UEH-International School of Business – Massey University

Master of Finance

QUANTITATIVE METHODS IN FINANCE
Course Syllabus
Summer 2018

Instructor Le Van Chon
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Course Description

This course provides an introduction to the specification and estimation of linear regression models. Emphasis is given to least-squares and its performance under different statistical assumptions. After a review on cross-sectional econometrics, the course will discuss statistical techniques that are particularly suited for analyzing financial data. We will consider and test models of how financial markets operate and how financial prices are determined.

Prerequisites

Students are expected to have completed introductory courses in economics, statistics and calculus or equivalent.

Course Materials

Required texts: Wooldridge, J.M., *Introductory Econometrics: A Modern Approach*, Thomson/South-Western College Publishing, 4e.

Gujarati, D.N., *Econometrics by Example*, Palgrave Macmillan, 1e.

Other useful texts:

Brooks, C., *Introductory Econometrics for Finance*, Cambridge University Press, 3e.

Gujarati, D.N., *Essentials of Econometrics*, McGraw-Hill/Irwin, 4e.

Gujarati, D.N., *Basic Econometrics*, McGraw-Hill, 5e.

Pindyck, R.S., and D.L. Rubinfeld, *Econometric Models and Economic Forecasts*, McGraw-Hill/Irwin, 4e.

Ramanathan, R., *Introductory Econometrics with Applications*, Harcourt College

Publishers, 5e.

Software

During the course students are expected to do several home assignments with data sets which are already available in Stata format. Hence, the software taught in this class is Stata. However, students can do their assignments with other statistical software.

Tentative Course Outline

Section	Lecture topics	Required Readings
1-3	The Simple Regression Model	Wooldridge, J.M., *Introductory Econometrics*, Chapter 2
4	Multiple Regression Analysis: Estimation	Wooldridge, J.M., *Introductory Econometrics*, Chapter 3
5	Multiple Regression Analysis: Estimation Midterm Exam	Wooldridge, J.M., *Introductory Econometrics*, Chapter 3
6	Multiple Regression Analysis: Estimation	Wooldridge, J.M., *Introductory Econometrics*, Chapter 3
7-8	Multiple Regression Analysis: Inference	Wooldridge, J.M., *Introductory Econometrics*, Chapter 4
9	Autocorrelation	Gujarati, D.N., *Econometrics by Example*, Chapter 6
10	Stationary and Nonstationary Time Series Midterm Exam	Gujarati, D.N., *Econometrics by Example*, Chapter 13
11	Cointegration and Error Correction Models	Gujarati, D.N., *Econometrics by Example*, Chapter 14
12	Asset Price Volatility: the ARCH and GARCH Models	Gujarati, D.N., *Econometrics by Example*, Chapter 15
13-14	Economic Forecasting	Gujarati, D.N., *Econometrics by Example*, Chapter 16
15	Revision	

Assignments and Grading Policy

Performance will be evaluated on the basis of 1 home assignment, 2 midterm exams and a final exam, weighted as follows:

Component	Weight
home assignment	.20
midterm exams	.40
final exam	.40

Class Attendance

Students are expected to attend every class and be on time. Students are entitled to 2 absences from class without loss of grade. For each additional absence without a doctor's excuse, I will deduct one-half point from the final grade.

Late Assignments

A 10% per day penalty will be applied to late assignments. Assignments more than 3 days late will not be accepted. Technological issues are not considered a valid excuse for late assignments.

Exam Dates & Policies

The final exam is on September 16.
Failure to take the final exam at the scheduled time will result in a grade of zero unless there is a serious family or personal matter of which I must be notified *before* the exam.

All academic work must meet the standards relevant to referencing and plagiarism.