

Semester-VI

PAPER NO-17: ECONOMETRICS

1. Objective behind building Econometric Models.
2. General linear models.
3. Multicollinearity
 - 3.1. Introduction and concepts
 - 3.2. Consequences of Multicollinearity
 - 3.3. Tests for Multicollinearity
 - 3.4. Solutions to Multicollinearity
4. Generalized least squares
5. Heteroscedasticity
 - 5.1. Introduction and concept
 - 5.2. Consequences of Heteroscedasticity
 - 5.3. Tests of Heteroscedasticity
 - 5.4. Solutions of Heteroscedasticity
6. Autocorrelation
 - 6.1. Introduction and concept
 - 6.2. Consequences of autocorrelation
 - 6.4. Tests of autocorrelation
 - 6.5. Solutions of autocorrelation
7. Selection of best regression Equation
8. Forecasting

WEEK-WISE DETAILS

Week 1: Objective behind building Econometric Models

- Gujarati, D. and Sangeetha, S. (2007): *Basic Econometrics*, 4th Edition, McGraw Hill Companies. Ch.1 PP. 1-13, 17-37

Week 1-3: General linear models

- Johnston, J. (1972): *Econometric Methods*, 2nd Edition, McGraw Hill International. pp. 121-132, 135-138, 143, 152-164

Week 3-5: Multicollinearity

- Gujarati, D. and Sangeetha, S. (2007): *Basic Econometrics*, 4th Edition, McGraw Hill companies. Ch. 10 pp. 349-377
- Johnston, J.(1972) : *Econometric Methods*, 2nd Edition, McGraw Hill International, Article 5.7 pp.159-163
- Koutsoyiannis, A. (2004): *Theory of Econometrics*, 2nd Edition, Palgrave Macmillan Limited, Article 11.4 pp.238-249
- Maddala, G.S. and Lahiri, K. (2009): *Introduction to Econometrics*, 4th Edition, John Wiley & Sons. Article 7.5-7.8 pp. 290-302

Week 6-7: Generalized least squares

- Johnston, J. (1972): *Econometric Methods*, 2nd Edition, McGraw Hill International. Article 7.1, 7.2, pp. 208-213

Week 8-10: Heteroscedasticity

- Gujarati, D. and Sangeetha, S. (2007): *Basic Econometrics*, 4th Edition, McGraw Hill Companies. Ch. 11, 396-409
- Koutsoyiannis, A. (2004): *Theory of Econometrics*, 2nd Edition, Palgrave Macmillan limited. pp. 185-197

Week 11: Autocorrelation

- Gujarati, D. and Sangeetha, S. (2007): *Basic Econometrics*, 4th Edition, McGraw Hill Companies. Ch. 12, pp. 451-459, 472-480.
- Koutsoyiannis, A. (2004): *Theory of Econometrics*, 2nd Edition Palgrave Macmillan limited. pp. 200-215, 222 – 225.

Week 12: Selection of best regression Equation, Forecasting

- Maddala, G.S. and Lahiri, K. (2009): *Introduction to Econometrics*, 4th Edition, John Wiley & Sons. Article 8.11, pp. 124-127
- Montgomery D. G. and Johnston, J. (1976): *Forecasting and Time Series Analysis*, McGraw Hill Book Company. Article 3.1, Theorem 3, pp. 48-53

Practical/ Lab work

LIST OF PRACTICALS

1. Problems based on estimation of General linear model
2. Testing of parameters of General linear model
3. Forecasting of General linear model
4. Problems concerning specification errors
5. Problems related to consequences of Multicollinearity
6. Diagnostics of Multicollinearity
7. Problems related to consequences of Autocorrelation (AR(I))
8. Diagnostics of Autocorrelation
9. Estimation of problems of General linear model under Autocorrelation
10. Problems related to consequences Heteroscedasticity
11. Diagnostics of Heteroscedasticity
12. Estimation of problems of General linear model under Heteroscedastic distance terms
13. Problems related to General linear model under (Aitken Estimation)
14. Problems related to selection of best regression model
15. Problems related to Forecasting by simple exponential smoothing