DEPARTMENT OF ECONOMCS
UNIVERSITY OF DELHI

Subject: Common Pool of DSE

Sem.:   VI/ VIII

Course & Code: Forecasting Methods for Economics ECON053

Duration (per week):   4 (3 Lectures + 1 Tutorial)

Date & Time   06/01/2025 at 03:30 PM

Venue: 104, Department of Economics, Delhi University

Convenor: Reetika Garg

Present:

Shyma Jose	Jesus & Mary College

Learning Objectives

The Learning Objectives of this course are as follows:

- This course builds on the compulsory Basic Econometrics course and teaches students a broad set of commonly used econometric methods for forecasting econometric variables.

- These include both quantitative and qualitative Forecasting Techniques including VAR, VECM, ARIMA etc.

Learning outcomes

The Learning Outcomes of this course are as follows:

- Students will learn the theoretical and practical basis for forecasting techniques widely used in empirical research and consider their application in a wide range of problems..

Agenda of the Meeting

- To discuss detailed Topic-wise / Unit-wise Reading list
- To discuss Evaluation criteria and Exam pattern

Syllabus

UNIT I: Basics of Forecasting

Tools for forecasting, forecasting methods and applications, forecast horizon

- Diebold - Chapter 2

UNIT II: Quantitative Forecasting Techniques

Definition, Time Series-Naive,Average, Simple Moving Average, Weighted Moving Average, Exponential Smoothing; Forecast Errors Accuracy, Trend Projection, Seasonal Indexes, Holt's, winter's Model, Linear Regression. Smoothing Techniques, Exponential smoothing methods, Decomposition methods.

- Makridakis, Wheelwright and Hyndman – Chapter 2, 3(upto 3.4), 4, 5 (upto 5.3)

UNIT III: Box-Jenkins Methodology: Unit roots; Autoregressive models, moving average models, mixed autoregressive and moving average models; Identification, estimation, diagnostic checking and Forecasting

- Makridakis, Wheelwright and Hyndman – Chapter 7

UNIT IV: Forecasting with Multiple Regression Models

- Makridakis, Wheelwright and Hyndman – Chapter 6 (upto 6.5)

UNIT V: Cointegration, Granger Causality, Error Correction

- Asteriou and Stephen G. Hall – Chapter 17 pp. 383-395 (pp.395 onwards*), Chapter 15 pp. 349-351

UNIT VI: Qualitative Forecasting Techniques

Definition, Delphi, Precautions in administering Delphi, Sales force composite, Consumer Panel Survey, Nominal group, and their Drawbacks.

- Rowe and Wright in Armstrong(eds.) pp. 124-141
- DeLurgio Chapter 15 (section on Subjective Forecasting Methods pp. 627-632, section on Delphi method pp. 636-638)

Note: The readings / chapters / pages that are star marked (*) above are optional

Essential Readings

1. Spyros G. Makridakis, Steven C. Wheelwright, Rob J Hyndman, Forecasting: Methods and Applications, 3rd edition 2015 Wiley Publications.

2. Dimitrios, Asteriou and Stephen G. Hall, 4th edition, Applied Econometrics, 2021, Palgrave Macmillan.

3. Diebold, F.X., Elements of Forecasting, Department of Economics, University of Pennsylvania.3rd Edition 2004, Thomson South Western

4. Rowe, G. And Wright, G. (2001) Expert Opinions In Forecasting: The Role Of The Delphi Technique in Armstrong J.Scott, (eds.) Principles Of Forecasting: A Handbook For Researchers And Practitioners, 2001, Kluweracademic Publishers New York, Boston, Dordrecht, London, Moscow

5. DeLurgio Stephen A., Forecasting principles and Applications, 1998, 1st edition, International edition, Irwin Mc Graw Hill.

Other Readings

6. Hyndman, R.J., & Athanasopoulos, G. (2021) Forecasting: principles and practice, 3rd edition, OTexts: Melbourne, Australia.OTexts.com/fpp3.

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

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

9. Gujarati, D., Porter, D. (2012). Basic econometrics, 5th ed.McGraw-Hill.

10. Badi H. Baltagi, Econometrics, 5th Edition, 2011,Springer.

11. J. Johnston and J. DiNardo (2001), Econometric Methods, Fourth Edition, Irwin McgrawHill

12. G.S. Maddala and Kajal Lahiri, Introduction to Econometrics, 4th Edition, 2012, Wiley.

Evaluation & Assessment

Internal Assessment (IA): 30 marks

- As per the University guidelines

Continuous Assessment (CA): 40 marks

- As per the University guidelines

End Semester (Final) Exam: 90 marks

- It was decided that for the End Semester examination there will be open choice of attempting 5 out of 7 questions (18 marks each)