

Statistics 521: Applied Econometrics II

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Office hours: M 3–6, W 3–4:15 and by appointment

Class hours and location: MW 1:30–2:50, G88 JMHH

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Course web site

Statistics 521 is using webCafe. You can gain access by going to <http://webcafe.wharton.upenn.edu> and following the link to the Statistics Department.

Materials

Class notes. These will be posted on webCafe.

Econometric Analysis of Cross Section and Panel Data, by J. M Wooldridge, MIT Press, 2002 . The website for the book is mitpress.mit.edu/Wooldridge-EconAnalysis. The site has data files, errata and solutions for the odd-numbered problems.

Software

The R package will be used in lectures and for homework. R is free software and is available at www.r-project.org.

I expect to use JMP 8 software occasionally in class for illustration. JMP has excellent graphics.

Course overview

The aims of this course are to study basic econometric techniques. The emphasis will be upon the understanding and use of econometric methodology, and the written communication of the results of data analysis. Topics I plan to cover include advanced methods in ordinary least squares estimation, instrumental variables estimation, systems of equations, panel data models, M-estimation, maximum likelihood, the generalized method of moments, discrete response models, and time series analysis.

Course requirements

There will be about six homework assignments. Each will include the analysis of data and interpretation of the findings, and the presentation of a well-organized and clearly written report. The homework is designed to teach and to give experience in the use of econometric methodology. You are encouraged to consult with each other in doing the homework, and also to contact me and/or the teaching assistant for help. You must submit your own writeup. Homework must be submitted by the due date specified for the assignment.

Students will submit a final project. This will involve replicating the analysis presented in an empirical paper, and also presenting further analyses of the data set used in the paper. As an alternative, you may use a data set of your own choosing and carry out an original analysis. A major goal of this exercise is presentation of a carefully written report. Prior to starting the project, you should submit a brief (not more than one page) project proposal for my review.

There are no examinations.

The course grade will be calculated as 80 per cent homework and 20 per cent final project.

Calendar

Classes will be held Monday and Wednesday all weeks except the following:

- The week of January 11th—the first class is Wednesday, January 13th.
- The week of January 18th—Monday, January 18th is a University holiday.
- The week of March 8th—this week is Spring Break.

The last class day is Monday, April 26th. Altogether there are 27 class days.