ECOM30003/ECOM90003

APPLIED MICROECONOMETRIC MODELLING

Lecturer: Professor Jenny Williams
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Lectures: Thursday 2:15am - 4:15pm Alan Gilbert-Theatre 1

Tutor: Shannon Ward
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Tutorials: Friday 10:00am-11:00pm The Spot-3010 (Comp Lab)
Friday 11:00am-12:00pm The Spot-3010 (Comp Lab)

Consultations: Wednesday 10:00am-11:00am The Spot-3013 (Comp Lab)

Prerequisites:
Econometrics ECOM30002/ECOM90002 or
Basic Econometrics ECOM30001/ECOM90001

Subject Aims
This subject examines estimation and testing of microeconometric models based on cross-sectional and panel data and quantitative and limited dependent variables. Illustrative applications will be drawn from labour economics, health economics, and consumer demand. The computer software used is Stata.

Generic Skills
In this subject you will have the opportunity to develop important generic skills.

These include:
- High level of development: written communication; statistical reasoning; application of theory to practice; interpretation and analysis; critical thinking; synthesis of data and other information; evaluation of data and other information, oral communication; accessing data and other information from a range of sources
- Moderate level of development: problem solving; use of computer software; receptiveness to alternative ideas.

Email Protocol
While academic staff endeavour to address queries received via email, it is more appropriate to resolve substantive questions face-to-face by making an appointment to see either the Lecturer or tutor. Note that the tutor has a consultation hour following the tutorial.

Please note that we are only able to respond to student emails coming from a University email address. Please do not use personal email addresses such as Yahoo, Hotmail or even business email addresses. Emails from non-University email addresses may be filtered by the University’s spam filter, which means that we may not receive your email. All
correspondence relating to this subject will only be sent to your University email address. Note that you must first activate your University email address before you can send or receive emails at that address. You can activate your email account at this link: http://accounts.unimelb.edu.au/.

Lectures and Tutorials
Textbooks:
Wooldridge: Introductory Econometrics: A Modern Approach, 5e

The textbook may be supplemented with additional readings from journal articles

Subject Homepage
- Copies of lecture notes, additional readings, tutorials, tutorial answers and assignments will be available on the LMS web site.
- LMS will also contain access to data to be used for tutorial questions.

What we will cover in this subject
The following provides a guide to the topics covered in this subject.

- An Introduction to Stata (week 1)
- Refresher on OLS part 1: notation, assumptions, interpretation (week 2)
- Refresher on OLS part 2: more on interpretation & omitted variable bias (week 2)
- Pooling cross-sectional data: the Difference in Difference Estimator (week 3)
- Two period panel data analysis (week 4)
- Panel data techniques for more than two periods (week 5)
- Instrumental Variables and Two Stage Least Squares Estimation (weeks 6-8)
- Binary outcomes model: the Linear Probability Model, Logits and Probits (week 9)
- The Tobit Model and models for Censored data (week 10)
- Truncation and selection correction (week 11)
- Truncation and selection correction & Wrap up (week 12)

Software
Stata
- We will use Stata 12 version in the labs.
- Stata is available:
  - On campus in tutorial rooms and the Faculty computer lab.
  - Off campus via the citrix server
- DO NOT BUY the 6 Month GradPlan Small Stata 13
- Interpretation of stata output will be required in the final exam.
Data Files
Data files for tutorials and assignments will be available on LMS.

Assessment

- 2-hour end-of-semester exam (60%)
  - To be scheduled for the exam period

- In semester assessment (40%)
  The breakdown of marks for this assessment is as follows:
  - Review Assignment: Due 9:00am 16 August (5%)
  - Replication Project Part A: Due 9:00am 13 September (10%)
  - Replication Project Part A and B: Due 9:00am 18 October (25%)

Review Assignment

AIM: To effectively read a journal article, review hypothesis testing and inference and to ensure students have gained some familiarity with stata.

Replication Project

AIM: To familiarize students with the skills and techniques used in conducting empirical research. This project asks you to review and replicate an empirical paper that has been assigned to you. You will be assigned a paper at the end of week 3 of the semester.

Please see chapter 19 of your textbook for advice on how to write up an empirical project

In order to provide feedback to students, the project will be done in 2 parts:

A. Review (up to 5 pages)

1. What questions does the study ask? Why are these questions of economic interest? What are the most important findings in the paper?
2. Discuss the data used. Why are they useful or well suited for answering the key questions of the paper?
3. Describe the data using graphs and/or tables.
4. Describe (using graphs or tables as appropriate) the relationship between the outcome of interest and the key explanatory variable. Does this analysis provide evidence for or against the key hypothesis (or hypotheses) put forth in the paper?

B. Replication and Discussion (up to 7 pages)

5. Discuss the empirical model. How does it relate to the hypothesis being tested?
6. Discuss the empirical challenges faced in obtaining reliable estimates of the parameters of interest and how they addressed by the estimation methodology employed. What assumptions does a causal interpretation rely on? Are (any) these assumptions testable? If so, how?
7. Identify the main findings and use the authors' data to replicate these results. Interpret your finding. How do the results inform us about the key questions asked in the paper? Compare your replication results to the original results in a table. Discuss why you think your results differ from the original (if they do).

8. Provide a brief discussion that summarizes what one should take away from the study you have done. Could the analysis be extended to provide additional insights into the questions this study seeks to address? What, if any, additional information would the extension require?

The length of the research report (Part A and B combined) should be between 10 and 12 pages including all graphs and tables. In an appendix to your submission, please include all Stata programs used to generate your results, findings, descriptive stats etc. I should be able to replicate all of your descriptive statistics as well as econometric modelling with the Stata code. The appendix does not count towards the page limit.

You may NOT work in a group. Assistance from any source must be acknowledged and all programs included as an appendix (not part of the word limit).

All assignments must be submitted via the subject web-page using Turnitin. The assignments are NOT to be submitted to the Commerce Student Centre.

The assignments MUST CONTAIN your name and unimelb email address. The assignment must also have a coversheet attached. A copy of the coversheet is available in the Assignment Folder on the LMS subject webpage. Each student is to submit a copy of their own assignment. Details of Plagiarism and Collusion are defined below. It is very important that you submit all the assignments by the due dates. Late Assignments will NOT be accepted

Students with a genuine and acceptable reason for not completing an assignment, such as illness, can apply to the lecturer to have their marks for that assignment transferred to the final exam. Suitable evidence, such as a doctor’s certificate is required. Applications made more than 3 days after the assignment is due will not be considered.

Special Consideration
Students who have been significantly affected by illness or other serious circumstances during the semester may be eligible to apply for Special Consideration. The following website contains detailed information relating to who can apply for Special Consideration and the process for making an application: http://www.ecom.unimelb.edu.au/students/special/

Plagiarism and Collusion
Presenting material from other sources without full acknowledgement (referred to as plagiarism) is heavily penalised. Penalties for plagiarism can include a mark of zero for the piece of assessment or a fail grade for the subject. Plagiarism is the presentation by a student of an assignment identified as his or her own work even though it has been copied in whole or in part from another student’s work, or from any other source (eg. published books, web-based materials or periodicals), without due acknowledgement in the text.