

**NATIONAL UNIVERSITY OF SINGAPORE**  
**Faculty of Business Administration**  
**Department of Strategy & Policy**

## **BSP4513 Econometrics: Theory & Practical Business Applications**

**Lecturer:** Associate Professor Toh Mun Heng  
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**Session:** Semester I 2016/2017

### **Course Objective & Description:**

When a university graduate presents himself/herself to the business world, it carries a pertinent and distinct advantage that he/she had done a course in **econometrics**, and that is explicitly stated in his/her *resume*. This course to be introduced is not about tortuous algebra and mathematical proofs but will slowly but surely immerse students into a state of appreciation and mastery of basic skill in data analysis, econometric evaluation and forecasting. These are essential skills that are well appreciated and valued by 21<sup>st</sup> century knowledge based enterprises in the digital business world. They need executives that are able to back their **research, analysis**, suggestions and advice with adequate quantitative and empirical support.

Econometric tools covered in this module can be used to analyse a wide range of issues from economics, finance, business studies and the other social sciences. The techniques and methodological approaches introduced in the course will enable students to think of and design appropriate strategies and solutions to achieve the desired objectives.

This course has no pre-requisites. In this revised version of the module, the approach is to apply the practical aspects of regression analysis to some interesting issues and without adopting an excessively esoteric and/or mathematical approach. Examples from economics, finance, marketing and other disciplines will be used for exposition of methodologies, case studies and tutorial exercises.

### **Basic Text:**

Baddeley M.C. and D.V. Barrowclough (2009) **Running Regressions: A Practical Guide...**; Cambridge University Press. (Referenced as B&B)

### **Supplementary Texts**

Gujarati D. & Porter D. (2010) **Essentials of Econometrics**, 4th edition, N.Y.: McGraw-Hill. (Referenced as GP)

Dennis Halcoussis (2005) **Understanding Econometrics**, USA: Thomson\*South-Western. (Referenced as DH)

RC Hill, WE Griffiths, GC Lim(2011) **Principles of Econometrics** (4th ed): John Wiley & Son.

Woolridge J.M.(2009) **Introductory Econometrics: A Modern Approach**, 4<sup>th</sup> edition, South-Western.

Hilmer C.E. and Hilmer M.J. (2014) **Practical Econometrics**. McGraw-Hill International Edition

**Topics covered in the Course:**

	<b>Topics</b>	<b>Chapter in B&amp;B (4th ed)</b>	<b>Chapter in GP (4th ed)</b>	<b>Chapter in DH</b>
1	What is meant by the Econometric Approach? Introduction to Ordinary Least Squares	1	1	1
2	Running SRM: Global Poverty & Economic Growth	2	2	2
3	Running SRM: Functional form : Elasticity measures in Air Travel Demand	3	5	5.5
4	Hypothesis Testing: Health Expenditure & Quality of Life	4	3	3
5	Running MRM: Housing Demand in the UK	5	4 and 6	4
6	Running MRM: Heteroscedasticity: R&D, invention and innovation;	6	9	8
7	Running MRM: Autocorrelation: Tourism & Environment	7	10	7
8	Model Misspecification: Omitted variables; Consequences & Ramsey Test	8	7	13
9	Structural Breaks; non-stationarity & spurious regression: Venture capital & computing investment in USA	9	12.2, 12.3 and 12.5	11
10	Error Correction Model: Consumption and the multiplier in UK.	10	12.4	11
11	Panel Estimation: Divorce & Income	11		9
12	Logit and Probit Model: War and poverty	12	12.6	12
13	Miscellaneous Topics: Simultaneous Equation Model; Experimental Data Modelling	Notes	11	10

**Course Assessment:**

Class Assignment, Quiz & Attendance	20%
Project Report and Presentation*	30%
End of Term Test (Open Book)	50%
Total	100%

\*A report of the project will be submitted for assessment and also the findings will be presented to the class during the last two weeks of the semester.