 10.
6. Qualitative and Limited Dependent Variables (March 23 and 25)
Ramanathan, chapter 12.
Kennedy, chapters 7, 15, and 16.
SHAZAM Manual, chapters 25 and 28.

7. Simultaneous Equation Models (March 30, and April 1, 6, and 8)
Ramanathan, chapter 13.
Kennedy, sections 9.1-9.3; chapter 10.
SHAZAM Manual, chapter 29.