



MODULE SPECIFICATION

Code: UMEN3Q-15-M

Title: Applied Econometrics

Version: 3

Level: M

UWE credit rating: 15

ECTS credit rating: 7.5

Module type: Standard

Owning Faculty: FBL

Field: Economics

Valid from: 1 September 2005
(Revised 1 September 2008)

Discontinued from:

Pre-requisites: None

Co-requisites: None

Excluded combinations: None

Aim of module

The aim of this module is to build on the work covered in the Econometrics module and to provide a more advanced econometrics course, with the emphasis on the use of econometrics in applied economics and finance. It begins by introducing the linear model in matrix notation and then moves on to consider particular topics in applied econometrics. Exercises with computer packages to replicate published studies will be provided.

Specifically the aims are to:

- Provide an appreciation of the use of econometrics in economic analysis.
- Introduce the advance tools required for applied econometric analysis.
- Provide a firm foundation for an understanding of the academic and professional literature.
- Prepare the student for research work as an economist in industry, government and possible academia.

By the end of the module you should:

- have developed your knowledge of econometric techniques beyond the Econometrics course in the first term
- be able to use the Microfit package in a more sophisticated manner and undertake empirical work with the Stata and/or Limdep packages.
- Have knowledge of the literature in a number of areas of applied econometrics and be able to replicate the results of the studies used in the classes.
- Be able to read and understand some of the applied articles published in academic and professional journals and monographs.
- be able to undertake independent applied econometric research: including data collection and analysis, using relevant econometric techniques, integrating economic theory and econometrics, understanding the problems and limitations.

Syllabus outline:

- the linear model in matrix notation;
- time series modelling;
- cointegration and unit roots;
- vector autoregression and Granger causality;
- cross sectional methods; discrete choice modelling;
- sample selection; pooling data.
- Panel data method

These will be taught as part of applied topics including:

- Demand analysis;
- Modelling industrial structure
- Macroeconometric modelling

- Modelling consumption,
- Modelling the labour market;
- Estimating Production functions;
- Modelling stock price volatility.

Teaching and learning methods:

Lectures and workshops will complement each other. Early workshops will allow discussion and advice on project proposal, once topics are being covered in the lecture the workshops will be computer based, with students replicating and discussing relevant pieces of empirical work. In addition to the econometrics package Microfit 4, Stata 9 and possibly Limdep 8 will be used in the practical sessions.

Reading Strategy

All students will be encouraged to make full use of the print and electronic resources available to them through membership of the University. These include a range of electronic journals and a wide variety of resources available through web sites and information gateways. The University Library's web pages provide access to subject relevant resources and services, and to the library catalogue. Many resources can be accessed remotely. Students will be presented with opportunities within the curriculum to develop their information retrieval and evaluation skills in order to identify such resources effectively.

Indicative sources:

There is a wide reading list for the module. You will be given readings with each session but as a starting point:

This course will start off by going through matrix algebra and then the standard results for the linear model using matrix algebra. This is covered in most of the text books used in Methods of Economic Investigation (ECS4305) in semester 1. There are also some more advanced texts referenced below.

Texts:

- Cameron, AC and PK Trivedi (2005) *Microeconometrics: Methods and Applications*, Cambridge University Press. Useful for panel data
- Deaton, Angus (1997) *The Analysis of Household Surveys: A Microeconomic approach to Development Policy*, Johns Hopkins University Press. Useful for panel data
- Greene, WH (2002) *Econometric Analysis*, Prentice Hall, 5th edn.
- Intriligator M, R Bodkin, C Hsaio (1996) *Econometric Models, Techniques and Applications*, Prentice Hall.
- Judge et al (1985) *The Theory and Practice of Econometrics*, Wiley.
- Patterson, K (2000) *An Introduction to Applied Econometrics*, Palgrave. Useful for time series
- Thomas RL (1993) *Introductory Econometrics: Theory and Applications*, Longman
- Wooldridge, Jeffrey (2002) *Econometric Analysis of Cross Section and Panel Data*, Massachusetts Institute of Technology.

Other useful texts are:

- Berndt ER (1991) *The Practice of Econometrics*, Addison Wesley.
- Charemza, WW and DF Deadman (1997) *New Directions in Econometric Practice*, Edward Elgar. Useful for cointegrating VARs
- Cuthbertson, K, SG Hall and MP Taylor (1992) *Applied Econometric Techniques*, Harvester Wheatsheaf.
- Darnell AC and JL Evans (1990) *The Limits of Econometrics*, Edward Elgar.
- Desai, M (1976) *Applied Econometrics*, Philip Allan.
- Hendry D (1995) *Dynamic Econometrics*, Oxford University Press.
- Griliches, Z and MD Intriligator (eds) (1993) *Handbook of Econometrics*, Elsevier.
- Mills T (1993) *Applied Financial Econometrics*
- Pesaran, M Hashem and Schmidt, Peter (eds) (1997) *Handbook of Applied Econometrics, Volume II: Microeconomics*, Blackwell.
- Stewart, J (1991) *Econometrics*, Philip Alan.
- Wallis, K (1979) *Topics in Applied Econometrics*

Software:

We will be using

- Microfit 4.1: Pesaran MH and B Pesaran (1997) *Microfit 4.0 Manual*, OUP. Available in the library.

- LIMDEP 8.0: The manual is available in the library and a manual for version 7 on the internet
- Stata 9.0: The manuals are available in the library

Assessment

Weighting between components A and B

A: 50% B: 50%

ATTEMPT 1

First Assessment Opportunity

Component A

Description of each element

1. Unseen exam, 2 hours

Element weighting
100%

Component B

Description of each element

1. Individual coursework assignment of up to 2000 words

Element weighting
100%

Second Assessment Opportunity (further attendance at taught classes is not required)

Component A

Description of each element

1. Unseen exam, 2 hours

Element weighting
100%

Component B

Description of each element

1. Individual coursework assignment of up to 2000 words

Element weighting
100%

SECOND (OR SUBSEQUENT) ATTEMPT: Attendance at taught classes is required.