FOBE740

Quantitative Research Approaches in Business and Economics 2

S2 Day 2019

Business and Economics Faculty level units

Contents

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General Information

Unit convenor and teaching staff
Unit Convenor
Roselyne Joyeux
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Contact via roselyne.joyeux@mq.edu.au
E4A440
Thursday 1pm to 3pm

Credit points
4

Prerequisites
Admission to MRes

Corequisites

Co-badged status
FOBE840

Unit description
This unit focuses on advanced statistical approaches used in Business and Economics and related disciplines. Topics include statistical modelling, time series analysis, ARCH, GARCH model, longitudinal and panel data models, generalized linear models and limited dependent variables. The unit will also consider applications of the above models and techniques to these disciplines.

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:

Understand a range of generalizations of regression and how to apply them.

Understand how linear models, time series models and various generalizations are applied and how empirical results are communicated in practice.

Have a broad understanding of Panel Data Models and Dynamic Panel Data Models.

General Assessment Information

Details of these assessment tasks will be given in lectures, and will be posted on iLearn.

Tutorial exercises

The weekly exercises require access to a statistical package. Students are expected to attempt at least 10 of the 12 tutorial exercises. If you miss more than 2 tutorials due to unavoidable disruption/s, you should apply for Special Consideration (see the Special Consideration Policy below).

Midterm test

A 60-minute test covering all of the material up to week 6 will be held in lecture time in week 7.

Students must be available during the time of the lecture class to sit the test. The only exception to this is if a student could not do the test because of documented illness or unavoidable disruption. In these circumstances this student may wish to apply for Special Consideration. When an application for special consideration has been approved, Policy allows for the provision of one additional task. The format, time and date of this task will be determined by the UC. Note: applications for Special Consideration must be made within 5 (five) business days of the due date and time.

Class test conditions: 1 x A4 page of handwritten or typed notes (one side only) to be returned with the exam paper; Non-programmable calculators (no text retrieval capacity) permitted; No dictionaries permitted.

Assignment

Students will replicate some of the empirical work presented in a recent journal article. They will need to research relevant literature, access data, apply one or more of the techniques discussed in class to address the problem and write up a report on the same. Submission as per the class timetable and to be further discussed in class.

No extensions will be granted. There will be a deduction of 10% of the total available marks made from the total awarded mark for each 24 hour period or part thereof that the submission is late (for example, 25 hours late in submission incurs a 20% penalty). Late submissions will be accepted up to 96 hours after the due date and time. This penalty does not apply for penalty does not apply for cases in which an application for Special Consideration is made and approved. Note: Applications for Special Consideration must be made within 5 (five) business days of the due date and time.

This is to be completed as an individual piece of work. A hard copy needs to be submitted as well as a copy uploaded to "Turn-it-in" (via iLearn). The assignment is worth 30% of the course grade.

Class Test

The class test will be of a two-hour duration and will be held in lecture time in week 13.

Students must be available during the time of the lecture class to sit the test. The only exception

to this is if a student could not do the test because of documented illness or unavoidable disruption. In these circumstances this student may wish to apply for Special Consideration. When an application for special consideration has been approved, Policy allows for the provision of one additional task. The format, time and date of this task will be determined by the UC. Note: applications for Special Consideration must be made within 5 (five) business days of the due date and time.

Class test conditions: 1 x A4 page of handwritten or typed notes (both sides) to be returned with the exam paper; Non-programmable calculators (no text retrieval capacity) permitted; No dictionaries permitted.

Assessment Tasks

Name	Weighting	Hurdle	Due
Participation - class	20%	No	All session
Midterm	20%	No	Week 7, Lecture time
Assignment	30%	No	Week 14
Class Test	30%	No	Week 13, Lecture time

Participation - class

Due: **All session**
Weighting: **20%**

Participation in lectures and tutorials. Attempt tutorial questions. You are expected to attend and participate in at least 10 tutorials out of 12.

On successful completion you will be able to:
- Understand a range of generalizations of regression and how to apply them.
- Understand how linear models, time series models and various generalizations are applied and how empirical results are communicated in practice.
- Have a broad understanding of Panel Data Models and Dynamic Panel Data Models.

Midterm

Due: **Week 7, Lecture time**
Weighting: **20%**

Class Test

On successful completion you will be able to:

- Understand a range of generalizations of regression and how to apply them.
- Understand how linear models, time series models and various generalizations are applied and how empirical results are communicated in practice.

Assignment

Due: **Week 14**
Weighting: **30%**

In this assignment FOBE740 students will replicate some of the empirical work presented in a recent journal article.

On successful completion you will be able to:

- Understand a range of generalizations of regression and how to apply them.
- Understand how linear models, time series models and various generalizations are applied and how empirical results are communicated in practice.
- Have a broad understanding of Panel Data Models and Dynamic Panel Data Models.

Class Test

Due: **Week 13, Lecture time**
Weighting: **30%**

Class Test

On successful completion you will be able to:

- Understand a range of generalizations of regression and how to apply them.
- Understand how linear models, time series models and various generalizations are applied and how empirical results are communicated in practice.
- Have a broad understanding of Panel Data Models and Dynamic Panel Data Models.

Delivery and Resources

Lecture and Tutorial times

Classes for FOBE740 are scheduled as per the class timetable available at http://www.timetables.mq.edu.au/

There will be 3 hours face-to-face teaching per week consisting of one two-hour lecture and one hour tutorial. Lectures and tutorials are held in the computer labs.

Technology used and required

If you are enrolled in this unit, you will be listed in the FOBE740 online unit (iLearn). Login at http://ilearn.mq.edu.au/

The site will be used to post any additional lecture slides, handouts, and assignment.   The site contains a "forum" to which you may contribute.   Please log in to the site on a regular basis.

Required and Recommended Texts and/or Materials

 The recommended textbooks for FOBE740 are:

1. Hill, C. H., Griffiths, W. E. and Lim, G. C. (2018) *Principles of Econometrics* (5th ed.) Wiley.

2. Wooldridge, J. (2008) *Introductory Econometrics: A Modern Approach (4th ed.)* Cengage Learning.

- A list of prescribed reading will be developed on the website as the unit progresses.

Teaching and Learning Strategy

- Students are expected to complete all pre-class preparation tasks in advance of that particular class.

- Please make notes summarizing the pre-class readings. These notes do not need to be submitted for assessment; however they will permit discussion of the questions and material in class.

- Students are expected to attend and participate in all classes.

Information

Details of the assessment tasks will be given in lectures and posted on iLearn. You should check iLearn regularly.

About this Unit

This unit is one of core units of the MRes program for FBE students enrolled in Applied Finance or Economics who require advanced quantitative skills in their research. This unit focuses on advanced statistical approaches used in Finance, Economics and related disciplines. It seeks to develop students understanding of the contexts in which quantitative research can be undertaken and the ability to analyse, conduct, and evaluate quantitative forms of research. It is designed for those who need quantitative skills for specialisations in the areas of Economics and Finance.

Assumed background

A one—semester rigorous introduction to probability, statistics and regression analysis,

equivalent to FOBE735, is assumed.

Unit Schedule

Week	Topic	Tutorial Topic
1	Stationarity, Integration and ARIMA Models	Introduction to software
2	Testing for bubbles	Computer exercise
3	VAR and VECM	Computer exercise
4	SVAR	Computer exercise
5	Impulse response functions	Computer exercise
6	Impulse response functions	Computer exercise
7	Impulse response functions	Mid term tests
Mid	Semester	Break
8	Panel data models	Computer exercise
9	Panel data models	Computer exercise
10	Dynamic Panel data models	Computer exercise
11	Panel unit roots	Computer exercise
12	Panel cointegration	Computer exercise
13	Class test	Test

The list of topics above is only provisional and will be changed according to students backgrounds and interests.

Policies and Procedures

Macquarie University policies and procedures are accessible from Policy Central (https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central). 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

- Grade Appeal Policy
- Complaint Management Procedure for Students and Members of the Public
- Special Consideration Policy *(Note: The Special Consideration Policy is effective from 4 December 2017 and replaces the Disruption to Studies Policy.)*

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

If you would like to see all the policies relevant to Learning and Teaching visit Policy Central (https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central).

Student Code of Conduct

Macquarie University students have a responsibility to be familiar with the Student Code of Conduct: https://students.mq.edu.au/study/getting-started/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

Student Support

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

Learning Skills

Learning Skills (mq.edu.au/learningskills) provides academic writing resources and study strategies to improve your marks and take control of your study.

- Workshops
- StudyWise
- Academic Integrity Module for Students
- Ask a Learning Adviser

Student Services and Support

Students with a disability are encouraged to contact the Disability Service who can provide appropriate help with any issues that arise during their studies.

Student Enquiries

For all student enquiries, visit Student Connect at ask.mq.edu.au

If you are a Global MBA student contact globalmba.support@mq.edu.au

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.

Graduate Capabilities

PG - Capable of Professional and Personal Judgment and Initiative

Our postgraduates will demonstrate a high standard of discernment and common sense in their professional and personal judgment. They will have the ability to make informed choices and decisions that reflect both the nature of their professional work and their personal perspectives.

This graduate capability is supported by:

Learning outcome

- Understand how linear models, time series models and various generalizations are applied and how empirical results are communicated in practice.

Assessment tasks

- Participation - class
- Assignment

PG - Discipline Knowledge and Skills

Our postgraduates will be able to demonstrate a significantly enhanced depth and breadth of knowledge, scholarly understanding, and specific subject content knowledge in their chosen fields.

This graduate capability is supported by:

Learning outcomes

- Understand a range of generalizations of regression and how to apply them.
- Understand how linear models, time series models and various generalizations are applied and how empirical results are communicated in practice.
- Have a broad understanding of Panel Data Models and Dynamic Panel Data Models.

Assessment tasks

- Participation - class
- Midterm
- Assignment

- Class Test

PG - Critical, Analytical and Integrative Thinking

Our postgraduates will be capable of utilising and reflecting on prior knowledge and experience, of applying higher level critical thinking skills, and of integrating and synthesising learning and knowledge from a range of sources and environments. A characteristic of this form of thinking is the generation of new, professionally oriented knowledge through personal or group-based critique of practice and theory.

This graduate capability is supported by:

Learning outcomes

- Understand a range of generalizations of regression and how to apply them.
- Understand how linear models, time series models and various generalizations are applied and how empirical results are communicated in practice.
- Have a broad understanding of Panel Data Models and Dynamic Panel Data Models.

Assessment tasks

- Participation - class
- Midterm
- Assignment
- Class Test

PG - Research and Problem Solving Capability

Our postgraduates will be capable of systematic enquiry; able to use research skills to create new knowledge that can be applied to real world issues, or contribute to a field of study or practice to enhance society. They will be capable of creative questioning, problem finding and problem solving.

This graduate capability is supported by:

Learning outcomes

- Understand a range of generalizations of regression and how to apply them.
- Understand how linear models, time series models and various generalizations are applied and how empirical results are communicated in practice.
- Have a broad understanding of Panel Data Models and Dynamic Panel Data Models.

Assessment tasks

- Participation - class
- Assignment
- Class Test

PG - Effective Communication

Our postgraduates will be able to communicate effectively and convey their views to different social, cultural, and professional audiences. They will be able to use a variety of technologically supported media to communicate with empathy using a range of written, spoken or visual formats.

This graduate capability is supported by:

Learning outcome

- Understand how linear models, time series models and various generalizations are applied and how empirical results are communicated in practice.

Assessment tasks

- Participation - class
- Assignment

PG - Engaged and Responsible, Active and Ethical Citizens

Our postgraduates will be ethically aware and capable of confident transformative action in relation to their professional responsibilities and the wider community. They will have a sense of connectedness with others and country and have a sense of mutual obligation. They will be able to appreciate the impact of their professional roles for social justice and inclusion related to national and global issues

This graduate capability is supported by:

Learning outcome

- Understand how linear models, time series models and various generalizations are applied and how empirical results are communicated in practice.

Assessment task

- Participation - class

Research and Practice

- The unit is designed to equip students to embark on their individual higher degree research projects.
- A number of reading, writing and analytical tasks are set. Responses to some of these tasks are discussed in class, whereas others will be submitted for assessment. The tasks will contribute directly to the Research Protocol submission and/or PhD thesis.
- The unit is delivered in accordance with current academic teaching and learning pedagogies.