Minutes of Meeting

Subject : B.A. (Hons) Economics – Sixth Semester (2014)
Course : 25 B - Applied Econometrics
Date of Meeting : Monday, 13th December, 2013
Venue : Department of Economics, Delhi School of Economics, University of Delhi
Chair : Prof. Pami Dua

Attended by:

1. Vandana Tulsyan, Dyal Singh College
2. Arushi Kaushik, Hindu College
3. Padma Suresh, Sri Venkateswara College
4. Renu Bansal, SRCC
5. Deb Kusum Das, Ramjas College
6. Nidhi Chand, Maitreyi College
7. Azad Singh, Motilal Nehru College
8. Shweta Nanda, ARSD
9. Hena Oak, Miranda House
10. Shilpa Chaudhary, JDM College
11. Nita Singh, Satyawati College (E)
12. Saachi Bhutani, Kalindi College
13. Shweta Jain, St. Stephen’s College
14. Enakshi Sinha Ray Chaudhory, Rajdhani College
15. Krishna Ram, Shivaji College
16. Nupur Kataria, Kamala Nehru College
17. Rimpy, PGDAV
The meeting of teachers of this course was held with a view to achieve the following aims:

- To finalize the text books
- To finalize the topic-wise reading list
- To discuss the pattern of internal assessment and semester-end exam

A preliminary discussion was held in this regard and the core texts were decided upon. The pedagogy was discussed and it was agreed that the course must orient students to do a research project and get a hands on experience with appropriate software (GRETL/ EViews/ Stata/ EXCEL). It was also decided that follow-up meetings can be held during the semester if any clarification is required.

The teachers also prepared a draft of the reading list which was presented in a second meeting held on 16th December, 2013. The following members were present:

1. Nidhi Chand
2. Padma Suresh
3. Vandana Tulsiyan
4. Shweta Nanda
5. Saachi Bhutani
6. Rimpi
7. Arushi Kaushik

Further meetings were held in smaller groups with the following teachers coordinating the finalization of the reading list:

1. Nidhi Chand
2. Padma Suresh
3. Vandana Tulsiyan

The syllabus and reading list are as follows:

**SYLLABUS**

I. Stages in Empirical Econometric Research

II. The Linear Regression Model: Estimation, Specification and Diagnostic Testing
   ii. Review of Functional forms and Qualitative explanatory variable regression models
   iii. Regression Diagnostics
      a. Detection of and remedial measures for Multicollinearity, Autocorrelation and Heteroscedasticity.
      b. Model Selection and Diagnostic Testing
1. Tests of Specification errors: Detecting the presence of unnecessary variables, omitted variables and incorrect functional form (Ramsey RESET and Lagrange Multiplier Test for Adding Variables)
2. Errors of measurement: Consequences and remedial measures
3. Model Selection Criteria: $R^2$ and Adjusted $R^2$ criteria, Akaike’s Information Criterion and Schwarz’s Information Criterion.
4. Additional topics in modeling (Outliers, Leverage, Influence; Recursive least squares; Chow’s Prediction Failure Test; Missing Data)
5. Non-normal errors and stochastic regressors

III. Advanced Topics in Regression Analysis
i. Dynamic Econometric Models
   b. Estimation of Autoregressive Models
ii. Instrumental Variable Estimation
   a. Omitted variables in a simple regression model
   b. Measurement errors

IV. Panel Data Models and Estimation techniques


V. Introduction to Econometric Software (GRETL/ EViews/ Stata/ EXCEL: ANY ONE)

i. Generation of data sets and data transformation; data analysis (Graphs and Plots, Summary Statistics, Correlation Matrix etc.)
ii. Running an OLS regression; Testing for Linear Restrictions and Parameter Stability
iii. Regression Diagnostics: Collinearity, Autocorrelation, Heteroscedasticity, Normality of residuals
iv. Estimation of Other Linear Models: Weighted Least squares, Cochran-Orcutt/Hildreth-Lu/ Prais-Winsten etc.
v. Model Selection Criteria (AIC, SC Criteria) and Tests (Adding and Omitting Variables, Non-Linearities: Squares, Cubes and Logs, Ramsey’s RESET test
## Topic-wise reading list

<table>
<thead>
<tr>
<th>S.No.</th>
<th>TOPIC</th>
<th>REFERENCES FROM RECOMMENDED TEXT BOOKS</th>
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</thead>
<tbody>
<tr>
<td>II.ii.</td>
<td>Review of Functional forms and Qualitative explanatory variable regression models</td>
<td>Chapter 2 ‘Functional Forms of Regression Models’ and Chapter 3 ‘Qualitative Explanatory Variables Regression Models in Gujarati, Econometrics by Example.</td>
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<tr>
<td>II.iii.a</td>
<td>Regression Diagnostics: Detection of, and remedial measures for Multicollinearity, Autocorrelation Heteroscedasticity</td>
<td>Chapter 4 ‘Regression Diagnostic I: Multicollinearity’, Chapter 5 ‘Regression Diagnostic II: Heteroscedasticity’ and Chapter 6 ‘Regression Diagnostic III: Autocorrelation in Gujarati, Econometrics By Example’</td>
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<td>III.b.</td>
<td>Advanced Topics in Regression Analysis: Instrumental Variable Estimation</td>
<td>Chapter 15 ‘Instrumental Variable Estimation and Two Stage Least Squares’, Section 15.1, 15.2 and 15.4 in Wooldridge, Econometrics</td>
</tr>
<tr>
<td>IV.</td>
<td>Panel Data Models and Estimation Techniques</td>
<td>Chapter 16 ‘Panel Data Regression Models’ in Gujarati, Porter and Gunasekar, Basic Econometrics</td>
</tr>
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2. Relevant Instruction Manual for Software |
**Recommended text books**


**Student Assessment Summary**

Students will have to pass the end-semester exam and the total of the internal assessment and end-semester exam as per university rules to clear the paper.

The end-semester final examination will be of 75 marks. The question paper will consist of seven questions of 15 marks each from Topics I, II, III and IV only. Students will have to answer any five questions.

The software skills of the students will be tested by the teachers during internal assessment and not in the end-semester final exam. The paper setting committee should take a note of this.

Internal assessment will be of 25 marks, divided further as follows:

1. Attendance: 5 marks
2. Class Test/ Assignment: 10 marks
3. Empirical project using the econometric software learnt: 10 marks. (Projects can be done in groups of 2 or 3)