Department of Economics
University of Delhi, Delhi

Minutes of Meeting

Subject   :   Pool of Discipline Specific Electives (DSE)

Semester   :   V/VII

Course   :   Advanced Econometrics

Date   & Time :   04th Sep 2025 at 4:00 pm

Venue   :   Online https://meet.google.com/iwm-cpxj-znd

Convenors   :   Reetika Garg and Rohini Somanathan

The meeting was attended by the following teachers

1	Deepika Goel	Aryabhatta College
2	Lakshika Bhardwaj	Maitreyi College
3	Leema Mohan Paliwal	St. Stephen's College
4	Madhavi Moni	Hansraj College
5	Manas Verma	Maharaja Agrasen College
6	Shyma Jose	Jesus & Mary College
7	Yogesh Malhotra	Sri Venkateswara College

Learning Objectives

The Learning Objectives of this course are as follows:

• A prerequisite for this course is the knowledge of concepts in the Basic Econometrics course.

• It builds on the compulsory Basic Econometrics course and teaches students a broad set of commonly used econometric methods.

• These include estimating models with limited dependent variables, the use of instrumental variables to estimate models with endogenous regressors, as also estimation methods for time series and panel data sets.

Learning outcomes

The Learning Outcomes of this course are as follows: Students will learn the theoretical and practical basis for techniques widely used in empirical research and consider their application in a wide range of estimation problems.

The issues discussed and decided in the meeting are as follows:

1. It was decided to use the texts by Jeffrey Wooldridge *Introduction to econometrics: A modern approach,* 5th edition and by James Stock and Mark Watson*, Introduction to Econometrics*, 4th edition, as two textbooks. Other textbooks can be used for supplementary material and problem solving / practice.
2. Detailed unit-wise readings are given below.

3. It was decided that Unit I and VI will be introduced together in class and will be evaluated in internal assessment and continuous assessment. No question from Unit I and VI will be asked in the end semester exam.

4. **End semester exam**: This would be of 90 marks. The following decisions were taken regarding the choice offered within topics and the weightage given.

    (i) One compulsory question of 10 marks will be from Unit II

    (ii) Five questions of 20 marks each will be from Unit III, IV and V out of which students will be required to attempt four. An attempt should be made to cover all the Units i.e. Unit III, IV and V in the exam.

5. The **internal assessment** would comprise two class tests of 12 marks each. Lecture attendance will carry 6 marks. The **continuous assessment** would comprise of 35 marks tutorial assignment and individual class projects / group projects, where data is collected and analysed. Tutorial attendance will carry 05 marks.

Details of the Course Content, Topic-wise Reading list, recommended textbooks

UNIT I: Stages in empirical econometric research

Wooldridge, J. (2014). Introduction to econometrics: A modern approach, 5th ed. Cengage Learning. Chapter 1

UNIT II: The linear regression model: The matrix approach, Review of model specification, estimation and testing

Wooldridge, J. (2014). Introduction to econometrics: A modern approach, 5th ed. Cengage Learning. Chapter 2, 3, 4 and Appendix E Section E.1 and E.2

UNIT III: Limited dependent variables: Logit and Probit models for binary responses, Tobit models for truncated data.

The students are not required to derive MLE estimates. They should understand why these models give different results from OLS, when they should be used and how estimates from these models should be interpreted. In Tobit Models interpretation of coefficients needs to be emphasised.

Wooldridge, J. (2014). Introduction to econometrics: A modern approach, 5th ed. Cengage Learning. Chapter 17 Section 17.1 - 17.2

James Stock and Mark Watson, Introduction to Econometrics, 4th Edition, 2019, Pearson. Chapter 11

UNIT IV: Selected Topics: Instrumental variable estimation, Simultaneous equation models, Experiments and Quasi-Experiments. (9 hours)

Wooldridge, J. (2014). Introduction to econometrics: A modern approach, 5th ed. Cengage Learning. Chapter 15 Section 15.1 - 15.5, Chapter 16 Section 16.1 - 16.3

James Stock and Mark Watson, Introduction to Econometrics, 4th Edition, 2019, Pearson. Chapter 12 Section 12.1*, 12.2*, 12.3 * (optional)

UNIT V: Dynamic econometric models: distributed lag models, autoregressive models; Panel data models and estimation techniques

Wooldridge, J. (2014). Introduction to econometrics: A modern approach, 5th ed. Cengage Learning. Chapter 13 Section 13.3, 13.4 and 13.5 (Section 13.1* and 13.2* optional), Chapter 14 Section 14.1, Chapter 18 Section 18.1

UNIT VI: Introduction to econometric software (R/GRETL/EViews/Stata: ANY ONE); publicly available data sets and software will be used to estimate models and apply the techniques learnt.

Since R is an open-source software, it is preferable. If students have access to Stata in colleges, that may be used instead.

Essential Readings:

1. Wooldridge, J. (2014). Introductory econometrics: A modern approach, 5th ed. Cengage Learning.
2. James Stock and Mark Watson, Introduction to Econometrics, 4th Edition, Global Edition, 2019, Pearson.

Supplementary Readings:

1. Asteriou, D and Hall, Stephen G, Applied Econometrics, 4th Edition, 2021, Palgrave Macmillan.
2. Gujarati, D., Porter, D. (2012). Basic econometrics, 5th ed. McGraw-Hill.
3. Gujarati, D. (2014). Econometrics by Example, 2nd ed. Palgrave Macmillan.
4. G.S. Maddala and Kajal Lahiri, Introduction to Econometrics, 4th Edition, 2012, Wiley. 27
5. Badi H. Baltagi, Econometrics, 5th Edition, 2011, Springer.
6. J. Johnston and J. DiNardo (2001), Econometric Methods, Fourth Edition, Irwin Mcgraw Hill