



ECON8040

Applied Econometrics

Session 1, In person-scheduled-weekday, North Ryde 2022

Department of Economics

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General Information

Unit convenor and teaching staff
Unit convenor, lecturer and tutor
Chris Heaton
chris.heaton@mq.edu.au
Contact via chris.heaton@mq.edu.au
06EaR-453
TBA on iLearn

Tutor
Colin Bowers
colin.bowers@mq.edu.au
Contact via colin.bowers@mq.edu.au
TBA on iLearn

Credit points
10

Prerequisites
ECON634 or ECON6034

Corequisites

Co-badged status
ECON7035

Unit description
The objective of this unit is to enable students with basic statistical knowledge to upgrade their understanding to a practical level where they can apply their knowledge of econometrics to empirical analysis. By successfully completing this unit, students should be able to develop an econometric model suitable for the objective of their analysis, estimate the model using an appropriate estimation method, and draw valid inferences from the estimation results. The unit starts with a brief review of the standard multiple linear regression model and the OLS estimation method. It then relaxes the standard assumptions and investigates alternative estimation methods that are valid under the new circumstances. The final part introduces the interesting discrete-choice models.

Important Academic Dates

Information about important academic dates including deadlines for withdrawing from units are available at <https://www.mq.edu.au/study/calendar-of-dates>

Learning Outcomes

On successful completion of this unit, you will be able to:

ULO1: Develop an econometric model suitable for the objective of analysis.

ULO2: Estimate the model using an appropriate estimation method.

ULO3: Interpret the estimation results and draw valid inferences.

ULO4: Critically analyse the econometric methods covered in the unit.

General Assessment Information

Late submissions of assessments Unless a Special Consideration request has been submitted and approved, no extensions will be granted. There will be a deduction of 10% of the total available assessment-task marks made from the total awarded mark for each 24-hour period or part thereof that the submission is late. Late submissions will only be accepted up to 96 hours after the due date and time.

No late submissions will be accepted for timed assessments – e.g., quizzes, online tests.

Submission time after the due date (including weekends)	Penalty (% of available assessment task mark)	Example: for a non-timed assessment task marked out of 30
<24 hours	10%	10% x 30 marks = 3-mark deduction
24-48 hours	20%	20% x 30 marks = 6-mark deduction
48-72 hours	30%	30% x 30 marks = 9-mark deduction
72 – 96 hours	40%	40% x 30 marks = 12-mark deduction
>96 hours	100%	Assignment won't be accepted

Special Consideration

To request an extension on the due date/time for a timed or non-timed assessment task, you must submit a Special Consideration application. An application for Special Consideration does not guarantee approval.

The approved extension date for a student becomes the new due date for that student. The late submission penalties above then apply as of the new due date

Assessment Tasks

Name	Weighting	Hurdle	Due
Online lecture interaction	10%	No	9am Thursdays from Week 2

Name	Weighting	Hurdle	Due
Tutorial Exercises	20%	No	9am Thursdays from Week 2
Take home test	50%	No	Week 12, Tuesday 7am
Assignment	20%	No	Week 14, Monday 7am

Online lecture interaction

Assessment Type ¹: Participatory task

Indicative Time on Task ²: 5 hours

Due: **9am Thursdays from Week 2**

Weighting: **10%**

Online lecture videos will include embedded exercises that engage students in the material being taught and ensure that students grasp essential concepts.

On successful completion you will be able to:

- Interpret the estimation results and draw valid inferences.
- Critically analyse the econometric methods covered in the unit.

Tutorial Exercises

Assessment Type ¹: Problem set

Indicative Time on Task ²: 10 hours

Due: **9am Thursdays from Week 2**

Weighting: **20%**

A weekly assessment (from Week 2) that covers material from previous lectures, with an emphasis on the most recent work, and ensures acquisition of the concepts and skills necessary to understand and apply the unit material.

On successful completion you will be able to:

- Interpret the estimation results and draw valid inferences.
- Critically analyse the econometric methods covered in the unit.

Take home test

Assessment Type ¹: Quiz/Test

Indicative Time on Task ²: 20 hours

Due: **Week 12, Tuesday 7am**

Weighting: **50%**

A diagnostic test of technical skills and applied knowledge acquired in the unit up until the week of the test.

On successful completion you will be able to:

- Develop an econometric model suitable for the objective of analysis.
- Interpret the estimation results and draw valid inferences.
- Critically analyse the econometric methods covered in the unit.

Assignment

Assessment Type ¹: Case study/analysis

Indicative Time on Task ²: 15 hours

Due: **Week 14, Monday 7am**

Weighting: **20%**

A written report comprising the application of technical skills and theoretical concepts acquired in the unit to a given economic problem

On successful completion you will be able to:

- Develop an econometric model suitable for the objective of analysis.
- Estimate the model using an appropriate estimation method.
- Interpret the estimation results and draw valid inferences.

¹ If you need help with your assignment, please contact:

- the academic teaching staff in your unit for guidance in understanding or completing this type of assessment
- the [Writing Centre](#) for academic skills support.

² Indicative time-on-task is an estimate of the time required for completion of the assessment task and is subject to individual variation

Delivery and Resources

Classes

- Online lectures will be available each week. Lectures will include links to datasets and reference material. Lectures will also include embedded questions which must be answered by students before the weekly deadline. The lectures cover all the material necessary to pass the unit, including some material that is not available in other formats. Consequently, students are expected to study the lectures closely.
- There is a tutorial class held in each week except Week 1. Students must register in a tutorial class and generally will **not** be permitted to attend a tutorial class other than the one in which they are registered. Changes to tutorial enrolments may only be made using the online system subject to available capacity. The Unit Convenor cannot make enrolment changes on behalf of students. Changes to tutorial enrolments generally take up to 24 hours to be reflected on iLearn.
- Students must complete and submit the tutorial exercises each week before the deadline, which will be prior to the first scheduled class each week. The tutorial exercises will be discussed in class. After the completion of the last scheduled class of the week, students will be permitted to re-attempt the tutorial. Details of the marking scheme will be made available on iLearn.
- The timetable for classes can be found on the University website:
<http://www.timetables.mq.edu.au/>
- Students are expected to study all lectures, attempt the lecture exercises and tutorial exercises, attend the tutorial classes, discuss the unit material both in-class and online, and read the text. It is important that students identify problems that they are having with the unit material each week. If a reasonable but unsuccessful effort has been made to solve a problem, then the student should seek help from the tutor during the tutorial. Outside class time, the best way to get help with a problem is to post it on the online discussion forum.
- It is expected that students will spend an average of approximately 10 hours per week working on this unit (including class time).

Note: *the intended delivery mode may need to change after the start of the session due to the evolving covid situation and students need to ensure they keep up with iLearn Announcements made during the session accordingly.*

Required and Recommended texts and/or materials

- [Stock, J. H. and Watson, M. W. \(2019\) Introduction to Econometrics, Global Edition, 4th](#)

edition, Pearson.

Additional useful textbooks and resources.

- Hill, C. H., Griffiths, W. E. and Lim, G. C. (2018) Principles of Econometrics (5th ed.) Wiley.
- Wooldridge, J. M., Wadud, M., Lye, J. and Joyeux, R. (2021) Introductory Econometrics (2nd Asia-Pacific ed.) Cengage.
- Gujarati, D.N., and Porter, D.C. (2010) Essentials of Econometrics (4th ed.) McGraw-Hill.
- A list of prescribed reading will be developed on the website as the unit progresses.
- The data sets used in the textbook and in lectures will be provided on the website.

Technology Used and Required

- The main software package used is Gretl (<http://gretl.sourceforge.net/>). This software is available for use on AppStream and may be freely downloaded for use elsewhere. The Microsoft Windows version is available at <http://gretl.sourceforge.net/win32/>. A Mac version is available at <http://gretl.sourceforge.net/osx.html>. Linux users should check their repositories or download the rpm or source from <http://gretl.sourceforge.net/>.
- The use of a spreadsheet will often be helpful for tasks in this unit. Microsoft Excel will be used during tutorials and is available for students to use off-campus at <https://wiki.mq.edu.au/display/microsoftstu/About;jsessionid=E26834FF0E276C3384E93466EE687514>. For students who don't wish to use Microsoft Excel, free alternatives include OpenOffice (<http://www.openoffice.org>), LibreOffice (<https://www.libreoffice.org/>) and Gnumeric (<http://www.gnumeric.org/>, https://portableapps.com/apps/office/gnumeric_portable).
- Course material is available on the learning management system (iLearn).
- Announcements will be made regularly on iLearn. Students should ensure that these announcements, and posts on the online discussion forum, are forwarded to their email account, which they should check regularly. Staff may also occasionally directly email students. Students must check their email daily.
- Students will need access to an internet-connected computer capable of streaming video and participating in Zoom meetings.

Policies and Procedures

Macquarie University policies and procedures are accessible from [Policy Central](https://policy) (<https://policy>

[s.mq.edu.au](https://www.mq.edu.au)). Students should be aware of the following policies in particular with regard to Learning and Teaching:

- [Academic Appeals Policy](#)
- [Academic Integrity Policy](#)
- [Academic Progression Policy](#)
- [Assessment Policy](#)
- [Fitness to Practice Procedure](#)
- [Assessment Procedure](#)
- [Complaints Resolution Procedure for Students and Members of the Public](#)
- [Special Consideration Policy](#)

Students seeking more policy resources can visit [Student Policies \(https://students.mq.edu.au/support/study/policies\)](https://students.mq.edu.au/support/study/policies). It is your one-stop-shop for the key policies you need to know about throughout your undergraduate student journey.

To find other policies relating to Teaching and Learning, visit [Policy Central \(https://policies.mq.edu.au\)](https://policies.mq.edu.au) and use the [search tool](#).

Student Code of Conduct

Macquarie University students have a responsibility to be familiar with the Student Code of Conduct: <https://students.mq.edu.au/admin/other-resources/student-conduct>

Results

Results published on platform other than [eStudent](#), (eg. iLearn, Coursera etc.) or released directly by your Unit Convenor, are not confirmed as they are subject to final approval by the University. Once approved, final results will be sent to your student email address and will be made available in [eStudent](#). For more information visit ask.mq.edu.au or if you are a Global MBA student contact globalmba.support@mq.edu.au

Academic Integrity

At Macquarie, we believe [academic integrity](#) – honesty, respect, trust, responsibility, fairness and courage – is at the core of learning, teaching and research. We recognise that meeting the expectations required to complete your assessments can be challenging. So, we offer you a range of resources and services to help you reach your potential, including free [online writing and maths support](#), [academic skills development](#) and [wellbeing consultations](#).

Student Support

Macquarie University provides a range of support services for students. For details, visit <http://students.mq.edu.au/support/>

The Writing Centre

[The Writing Centre](#) provides resources to develop your English language proficiency, academic writing, and communication skills.

- [Workshops](#)
- [Chat with a WriteWISE peer writing leader](#)
- [Access StudyWISE](#)
- [Upload an assignment to Studiosity](#)
- [Complete the Academic Integrity Module](#)

The Library provides online and face to face support to help you find and use relevant information resources.

- [Subject and Research Guides](#)
- [Ask a Librarian](#)

Student Services and Support

Macquarie University offers a range of [Student Support Services](#) including:

- [IT Support](#)
- [Accessibility and disability support](#) with study
- Mental health [support](#)
- [Safety support](#) to respond to bullying, harassment, sexual harassment and sexual assault
- [Social support including information about finances, tenancy and legal issues](#)

Student Enquiries

Got a question? Ask us via [AskMQ](#), or contact [Service Connect](#).

IT Help

For help with University computer systems and technology, visit http://www.mq.edu.au/about_us/offices_and_units/information_technology/help/.

When using the University's IT, you must adhere to the [Acceptable Use of IT Resources Policy](#). The policy applies to all who connect to the MQ network including students.