

BHARATHIAR UNIVERSITY COIMBATORE - 641 046.
M.Phil. ECONOMETRICS (FT/PT) 2013-14
(Applicable to candidates admitted from 2012 onwards)

PAPER - I: RESEARCH METHODOLOGY

PAPER - II: ADVANCED ECONOMETRIC ANALYSIS

PAPER – III: 1. INDUSTRIAL ECONOMETRICS

PAPER – III: 2. HUMAN RESOURCE ECONOMETRICS

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PAPER - I: RESEARCH METHODOLOGY

UNIT-I: Introduction of Research

Meaning - Purpose - Types of Research - Significance of Research in Social and Business Science – Steps in Research: Identification, Selection and Formulation of Research Problem - Research Questions - Research Design - Review of Literature.

UNIT-II: Sampling Design & Scaling Techniques

Sampling Design: Census and Sample Survey - Implication of a Sample Design - Steps in Sampling Design - Criteria of Selecting a Sampling Procedure - Characteristics of a Good Sample Design – Different Types of Sample Designs - Random Sample from an Infinite Universe - Complex Random Sampling Designs. **Scaling Techniques:** Meaning of Scaling - Measurement Scales - Scale Classification Bases - Important Scaling Techniques - Scale Construction Techniques.

UNIT- III: Data for Research

Types of Data - Primary data: Meaning - Collection Methods - Tools of Data Collections. Secondary Data: Meaning - Relevance, Limitations and Cautions. Data Disturbances: Auto Correlation, Multicollinearity, Heteroscedasticity (Sources, Detections and Remedial Measures).

UNIT- IV: Hypothesis Testing and Test of Significance

Definition of Hypothesis - Types - Hypothesis Testing and Estimation - Fundamental of Hypothesis Testing - Standard Error - Assumptions about Parametric and Non-Parametric Tests - Parametric Test - T test, F test and Z test - Non Parametric Test - Chi-Square Test, U Test, Kurskal Wallis, Sign Test - Multivariate Analysis - SPSS, E-Views, STATA, DEA and Its Applications.

UNIT-V: Research Report Writing

Interpretation - Meaning- Techniques of Interpretation- Report Writing - Significance - Report Writing - Steps in Report Writing - Layout of Report - Types of Reports - Oral Presentation - Executive Summary - Methods of Writing Research Report - Precautions for Writing Report - Norms for Using Tables, Charts and Diagrams - Appendix - Norms for Using Index and Bibliography.

REFERENCE

1. C.R. Kothari, Research Methodology Methods and Techniques, Vishwa Prakashan, 2006.
2. Bendat and Piersol, Random data: Analysis and Measurement Procedures, Wiley Interscience, 2001.
3. Shumway and Stoffer, Time Series Analysis and its Applications, Springer, 2000.
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5. Richard I Levin and David S. Rubin, Statistics for Management, Pearson Education, 2005.
6. Donald R. Cooper, Pamela S. Schindler, Business Research Methods, Tata McGraw-Hill Co. Ltd., 2006.
7. Fuzzy Logic with Engg Applications, Timothy J. Ross, Wiley Publications, 2nd Ed[d]
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9. A.Koutsoyiannis, "Theory of Econometrics: An Introductory Exposition of Econometric Methods",McMillan Educations Ltd.,(1992).

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PAPER - II: ADVANCED ECONOMETRIC ANALYSIS

UNIT- I: Methodology of Econometrics

Meaning, Definition and Scope of Econometrics- Divisions and Methodology of Econometrics - OLS: Assumptions - Linear and Non Linear Functional Forms - Simple and Multiple Linear Regression Models - R^2 & Adjusted R^2 - Tests of Significance of the Parameters - Construction of Confidence Interval - Properties of Least Square Estimates.

UNIT- II: Model Selection Criteria

Types and Consequences of Model Specification Errors - Tests of Specification Errors - Errors of Measurement- Intrinsically Linear and Intrinsically Nonlinear Regression Models - Estimation of Linear and Nonlinear Regression Models.

UNIT-III: Dummy Variables

Definitions - Nature of Dummy Variables - ANOVA Models with Two Quantitative Variables - The ANCOVA Model – CHOW TEST - The Dummy Variables Alternative to the CHOW Test - Interaction Effects using Dummy Variable - Use of Dummy Variables in Seasonal Analysis - Piecewise Linear Regression.

UNIT-IV: Time Series Econometrics

Stochastic Processes: Stationary and Non Stationary Stochastic Processes - Unit Root Stochastic Process - Trend Stationary and Difference Stationary - Integrated Stochastic Processes - The Phenomenon of Spurious Regression - Tests of Stationarity: Graphical Analysis, ACF and Correlogram - Unit Root Test: ADF Test, Phillips-Perron (PP) Unit Root Test - Transforming Non Stationary Time Series – Cointegration: Testing for Cointegration, ECM - Approaches to Economic Forecasting: AR, MA, and ARIMA.

UNIT-V: Qualitative Responsible Models

Definition - Nature of Qualitative Response Models - The Linear Probability Model - Logit Model - Probit Model - Tobit Model - The Poisson Regression Model - Panel Data Regression Model.

References:

1. Damodar Gujarathi "Basic Econometrics", Tata McGraw Hill Ltd,2003.4th ed.
2. A.Koutsoyiannis, "Theory of Econometrics: An Introductory Expansion of Econometric Methods", Educational Low-Price Books Scheme, McMillan Education Ltd.,(1992).
3. Greene, W.(2007), Econometric Analysis, 6th ed, Prentice Hall.

4. Davidson, R.& Mackinnon, J.D. (2003), Econometric Theory and Methods, Oxford University Press.
5. Hayashi, F.(2000), Econometrics, Princeton University Press.
6. Rudd, O. (2000), An Introduction to Classical Econometric Theory, Oxford University.
7. Wooldrige, J.M. (2002), Econometric Analysis of Cross Section and Panel Data MIT press

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PAPER – III: 1. INDUSTRIAL ECONOMETRICS

UNIT- I: Theory of the Firm and Pricing

Industrialisation - Meaning, Importance - Objectives of the Firms - Assumption and Objectives of the Traditional Theories of the Firm - Managerial Theories - Behavioural Theories- Pricing Methods - Product Line Coverage and Pricing - Advertising - Demand Forecasting.

UNIT-II: The Growth of the Firm

Growth: Definition - Growth vs. Development - Need for Growth - Theories of Growth: Downie's Theory - Penrose's Theory - Marris's Theory, Measurement of Growth: Annual Growth - Compound Growth - Growth Acceleration/ Decelerations - Structural Break Analysis.

UNIT-III: Financial Ratio Analysis

Financial Ratio Analysis - Interpretation and Classification of Ratios – Structural Ratios - Profitability Ratios - Liquidity Ratios - Activity Ratios – Miscellaneous Ratios – Limitations of Ratio Analysis – Interrelatedness of Financial Ratios – Break Even Analysis.

UNIT-IV: Investment Decisions

Methods of Project Evaluation - The Payback Method, NPV, IRR - Assessment of Investment Appraisal Techniques - Inventory Investment Appraisal.

UNIT-V: Measurement of Industrial Efficiency

Meaning and Measurement of Efficiency of Factors- Theories of Cost - Cost Functions, Theories of Production Function - Cobb-Douglas, CES, VES and Translog - Measurement of Productivity – Kendrick & Solow Indices - Stochastic Production Function - Technical Efficiency - Measurement of Technical Change.

Reference:

1. Brathwal R, "Industrial Economics" Wiley Eastern Ltd., New Delhi.
2. Devine P.J. "An Introduction to Industrial Economics", George Allen & Unwin, London
3. Hay D.A & Morris D.J, "Industrial Economics Theory and Evidence", Oxford University Press, Oxford.

4. Koutsoyannians A, "Modern Micro Economics", MacMillan, New York.
5. Pandey I.M, "Elements of Financial Management" Wiley Eastern Ltd., New Delhi.
6. Dutt and Sundaram, "Indian Economy", S.Chand &Co, New Delhi.
7. Varshney & Maheswari, "Managerial Economics", S.Chand & Co, New Delhi.
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PAPER – III: 2. HUMAN RESOURCE ECONOMETRICS

UNIT - I

Human Capital: Meaning and Importance – Theories of Human Capital – Investment in Health & Education – Costs and Benefits of Human Capital Investments - the Nexus between human capital, physical capital and natural capital - Theory of investment in human capital.

UNIT – II

Importance of Human Resource Development in Economic development - Manpower planning- meaning - manpower shortages – Man Power Surplus - Demand for Education - Cost and Benefits of Education - Direct and Indirect Benefits; Private and Social Benefits of Education – Estimating the wage Returns to education in Mincer wage Equations.

UNIT – III

Health as a form of Human capital - Investment in Health – Determinants of Health - Nexus between Health and Economic Development - Choice of Health care services – Demand for Health care – Health care financing in India – Health Insurance Programs – Women and unequal Access to Health Care - Grossman's Investment Model of Health – Gary S. Becker's Investment Model – Uses of Logit and Tobit model in health care research.

UNIT – IV

Labour: Theories of Labour market - Segmented Labour Market Theory, Dual Labour Market Theory and Radical Theory – Formal and Informal Labour markets – Trade unions – meaning and objectives – Demand and Supply of Labour – Social security for labour – Estimation and specification of search models for wages and unemployment duration.

UNIT – V

Migration – Meaning, Types – Internal and External Migration – Theories of Migration – Brain Drain – Advantages and disadvantages of brain drain - Globalization and labour Migration – Uses of Human Capital model in explaining the direction and the stages of migration – Harris – Todaro Models – Random Utility – The Linear Probability Model.

Reference Books:

1. Gary S. Becker (1994) 'Human Capital', University of Chicago Press.
2. Blaug.M (1969) 'An Introduction to the Economics of Education', Penguin Book.
3. Psacharopoulos.G, (1981) 'Returns to Education'. Vol. 17, Taylor & Francis, Ltd.
4. Schultz.T.W (1963), 'The Economic Value of Education', Columbia University Press, New York,. Better World Books.
5. Dougherty, Christopher (2011), 'Introduction to Econometrics', Oxford University Press.
6. Damodar N. Gujarati (1999), 'Essentials of Econometrics', McGraw-Hill Irwin, New Delhi.