Part 2: Reading List and Lecture Outline

Reading List and Advice

Principal Texts

There are many textbooks, which can be used to follow the course. It is worth having a look at them and finding the one that best suits your individual requirements. Those who have done an undergraduate econometric course might consider following the topics in one of the more advanced texts.

You have covered most of the maths and statistics you will require in the lectures of the induction week. If you need to review basic material see: Thomas Ch 1 to 5, Salvatore Ch 1 to 5, Maddala Ch 2, Gujarati Ch 1 to 5 and Appendix A and Dougherty Ch 1 to 3. All texts are referenced below.

The main texts for this term's work will be:

Maddala, G. S. (2000) 'Introduction to Econometrics', Third Edition, Prentice-Hall.
This is more up to date than most texts only uses matrix algebra in appendices don't go straight to this book if you have not done econometrics before . Unfortunately, the new edition is not yet available. Please use library copies of the second edition (1992).

Gujarati, D. N. (1995) 'Basic Econometrics', McGraw Hill.
A useful introductory text with a detailed discussion. Might be preferable to the other two for those who have not done econometrics before.

Pindyck, R. S. and Rubinfield, D. L. (1998), 'Econometric Models and Economic Forecasts', McGraw Hill. Very good coverage of time series, cointegration, and simultaneous equation models.

You should select one of the above texts to work with throughout the semester and consult the others if necessary. Also of value are:

Stewart, J. (1984) 'Understanding Econometrics', Hutchinson.
For those who have not done econometrics before, with more words per equation than any other econometrics text. Use this book to start off with but move on to another more advanced text. It is denoted as Stewart (1) below

Kennedy, P. (1998) 'A Guide to Econometrics', Blackwell.
A useful text with an intuitive approach. It lacks notation and technical detail but explains concepts well and is a useful accompaniment to a more formal text

Also for those completely new to econometrics the following will be of use in providing relatively straightforward expositions:

Dougherty, C. (1992) 'Introduction to Econometrics', Oxford University Press.
Has useful coverage and is up to date. Provides a disk with data for examples

Gujarati, D. N. (1995) 'Essential Econometrics', McGraw Hill.
A simpler introduction than the one above.

Salvatore (1981) ‘Statistics and Econometrics’, Schaum Series.
Provides lots of worked examples

Other useful texts are:

Ghosh, S. K. (1991) ‘Econometrics: Theory and Applications’, Prentice Hall.
A useful text with references to applied studies.

Johnston, J and J DiNardo (1997) “Econometric Methods”, Mc Graw-Hill

Judge, G. G., Hill, R. C., Griffiths, W. E., Lutkepohl, H., and T-C Lee (1988) ‘Introduction to the Theory and Practice of Econometrics’, John Wiley. 2nd edition.

Harris, R. (1995) ‘Using Cointegration Analysis in Econometric Modelling’, Harvester Wheatsheaf
A very good introduction to cointegration

Stewart, J and L Gill (1998) ‘Econometrics’, Prentice Hall.

Stewart, M. and Wallis, K. (1981) ‘Introductory Econometrics’, Basil Blackwell.
Useful on identification in particular.

Applied texts

Berndt, E. R. (1991) ‘The Practice of Econometrics’ Addison Wesley.
A very good new text which comes with data to allow actual examples to be followed. it will also allow those who have already done an introductory course to move on to the more advanced chapters.

Thomas, R. L. (1997) ‘Modern Econometrics, an introduction", Addison-Wesley.
A good applied econometrics text with detailed introduction.

Software Manuals

Pesaran, M. H. and Pesaran, B. "MICROFIT 4.0, Windows version", 1997, Oxford University Press, ISBN 0-19-268531-7. This is the manual for the MICROFIT package that you will be using. It is available in the MUBS library and can be bought separately from bookshops and contains useful examples and exercises. It is denoted as MICROFIT MANUAL (MM) hereafter.

More advanced texts

Davidson, R. and MacKinnon, J. G. (1993), ‘Estimation and Inference in Econometrics’, Oxford University Press.
Very comprehensive

Greene, W. H. (1997) ‘Econometric Analysis’, Macmillan.
Comprehensive

Hendry, D. F. (1995), ‘Dynamic Econometrics’, Oxford University Press.

Intriligator M, R Bodkin, C Hsaio (1996) “Econometric Models, Techniques and Applications”, Prentice Hall.

Judge, G. G., Griffiths, W. E., Hill, R. C., Lutkepohl, H., and Lee, T. C. (1985) ‘The Theory and Practice of Econometrics’, Second Edition, Wiley.

Maddala, G. S. (1977) ‘Econometrics’, McGraw Hill.
A popular reference text for researchers

Maddala, G S and Kim (1999) “Unit Roots, Cointegration and Structural Change”, Cambridge University Press.

Mills T (1999) “The Econometric Modelling of Financial Time Series”, Cambridge University Press.

Patterson, K (2000) “An Introduction to Applied Econometrics”, Palgrave.

If you already have a textbook that is not on this list and you are happy with it then carry on and use it to follow the course. All texts follow roughly the same material.

Lecture and Class Outlines

In addition to the lectures and computer workshops, there will be one hour classes for students who need extra help. The computer sessions will be aimed at providing hands on computer econometric training.

Lecture 1: Introduction to Econometrics
Introduction in De Marchi and Gilbert (eds) (1989)'History and Methodology of Econometrics' Clarendon Press, Oxford.
Granger C (1990)'Where are the Controversies in Econometric Methodology' Introduction to Granger CWJ (ed) (1990)'Modelling Economic Time Series', Oxford University Press. p1-23.
Pesaran MH (1990)'Econometrics', in Eatwell et al (eds)'The New Palgrave'.
Pesaran MH and Smith RP (1984) 'Evaluation of Macroeconometric Models: Towards a More General Framework', Economic Modelling, April.
Smith RP (1992, forthcoming)'Econometrics' in M Sawyer (ed) 'The Handbook of Radical Political Economy' Edward Elgar.

Workshop 1: Introduction to Microfit 4.0. MM Ch 1 – 3, 8 - 9. Microfit Exercise 1.

Lecture 2: The Simple Regression Model: Assumptions of the classical linear model; (Ordinary) Least Squares Estimators; Goodness of Fit; Properties of Least Squares Estimators; Inference; Analysis of Variance, Prediction.
Stewart (1) Ch 2; Maddala Ch 3; Salvatore Ch 6; Gujarati Ch 2,3; Kennedy Ch 3.

Workshop 2: Microfit exercises. MM Ch 1 – 4, 10.

Lecture 3: Multiple Regression: Goodness of Fit; Interpretation; Statistical Inference; Asymptotic properties.
Stewart (1) Ch 3; Maddala Ch 4; Salvatore Ch 7; Gujarati Ch 7,8; Kennedy Ch 3,4.

Workshop 3: Microfit exercises. MM Ch 10.

Lecture 4: Statistical Inference and Hypothesis Testing
Maximum Likelihood Approach: Estimation and Tests; Likelihood Ratio Test; Lagrange Multiplier (Score) Test; Wald Test.
Maddala Ch 3 and 4, and appendices. Gujarati Ch 4,5,8.

Workshop 4: Microfit exercises.

Lecture 5: Violation of the Assumptions of the Classical Regression Model
Outline of Autocorrelation, Heteroskedasticity and Multicollinearity; Outliers and Dummy variables; Functional Form, RESET test; Omitted Variable Bias; Testing Restrictions.
Stewart (1) Ch 3; Maddala Ch 5,6,7; Gujarati Ch 10,11,13,14; Kennedy Ch 5-7,11.

Workshop 5: Microfit exercises. MM Ch 10.

Lecture 6: Autocorrelation and Dynamic Models
Problems of autocorrelation; Effects on OLS; Durbin-Watson and LM Tests for Serial Correlation; Cures and Strategies.
Stewart (1) Ch 4; Maddala Ch 6; Gujarati Ch 12,17; Kennedy Ch 9.

Workshop 6: Microfit exercises. MM Ch 11.

Lecture 7: Time Series Analysis,
Dynamic Models; Trends and Random Walks; Cointegration;
Stewart (1) Ch 4; Maddala Ch 13,14; Gujarati Ch 21,22; Kennedy Ch 16.

Workshop 7: Microfit exercises. MM Ch 11.

Lecture 8: Heteroskedasticity and Limited Dependent Variable Models
Heteroskedasticity: tests and cures; Dummy variables and truncated variables;
Maddala Ch 5, 8; Gujarati Ch 11,15,16; Kennedy Ch 8,14 .

Workshop 8: Microfit exercises. MM Ch 14.

Lecture 9: Multicollinearity, Prediction and Structural Stability
Stewart (1) Ch 6; Maddala Ch 9; Gujarati Ch 17-19; Kennedy Ch 10.

Workshop 9: Microfit exercises. MM Ch 14.

Lecture 10: Simultaneous Equations Models
Identification; Indirect Least Squares; Instrumental variables; Two stage least squares.
Stewart (1) Ch 6; Maddala Ch 9; Gujarati Ch 18-20; Kennedy Ch 10.

Workshop 10: Microfit exercises. MM Ch 17.

Lecture 11: Various topics:
Diagnostic Checking, Model Selection and Specification, etc…
Maddala Ch 12, Gujarati Ch 8, 13, 14 Kennedy Ch 4,5.

Workshop 11: Microfit exercises. MM Ch 11.

Lecture 12: Developments in Time Series Analysis
Vector Autoregressive (VAR) Models and Cointegration
Harris, Maddala, Ch 14, . Gujarati Ch 21,22 Kennedy Ch 16,17 additional references to be given

Workshop 12: Microfit exercises. MM Ch 15 – 16.

Module Assessment Details

This module is assessed 75% unseen exam and 25% coursework. The unseen exam is a 3 hour exam which requires you to answer one compulsory question and then 3 further questions from six.

Coursework

The coursework will require you to analyse a data set using Microfit 4.0 and to write up your results. The dataset will be provided during the term, together with further instructions.