TE WHARE WĀNANGA O TE ŪPOKO O TE IKA A MĀUI
VICTORIA
UNIVERSITY OF WELLINGTON

School of Economics and Finance

ECON 409 ADVANCED ECONOMETRICS B

Trimester 2 2012

COURSE OUTLINE

Names and Contact Details

Stefanie Schurer	RH 309, Tel. 463 6708 Email: Stefanie.Schurer@vuw.ac.nz
Office hours	Thursdays: 10-12 (or by appointment)
Bonnie Riley	RH 321, Tel. 463 5380 Email: Bonnie.Riley@vuw.ac.nz
Office hours	Monday-Friday 9am-12pm and 1-4pm

Trimester Dates

Teaching Period:	Monday 16 July – Friday 19 October
Study Period:	Monday 22 October – Thursday 25 October (Monday 22 October is a public holiday, Labour Day)
Examination Period:	Friday 26 October –Saturday 17 November (inclusive)

Withdrawal from Course

1. Your fees will be refunded if you withdraw from this course on or before **Friday 27 July 2012**.

2. The standard last date for withdrawal from this course is **28 September 2012**. After this date, students forced to withdraw by circumstances beyond their control must apply for permission on an '*Application for Associate Dean's Permission to Withdraw Late'* including supporting documentation.

The application form is available from either of the Faculty's Student Customer Service Desks.

Class Times and Room Numbers

Lectures

WEDNESDAY	**8.30-10.20**	Railway West Wing Building, Pipitea, **RWW 125**

Course Content

ECON 409 will focus on issues and econometric modeling of two broad types of data: panel (or longitudinal) data; and time series data. The first 6 weeks of the course will cover panel data analysis: focusing on issues that motivate the use of panel data; the main econometric models used to analyse panel data; and methods to handle issues that arise in such analysis. The second 6

weeks will cover time series analysis: focusing on stationary and non-stationary time series issues, and multivariate systems of equations.

Course Learning Objectives
By the end of this course, students should be able to:

1. Demonstrate in-depth mastery of the theories presented of econometric models of panel data and time series data.
2. Assess the merits of more complicated empirical tests of these theories.
3. Demonstrate the ability to apply the presented estimation method to real data analysis (Using R project or STATA).

Course Delivery
The first half of the course will focus on the panel data analysis; and the second half will focus on the analysis of time series analysis topics. There will be approximately four assignments throughout the course, involving a combination of theoretical and hands-on applied examples. These contribute to your final course grade and should contribute greatly to understanding the material.

Weeks 1–6:
Panel data methods

- Static linear panel data models
- Dynamic linear panel data models
- Static non-linear panel data models
- Dynamic non-linear panel data models

Weeks 7–12:
Time series analysis

- Stationary Time Series
- Non-stationarity and Spurious Regressions
- Cointegration and Error Correction Models
- Multivariate Systems of Equations (VARs etc)

Expected Workload
You are expected to spend roughly 150 hours completing this course. This includes preview, lecture attendance, and review and study for assignments and exams. On average this is roughly 10 hours per week from the start of the course until the final exam, but the load may vary over time and across students.

Readings
This course will follow Greene (2012) and Ashley (2012), as referenced below, however Wooldridge (2009) and Hsiao (2003) for panel data analysis and Luetkepohl (2004) and Enders (2004) for time series analysis will be used as well. In addition, relevant journal articles and chapters will be assigned throughout (a provisional list follows).

General
Greene, William H. (2012). Econometric Analysis, Pearson, 7th edition.
Richard A. Ashley (2012) Fundamentals of Applied Econometrics, Wiley.

Panel data analysis
Texts:
Hsiao, Cheng (2003), *Analysis of Panel Data*, 2nd ed (or 1st ed 1986), Econometric Society Monograph (No. 34), Cambridge University Press.

Wooldridge, Jeffrey (2009), *Econometric Analysis of Cross Section and Panel Data*, MIT Press, 2nd edition.

Overview of Panel Data Econometrics:

Chamberlain, Gary (1986), "Panel Data", Handbook of Econometrics, Chapter 22 in Vol. 2, Elsevier Science B.V.

Static linear modelling

Mundlak, Yair (1978), "On the Pooling of Time Series and Cross-section Data", Econometrica, 46, 69-85.

Hausman, Jerry A. and William E. Taylor (1981), "Panel Data and Unobservable Individual Effects", Econometrica, 49, 6, 1377-1398.

Dynamic linear modelling

Anderson, T.W. and Cheng Hsiao (1982), "Formulation and Estimation of Dynamic Models Using Panel Data", Journal of Econometrics, 18, 67-82.

Arellano, Manuel, and Stephen Bond (1991), "Some Tests of Specification for Panel Data: Monte Carlo Evidence and an Application to Employment Equations", Review of Economic Studies, 58, 277-297.

Static non-linear modelling

Chamberlain, Gary (1980), "Analysis of Covariance with Qualitative Data", Review of Economic Studies, Vol. 47, No. 3, 225-238.

Dynamic non-linear modelling

Arulampalam, Wiji and Mark B. Stewart (2009), "Simplified Implementation of the Heckman Estimator of the Dynamic Probit Model and a Comparison with Alternative Estimators", Oxford Bulletin of Economics and Statistics, Vol. 71, No. 5, 659-681.

Hyslop, Dean R. (1999), "State Dependence, Serial Correlation and Heterogeneity in Intertemporal Labor Force Participation of Married Women", Econometrica, 67(6), pp 1255-1294.

Time series analysis

Texts:

Enders, Walter (2004). *Applied Econometric Time Series*, John Wiley & Sons, 2nd edition.

Luetkepohl, Helmut (2004). Applied Time Series Econometrics. Cambridge University Press.

Overview of time series econometrics:

Hendry, David F. (1980), "Econometrics – Alchemy or Science?", Economica, 47, 387-406.

Stock, James H. and Mark W. Watson (1988), "Variable Trends in Economic Time Series", Journal of Economic Perspectives, 2(3), 147-174.

Unit roots

Granger, Clive W.J. and Paul Newbold (1974), "Spurious Regressions in Econometrics", Journal of Econometrics, 2, 111-120.

Phillips, Peter C.B. (1986), "Understanding Spurious Regressions in Econometrics", Journal of Econometrics, 33, 311-340.

Charles A, and Darne O. Trends and Random Walks in Macroeconomic Time Series: A Reappraisal. Journal of Macroeconomics. March 2012; 34(1):167-180.

Nelson, Charles R. and Charles I. Plosser (1982), "Trends and Random Walks in Macroeconomic Time Series", Journal of Monetary Economics, 10, 139-162.

Perron, Pierre (1989), "The Great Crash, the Oil Price Shock, and the Unit Root Hypothesis", Econometrica, 57(6), 1361-1401.
Zivot, E. and D. W. K. Andrews (2002). "Further Evidence on the Great Crash, the Oil-Price Shock, and the Unit-Root Hypothesis", Journal of Business & Economic Statistics, 20(1), 25-44.

Cointegration and Error Correction Models

Engle, Robert F. and Clive W.J. Granger (1987), "Co-Integration and Error Correction: Representation, Estimation and Testing", Econometrica, 55(2), 251-276.
Johansen, Soren (1988), "Statistical Analysis of Cointegration Vectors", Journal of Economic Dynamics and Control, 12, 231-254.
Mylonidis, Nikolaos, and Christos Kollias (2010), "Dynamic European stock market convergence: Evidence from rolling cointegration analysis in the first Euro-decade", Journal of Banking & Finance, Volume 34, Issue 9, 2056-2064.

Multivariate Systems of Equations (VARs etc)

Sims, Christopher A. (1994), "Are Forecasting Models Usable for Policy Analysis?", *Macroeconometric Modelling*, Vol. 2, 457-471.
Dungey, M. and A. Pagan (2000), "A Structural VAR model of the Australian Economy", The Economic Record, 76, 321-342.
Blanchard, Olivier J. and Danny Quah (1989), "The Dynamics of Aggregate Demand and Supply Disturbances", American Economic Review, 79(4), 655-673.

Materials and Equipment

The econometric software used in this course is R (http://www.r-project.org/) and STATA (http://www.stata.com/). Both are available in the University's computer labs.

Assessment Requirements

Assessment will be based on a combination of in-term assignments, a two-hour midterm test and a two-hour final exam. The midterm test will be held soon after the mid-trimester break, at a time to be determined. The final exam will be scheduled by the University during the examination period.

The overall assessment will be:

- 20% from assignments
- 40% from the midterm test
- 40% from the final exam

Quality Assurance Note

Your assessed work may also be used for quality assurance purposes, such as to assess the level of achievement of learning objectives as required for accreditation and audit purposes. The findings may be used to inform changes aimed at improving the quality of FCom programmes. All material used for such processes will be treated as confidential, and the outcome will not affect your grade for the course.

Examinations

Students who enrol in courses with examinations are obliged to attend an examination at the University at any time during the formal examination period.

The final examination for this course will be scheduled at some time during the period from Friday 26 October – Saturday 17 November (inclusive).

Penalties
Coursework submitted late will not be graded.

Mandatory Course Requirements
Mandatory course requirements will be satisfied if all assessment requirements are completed.

Communication of Additional Information
Additional information or information on changes will be conveyed to students via email and Blackboard.

Class Representative
A class representative will be elected in the first class, and that person's name and contact details made available to VUWSA, the Course Coordinator and the class. The class representative provides a communication channel to liaise with the Course Coordinator on behalf of students.

Use of Turnitin (if applicable)
Student work provided for assessment in this course may be checked for academic integrity by the electronic search engine http://www.turnitin.com Turnitin is an on-line plagiarism prevention tool which compares submitted work with a very large database of existing material. At the discretion of the Head of School, handwritten work may be copy-typed by the School and subject to checking by Turnitin. Turnitin will retain a copy of submitted materials on behalf of the University for detection of future plagiarism, but access to the full text of submissions will not be made available to any other party.

For the following important information follow the links provided:

Academic Integrity and Plagiarism
http://www.victoria.ac.nz/home/study/plagiarism.aspx

General University Policies and Statutes
Find key dates, explanations of grades and other useful information at
www.victoria.ac.nz/home/study
Find out about academic progress and restricted enrolment at
http://www.victoria.ac.nz/home/study/academic-progress.aspx
The University's statutes and policies are available at www.victoria.ac.nz/home/about/policy, except qualification statutes, which are available via the Calendar webpage at
http://www.victoria.ac.nz/home/study/calendar.aspx (See Section C).
Further information about the University's academic processes can be found on the website of the Assistant Vice-Chancellor (Academic) at
www.victoria.ac.nz/home/about_victoria/avcacademic/default.aspx

AVC (Academic) Website: information including: Conduct, Academic Grievances, Students with Impairments, Student Support
http://www.victoria.ac.nz/home/about_victoria/avcacademic/Publications.aspx

Faculty of Commerce Office
http://www.victoria.ac.nz/fcom/studenthelp/

Te Putahi Atawhai
Maori and Pacific Mentoring Programme
http://www.victoria.ac.nz/tpa/