Centre for International Trade and Development
School of International Studies
Jawaharlal Nehru University
M.A. Economics Programme

Course no. IE 514: Topics in Applied Econometrics
Semester: Monsoon semester 2012
Instructor: Bishwanath Goldar

Course outline and readings

1. **Introduction to Applied Econometrics**

- Peter Kennedy, A guide to Econometrics, Blackwell, 2003, Chapter 21.
- David Hendry, "The Methodology of Empirical Econometric Modeling: Applied Econometrics Through the Looking Glass", in T. C. Mills and Kerry Patterson edited, Handbook of Econometrics, vol. 2, Applied Econometrics, Palgrave, 2009.

2. **Production and Cost Functions**

2.1 Stochastic production and cost functions: single and simultaneous equations
2.2 Technical progress
2.3 Frontier production function

- A.A. Walters, "Production and Cost Functions: An Econometric Survey", Econometrica, 1963, Vol 31 No 1, pp 1-66.
- A. Zellner, J. Kmenta and J. Dreze, "Specification and Estimation of Cobb-Douglas Production Function Models", Econometrica, 1966, Vol. 34, pp 784-795.
- I.Hoch, "Simultaneous Equation Bias in the Context of the Cobb-Douglas Production Function", Econometrica, 1958, Vol 26, pp 566-578.
- R. M. Solow, "Technical Change and the Aggregate Production Function", Review of Economics and Statistics, 1957, pp 312-320.
- K. J. Arrow, H. B. Chanery, B. S. Minhas and R. M. Solow, "Capital-Labor Substitution and Economic Efficiency", Review of Economics and Statistics, 1961, pp 225-250.
- F. Forsund, C. Lovell and P. Schmidt, "A Survey of Frontier Production Function and their Relationships to Efficiency Measurement", Journal of Econometrics, 1980, 13(1), pp. 5-25.
- W.Greene, "Frontier Production Functions", in Handbook of Applied Econometrics, Vol II edited by M. Hasheem Pesaran and Peter Schmidt, Blackwell (UK), 1997. Chapter 3, pp 81-166.
- Laurits R. Christensen, Dale W. Jorgenson, and Lawrence J. Lau, "Transcendental Logarithmic Production Function Frontiers," Review of Economics and Statistics , 55 (Feb. 1973), 29-45.
- E.R. Berndt and L.R. Christensen, "The Translog function and the substitution of equipment, structure and labour in U.S. Manufacturing, 1929-68", Journal of Econometrics, 1973, 1(1), March, 81-113.

- Ernst R. Berndt and David Wood, "Technology, Prices, and the Derived Demand for Energy," Review of Economics and Statistics, 57 (Aug. 1975), 259-268.
- J. Levinsohn, and A.Petrin, "Estimating production functions using inputs to control for unobservables". Review of Economic Studies , 2003,vol, 70, pp317–341.
- S. Olley and A. Pakes, "The dynamics of productivity in the telecommunications equipment industry, "Econometrica, 1996, vol. 64, pp1263–1298.
- S.C. Kumbhakar, and C.A.K Lovell, Stochastic Frontier Analysis, Cambridge University Press, U.K., 2000, Chapters 2 and 3.

3. Testing Trade Theories

3.1 H/O and extensions
3.2 Technology based theories of trade
3.3 Imperfect Competition, Scale Economy, Intra-industry trade
3.4 Gravity model, Linder's hypotheses

- E. E. Leamer, Sources of International Comparative Advantage, MIT Press, 1984.
- A. V. Deardoff, "Testing Trade Theories and Predicting Trade Flows", in Handbook of International Economics Vol I, (chapter 10), R. W. Jones and P. B. Kenen (eds.), Elsevier Science, 1984.
- E. E. Leamer, "Testing Trade Theory", in Surveys in International Trade, D. Greenaway and A. Winters (eds.), Blackwell: Oxford, 1994.
- Luca De Benedictis and Daria Taglioni , "*The Gravity Model in International Trade*," chapter 4 of The trade impact of European Union preferential policies: an analysis through gravity models, Luca De Benedictis and Luca Salvatici (eds.), Springer, 2011.
- David Greenaway and Richard Kneller, "Firm Heterogeneity, Exporting and Foreign Direct Investment". Economic Journal, 2007, vol. 117, pp. F134-F161.
- James Tybout, "Plant- and Firm-Level Evidence on 'New' Trade Theories". In Kwan Choi, E. and James Harrigan (eds*.), Handbook of International Trade*, Oxford: Basil-Blackwell,2003.
- John Romalis, "Factor Proportions and the Structure of Commodity Trade". American Economic Review, 2004, vol. 94, pp. 67-97
- Robert C. Feenstra, James A. Markusen and Andrew K. Rose,"Using the Gravity Equation to Differentiate Among Alternative Theories of Trade". Canadian Journal of Economics, 2001, vol. 32, pp. 430-447.

4. Models of Limited Dependent and Qualitative Variables

4.1 Applications of Logit, Probit, Tobit and Trucated Models
4.2 Applications of Multinomial Logit, Nested Logit and Ordered Probit models
4.3 Models of count data

- G.S.Maddala, Limited Dependent and Qualitative Variables in Econometrics, Cambridge University Press, Cambridge, 1983.
- G.Judge et al, The Theory and Practice of Econometrics, Chapter 18, 2nd Edition, Wiley, 1985.
- W. Greene, Econometric Analysis, 4th Edition, chapter 19, 20.
- Johnston and DiNardo, Econometric Methods, chapter 13.

5. **Univariate Linear Time Series Models**

- J. Hamilton, <u>Time series analysis</u>, Princeton University Press, 1994, chapters 3, 4 and 5.
- W. Enders, <u>Applied Econometric Time Series</u>, Wiley, second edition, 2004, Chapter 2.
- Kerry Patterson, <u>An Introduction to Applied Econometrics: a Time Series Approach</u>, Palgrave, 2000, Chapters 6 and 7.

Note: Additional readings,particularly applications to Indian data,will be given in the class. The Grade will be based on a term paper (40%) and a final examination (60%)