

Core Paper -1

EMT 301: ADVANCED ECONOMETRICS

Economists apply econometric tools in a variety of specific fields (such as labor economics, development economics, health economics, Business and finance) to shed light on theoretical questions. They also use these tools to inform public policy debates, make business decisions, and forecast future events. The primary objective of this course is to provide an advanced treatment of econometric methods including Qualitative and Limited Dependent Variables Models and Simultaneous Equation Models.

Course Objectives

The objective of this course is to provide the knowledge of OLS assumptions that is essential equipment for any serious economist or social scientist, to a level where the participant would be competent to continue with the study of the subject in a Master's programme.

- Concepts of Heteroscedasticity, Multicollinearity and Autocorrelation
- Possible reasons behind the presence of Heteroscedasticity, Multicollinearity & Autocorrelation. various tests to understand the presence of Heteroscedasticity and multicollinearity. Possible remedial measures to overcome such problems
- This course explores Qualitative and Limited Dependent Variables Models; LPM, Probit, Logit and Tobit Models.
- Basic knowledge about Simultaneous Equation Models; Maximum likelihood estimation, Three stage Least Square method.

Unit 1: Multicollinearity and Heteroscedasticity

Multicollinearity: Source and Consequences, Tests for Multicollinearity and solutions for Multicollinearity. Heteroscedasticity: Sources and Consequences, Tests for Heteroscedasticity, Generalized Least Squares Method of Estimation.

Unit 2: Autocorrelation

Sources of Autocorrelation - first order Autoregressive scheme - Consequences of Autocorrelation - Tests for Autocorrelation – Durbin-Watson test - Methods of estimation of Autocorrelation coefficient - Estimation from d- statistic and Cochran-Orcutt iterative method.

Unit 3: Qualitative and Limited Dependent Variables Models

Binary Choice Models: Linear Probability Model, Probit Model and Logit Models – Censored and Truncated regression models.

Unit 4: Simultaneous Equation Models: Estimation Methods

Two stage Least Squares, Limited Information Maximum Likelihood, K-class Estimators, Three Stage Least Squares and Full Information Maximum Likelihood Methods – Numerical Problems.

Unit 5: Panel Data Regression Models and Time Series Econometrics

Panel Data – Estimation of Panel Data Regression Models - Fixed and Random Effects – Estimation – Introduction to Time Series Econometrics - Stationary and Non-Stationary

Stochastic Process – Integrated Stochastic Process – Unit roots – Co-integration – Test for co-integration, Co-integration and error correction mechanism.

TEXT AND REFERENCE BOOKS:

1. Maddala, G.S: Econometrics, McGraw-Hill Book Co., New York, 3rd Rd.
2. Johnston,J: Econometric Methods, McGraw-Hill Book Co., New York.
3. Gujarathi, D.N: Basic Econometrics, Fourth Edition, New Delhi.
4. Maddala, G.S: Limited-Dependent and Qualitative Variables in Econometrics, Cambridge University Press.

Learning Outcomes

After successfully completing the course Advanced Econometrics the graduate is able to:

At the end of the course the students will acquire additional specialization through the Advanced Econometrics courses. Skill to judge the reliability of estimation in case of violation of basic assumptions for the application of ordinary linear regression method. Besides, students will be able to execute in-depth analysis of Binary choice models. Student can perform Simultaneous Equation Models; Maximum likelihood estimation, Three stage Least Square method.

EMT 302: COMPUTER APPLICATIONS AND DATA ANALYSIS

A computer has high speed of calculation, diligence, accuracy, reliability, or versatility which has made it an integrated part in all business organizations. One main reason for the use of computers in economic analysis and forecasting is the widespread availability of in expense, convenient microcomputers. Computer applications can perform various financial analyses more easily and quickly. The end result is increased productivity.

Course Objectives

The objective of this course is to provide the basic knowledge of computer and importance of Data Analysis. Data analysis is a process of inspecting, cleansing, transforming, and modeling data with the goal of discovering useful information, informing conclusions, and supporting decision-making. Data analysis has multiple facets and approaches, encompassing diverse techniques under a variety of names, and is used in different business, science, and social science domains. In today's business world, data analysis plays a role in making decisions more scientific and helping businesses operate more effectively. SPSS is short for Statistical Package for the Social Sciences, and it's used by various kinds of researchers for complex statistical data analysis. The SPSS software package was created for the management and statistical analysis of social science data. It was originally launched in 1968 by SPSS Inc., and was later acquired by IBM in 2009.

- The course provides fundamentals Knowledge of computers and MS-Office helps simplify basic office tasks and improve work productivity. Each application is designed to address specific tasks, such as word processing, data management, making presentations and organizing emails.
- The main objective of the course is Data Analysis, for this simply we are using MS-Excel, here easily perform basic statistical analysis using data analysis pack, and also visualize the data using charts.
- This course explores SPSS Package. The SPSS software package was created for the management and statistical analysis of social science data.
- Finally, the course offered R-Programming, which is most preferable Language of Advanced analysis through programming Language. At present almost all business organizations were used R-programming for policy making.

Unit 1: Computer Fundamentals

Definition - Components of a computer-block diagram – Evolution of computer – Generations – input/output devices – storing information in computer – types of computers – Hardware and Software – Compilers and Assemblers – Low level and high-level languages – Operating systems and the graphic user interface – Microsoft Windows operating system.

Unit 2: MS-WORD

Creating, opening and saving files - editing and formatting text - spell and grammar check – auto correct- hyphenation – creating of tables and columns - mail merge - equation editor – concept of a macro - print preview.

Unit 3: MS-EXCEL

Work sheet – entering data – creation of worksheets and workbooks – opening and saving workbooks - editing and formatting - sorting, filtering and pivot tables - Creating graphs and charts - mathematical and statistical functions -Data analysis pack in Excel - Descriptive

statistics, tests of hypothesis, ANOVA, Correlation and Regression, Random Number Generation.

Unit 4: Data Handling Using SPSS

Opening Excel files in SPSS - Variables, labels and values, Analysis tools - Descriptive statistics - Selection of variables in multiple linear regression - Stepwise, forward and backward procedures - Factor analysis and Discriminant analysis (Stress on procedures and syntax only).

Unit 5: Data Analysis using R

R environment – Workspace, Getting help, Packages and Built-in data - Assigning values, performing vectorized arithmetic - Creating objects, vectors, lists, matrices, arrays and data frames - Conditional selection, sorting and indexing data frames, implicit looping - Importing data - Branching and looping statements - plotting data – Bar plots, Pie charts, Histogram, Box plots - Summary statistics - Generating samples from discrete and continuous distributions - Simple correlation and regression - Testing hypothesis of mean and variance, Analysis of variance.

TEXT AND REFERENCE BOOKS:

1. Shelly and Hunt, Computers and Common Sense, Prentice Hall of India, New Delhi.
2. Rajaraman V, Fundamentals of Computers, Prentice Hall of India, New Delhi.
3. Peter Dalgaard (2008): Introductory Statistics with R, 2nd Edition, Springer, New York.
(Chapters 1, 2, 3,4,5,6 and 7).
4. Peter Norton's Introduction to computers, Tata McGraw Hill Publishing Co., New York.
5. Foster, J.J. (2001), Data Analyzing using SPSS For Windows 8.0 – 10.0, A Beginner's Guide.
6. M. Crawley, Basic Statistics: An Introduction using R.
7. B.S. Everitt & T. Hothorn, A Handbook of Statistical Analyses Using R (2nd Ed.).
8. J. Maindonald & J. Braun, Data Analysis and Graphics Using R: An Example-based Approach.
9. P. Murrell, R Graphics (2nd Ed.).

Learning Outcomes

After successfully completing the course students must demonstrate the following:

- At the end of this course student will gain Examine spreadsheet concepts and explore the Microsoft Office Excel environment. Import and export data. Work with pivot tables and charts. Create and edit charts. Learn to use functions and formulas. Perform analysis tasks using Data analysis pack
- Student gained and evaluate Econometric Methods such as OLS, LPM, Logistic regression analyse and conclude using SPSS Package
- Finally, student will be able to write programme for Simple statistical analyse and interpret through R-programming.

EMT 303: PRACTICAL-III ADVANCED ECONOMETRICS, AND COMPUTER APPLICATIONS AND DATA ANALYSIS

The course EMT 303 is to provide the Practical knowledge of Data Analysis, which is useful information, informing conclusions, and supporting decision-making for business leaders.

Course Objectives

The objective of this course is to provide knowledge of data analysis through the domains of MS-Excel, SPSS and R-programming. In today's business world, data analysis plays a role in making decisions more scientific and helping businesses operate more effectively. SPSS is short for Statistical Package for the Social Sciences, and it's used by various kinds of researchers for complex statistical data analysis.

- The course provides Practical Knowledge of Data Analysis, for this simply we are using MS-Excel, here easily perform basic statistical analysis using data analysis pack, and also visualize the data using charts such as Histogram, Bar, Pie Line and scatter diagrams
- This course explores SPSS Package, using this package student will learn OLS regression model, multiple regression model and prepare correlation matrix and their significance, etc.
- Finally, the course offered R-Programming, which is most preferable Language. This can be use Advanced Econometric Analysis through R-programming Language.

Concepts are covered in this Practical Approach follows;

- **MS-Excel;**Pivot tables, Charts-Histogram, Bar, Pie, Scatter diagrams, Data Analysis Pack-Descriptive Statistics, Correlation Matrix, Simple and Multiple Regression analysis and Testing of Hypothesis.
- **SPSS;**Descriptive Statistics, Correlation Matrix, Simple and Multiple Regression analysis and Testing of Hypothesis. Using SPSS Testing of Multicollinearity, Heteroscedasticity and Autocorrelation, LPM and Logistic regression models
- **R-programme;**Descriptive Statistics, Correlation Matrix, Simple and Multiple Regression analysis and Testing of Hypothesis, LPM and Logistic Regression Models.

Learning Outcomes

After successfully completing the course students must analyse the following:

- At the end of this course student will gain Examine spreadsheet. Work with pivot tables and charts. Create and edit charts. Learn to use functions and formulas. Perform analysis tasks using Data analysis pack.
- Student gained and evaluate Econometric Methods such as OLS, LPM, Logistic regression analyse and conclude using SPSS Package
- After complete this course student will able to test of Multicollinearity, Heteroscedasticity and Autocorrelation.
- Finally, student will be able to write programme for Simple statistical analyse and interpret through R-programming.

EMT 304: APPLIED ECONOMETRICS

The main aim of the Applied Econometrics, problem solving through the application of appropriate economic theories, principles, and the econometric analysis of data. Ability to synthesize ideas, theories and data in developing solutions to economics problems. Ethical approaches to research and practice.

Course Objectives

The objective of this course is to provide the basic knowledge of an advanced theoretical understanding of consumer behaviour and decision-making. To develop a theoretical understanding of strategic behaviour of economic agents.

- The course discovers demand analysis; demand functions (single equation), Engel Functions and curves.
- The course covered Consumer analysis and production analysis which is more important in economic ground.
- This course can explore Macro econometric models; Klein-Goldberger Model for USA, Agarwal, K. Krishna Murthy and N.V. A. Narasimhan Models.
- This course covered Applications of Single and Simultaneous Equation Models; Models of Money Demand and Supply, Application in Industrial Organization, Labour Economics and Health Systems.

Unit 1: Demand Analysis

Demand functions – Restrictions to be satisfied by Demand functions - Single Equation models, Engel Functions and Curves, Specification of Functional forms and Estimation – Linear Expenditure System - Review of Empirical Studies.

Unit 2: Consumption Function

Theories of Consumption Function – Alternative specifications – Absolute Income Hypothesis, Relative Income Hypothesis, Life Cycle Hypothesis, Permanent Income Hypothesis – Problems of Estimating the Consumption Function – Review of some empirical studies.

Unit 3: Production Functions

Single Equation Estimation of production functions - Cobb-Douglas, CES, Translog – Specifications and Estimation issues – Review of Empirical studies – Functional forms and Estimation of Cost Functions - Estimation of Factor demand Equations - Empirical Studies.

Unit 4: Macro Econometric Models

Nature of Simultaneous Macro Econometric Models – Klein-Goldberger Model for USA - Brookings Model – Macro Econometric models for India – Agarwal, K. Krishna Murthy and N.V. A. Narasimhan Models.

Unit 5: Other Applications of Single and Simultaneous Equation Models

Models of Money Demand and Supply – Estimation of Demand for Money Function – Application in Industrial Organization, Labour Economics and Health Systems – Review of Empirical Studies.

TEXT AND REFERENCE BOOKS:

1. Intriligator, M. D. (1978) *Econometric Models, Techniques and Applications*, North-Holland.
2. ICSSR Survey of Economics – Vol.7 (Econometrics) Allied Publishers
3. Deaton A. and John Muellbauer, *Economics and Consumer Behaviour* –Cambridge University Press, 1987
4. Killingsworth Mark R.- *Labour Supply*, Cambridge University Press 1985
5. MeghnadJ.Desai 1973 – *Macro-economic models for India: A Survey* – Sankhya series-B 85 – PP 169-205

Learning Outcomes

- On successful completion of the course, a student will be able to develop a sound understanding of the core microeconomic concepts that economists use to understand the process of decision-making by an economic agent(s).
- The student should be able to apply mathematical tools and techniques to study behaviour of economic agents. Besides students will be able to identify strategic behaviour of economic agents and formulate them in a game theoretic framework.
- They will be able to identify and analyse strategic interactions and explain negotiation and exchange between economic agents in game theory models.

Generic Elective – 2

EMT 305: PUBLIC FINANCE

The objectives of public finance are achieved by managing and drafting policies pertaining to key areas such as taxation, management of public revenue and expenditure, raising and servicing public debt, fiscal administration at various levels. Public Finance deals with the financial activities of government concerning revenue, expenditure and debt operations and their effects on the economy. It tries to analyze the impacts of these financial activities of government on individuals and corporate bodies.

Course Objectives

The objective of this course is to provide the basic knowledge of public finance and relationship with other Sciences, principles of public finance; difference between Public and Private Expenditure, reasons for growth of Public Expenditure, effects of Public Expenditure, controls and accountability of Public expenditure in India; sources of Public Revenue, principle of public revenue, characteristics of Good Tax system in India, taxable Capacity, classification of Public Debt, causes of public debt - public debt Management and public Debt in India; and budgetary deficit and Fiscal deficit, functions of Finance Commission.

Unit 1: Scope and Structure of Public Finance

Nature, Scope and Importance of Public Finance - Public Finance and relationship with other Sciences - Distinction between Public and Private Finance - Principles of Public Finance - Principle of Opportunity Cost in Public Finance - Theory of Public Goods and Merit Goods - Role of Public Finance in Developing Economies and Underdeveloped Countries.

Unit 2: Public Expenditure

Introduction - Difference between Public and Private Expenditure - Reasons for growth of Public Expenditure - Classification and Canons of Public Expenditure - Effects of Public Expenditure - Wagner's Law of Increasing State Activities - Peacock and Wiseman Hypothesis - Controls and Accountability of Public expenditure in India

Unit 3: Public Revenue and Taxation

Sources of Public Revenue - Classification of Public Revenue - Principle of Public Revenue - Effects and significance of Public Revenue - Characteristics of Good Tax system in India - Canon of Taxation - Classification of Taxation - Benefit (Modern) theories of Taxation - Ability to Pay Theory - Taxable Capacity - Value Added Taxation (VAT) and GST Principle and Issues – Indian Tax Structure – Incidence and Effects of Taxation.

Unit 4: Public Debt

Classification of Public Debt - Causes of Public Debt - Objectives of Public Debt - Effects of Public Debt - Burden of Public Debt - Public debt Management - Public Debt in India.

Unit 5: Budget and Federal Fiscal Systems

Introduction – Definitions of Primary deficit, Revenue deficit, Budgetary deficit and Fiscal deficit - Budget classification - Zero Base Budgeting - Fiscal Deficit and Budgetary Deficit in India – FRBM -

Centre-State Financial relations in India –Functions of Finance Commission - Recommendations of 13th and 14th Finance Commissions.

TEXT AND REFERENCE BOOKS:

1. B.P.Tyagi, Public Finance, Jai Prakash & Company, Meerut, 2008.
2. Bhargava .R.N, the Theory and Practice of Union Finance in India, Chaitanya Publishers, Allahabad, 1998.
3. Dalton.H, Principle of Public Finance, Allied Publishers, Bombay, 1992.
4. Dwevedi.P.N, Reading in Indian Public Finance, Chanakya Publications, New Delhi, 2006.
5. Lakadawala.D.T, Union State Financial Relations, Lalwani Publishers House, Mumbai, 1986.
6. Mathew.T, Tax Policy, Some Aspects of Theory and Policy, Chanakya Publications, New Delhi, 2001.
7. Mundle.Sudipto.(ed), Public Finance, Policy Issues for India, Oxford University, Press, 1999.
8. Musgave.R.A, The Theory of Public Finance- A Study of Public Finance, McGraw hill company, Tokyo, 1999.
9. R.K.Lekhi, Public Finance, Kalyani Publishers, New Delhi, 2007.

Learning Outcomes

Public finance is the study of the role of the government in the economy. It is the branch of economics that assesses the government revenue and government expenditure of the public authorities and the adjustment of one or the other to achieve desirable effects and avoid undesirable ones. reasons for growth of Public Expenditure, accountability of Public expenditure in India, sources of Public Revenue, principle of public revenue, characteristics of Good Tax system in India, taxable Capacity, classification of Public Debt, causes of public debt - public debt Management and public Debt in India; and budgetary deficit and Fiscal deficit, functions of Finance Commission.

Generic Elective – 3

EMT 306: ECONOMICS OF DEVELOPMENT AND PLANNING

The six major objectives of planning in India, i.e., (a) Economic Growth, (b) Attaining Economic Equality and Social Justice, (c) Achieving Full Employment, (d) Attaining Economic Self-Reliance, (e) Modernization of Various Sectors, and (f) Redressing Imbalances in the Economy. The aim of economic development is to improve the material standards of living by raising the absolute level of per capita incomes. Raising per capita incomes is also a stated objective of policy of the governments of all developing countries.

Course Objectives

An economic development plan helps you realize your community's economic vision and take control of your economic future. The course objectives are concepts and Measurement of Economic Growth and Development, Growth and Development, Domestic Factors in Economic Development, Trade and Development and lastly planning Techniques and Planning in India. The economic development plan provides a comprehensive overview of the economy, sets policy direction for economic growth, and identifies strategies, programs, and projects to improve the economy.

Unit 1: Concepts and Measurement of Economic Growth and Development

Economics of Development and Growth - Problems and Causes of Underdevelopment and Development - Factors of Economic Growth - Obstacles to Economic Development - Vicious Circle of Poverty - Characteristics of Modern Economic Growth - Measures of Economic Growth and Economic Development, HDI and PQLI.

Unit 2: Theories of Growth and Development

Classical, Karl Marx and Schumpeter - Joan Robinson Golden Age model, Harrod-Domar model, Rostow Stages of Growth - Lewis theory of Surplus Labour - Rodan's Big Push theory - Nurkse Balanced Growth theory - Hirschman's Unbalanced theory – Ranis - Fei Model – Dependency Theory of Development.

Unit 3: Domestic Factors in Economic Development

Capital Formation and Economic Development- Role of Agriculture and Industry in Economic Development – Population Growth and Economic Development - Human Capital Formation and Man Power Planning – Entrepreneurship in Economic Development – Role of Technology in Economic Development.

Unit 4: Trade and Development

Role of Foreign Trade in Economic Development – Trade as an Engine of Economic Growth - Two Gap Model – Objectives and Role of Monetary and Fiscal Policies in Economic Development - Commercial Policy and Economic Development - Price Policy and Economic Development.

Unit 5: Planning Techniques and Planning in India

Capital-Output Ratio - The Choice of Techniques and Appropriate Technology - Investment Criteria – Elements of Cost-Benefit Analysis - Poverty, Unemployment and Economic Inequalities in India – Role of Public Sector in India - Role of Foreign Aid and Foreign Capital in India.

TEXT AND REFERENCE BOOKS:

1. Kindleberger.C.P, Economic Development, Mc Graw Hill Company, New York, 1988.
2. Lewis.W.A, The Theory of Economic Growth, George Allen and Unwin, London, 1998.
3. Michel.P.Todero & Stephen C.Smith, Economic Development, Pearson Education (Singapore) Limited, New Delhi, 1998.
4. S.K.Misra and V.K. Puri, Economics of Development and Planning, Himalaya Publishing House, New Delhi, 2006.
5. Solow.R.M, Growth Theory: An Exposition, Oxford University Press, New York, 2000.

Learning Outcomes

When planning for economic development, the goal is to create and maintain a strong, vibrant local economy. The economic development plan provides a comprehensive overview of the economy, sets policy direction for economic growth, and identifies strategies, programs, and projects to improve the economy. The aim of economic development is to improve the material standards of living by raising the absolute level of per capita incomes. Raising per capita incomes is also a stated objective of policy of the governments of all developing countries. One of the most important functions of economic planning is to achieve consistency among different economic objectives. Some desirable goals are likely to conflict with others. Development planning objectives overall objective of a development plan is to encourage continuous learning, performance improvement and personal growth, but it also has other, more specific objectives, namely to improve employees' performance in their current jobs. Five basic stages are traditional society, preconditions for take-off, take-off, drive to maturity, and age of high mass consumption), there exists no clear definition for the stages of economic development.

Generic Elective – 4

EMT 307: FINANCIAL INSTITUTIONS AND MARKETS

Buyers and sellers compete for the best price determined through supply and demand. This exchange makes it possible for companies from the United States and around the world to raise funds, while enabling millions of investors to profit from their growth. Role of Financial Institution in Financial Markets. Financial Institution is an entity of the financial system that facilitates the flow of money from savers to borrowers. Financial Institutions are known for offering a wide range of financial services that are more than useful to businesses and consumers alike.

Course Objectives

All however, share the following goals and objectives: to reduce global poverty and improve people's living conditions and standards; structure of financial system, financial system and economic development; instruments of money market, commercial Bills, market for commercial papers, discount and finance house of India (DFHI); Government Securities Market and Long Market, Objectives, Functions and performance of Securities and Exchange Board of India (SEBI), Bombay Stock Exchange (BSE), Objectives and Functions of Commercial Banks, Functions and Performance of Industrial Finance Corporation of India (IFCI), Small Industrial Development Bank of India, Mutual Funds, Performance of Life Insurance Corporation (LIC), Unit Trust of India (UTI), advantages and Disadvantages of Foreign Capital.

Unit 1: Financial System

Evolution of Financial System – Structure of Financial System – Functions of Financial System – Financial System and Economic Development.

Unit 2: Money Market

Features of Money Market – Instruments of Money Market: Call Money Market – Treasury Bills Market – Commercial Bills – Market for Commercial Papers – Certificate of Deposits – Discount and Finance House of India (DFHI) – Securities Trading Corporation of India (STCI) – Deficiencies and Recent Developments in Indian Money Market.

Unit 3: Capital Market

Industrial Securities Market: Primary and Secondary Markets – Government Securities Market and Long Market – Objectives, Functions and performance of Securities and Exchange Board of India (SEBI) – Over the Counter Exchange of India (OCTCEI) – Functions of Stock Exchanges – Bombay Stock Exchange (BSE) – National Stock Exchange (NSE) – Reforms in Capital Market.

Unit 4: Banking and Financial Institutions

Banking: Central Banking: Objectives and Functions - Commercial Banks, Functions and Growth - Process of Credit Creation – Growth and Control of Non-banking Financial Institutions - Functions and Performance of Industrial Finance Corporation of India (IFCI) – Industrial Development Bank of India (IDBI) – Industrial Credit and Investment Corporation of India (ICICI) – Small Industrial Development Bank of India (SIDBI) – State Financial Corporations (SFCs) – Mutual Funds.

Unit 5: Investment Institutions and Foreign Capital

Functions and Performance of Life Insurance Corporation (LIC) – General Insurance Corporation (GIC) and Unit Trust of India (UTI) – Forms of Foreign Capital – International Financial Instruments – Trends in Foreign Capital Inflows to India – Advantages and Disadvantages of Foreign Capital.

TEXT AND REFERENCE BOOKS:

1. M.Y. Khan, Indian Financial System, Tata Mc Graw Hill, New Delhi.
2. L.M.Bhole, Financial Institutions and Markets, Tata Mc Graw Hill, New Delhi.
3. V.A.Avadhani, Indian Capital Market, Himalaya Publishing House, Bombay.
4. H.R.Machiraju, International Financial Markets and India, Wheeler Publishing Company, New Delhi.
5. Vasant Desai, Indian Financial System, Himalaya Publications, Bombay.
6. Peter.S. Rose, Money and Capital Market: Financial Institutions and Instruments, Tata McGraw Hill, London.
7. S.C.Kuchal, Corporation Finance, Chaitanya Publishing, Allahabad.
8. S.L.N.Sinha, Capital Market in India, Vora & Co, Bombay.
9. Hendrik.S. Houthakker, The Economics of Financial Markets, Oxford University Press, New Delhi.

Learning Outcomes

All however, share the following goals and objectives: to reduce global poverty and improve people's living conditions and standards; structure of financial system, financial system and economic development; instruments of money market, commercial Bills, market for commercial papers, Securities and Exchange Board of India (SEBI), Bombay Stock Exchange (BSE), Commercial Banks, Functions Industrial Finance Corporation of India (IFCI), Life Insurance Corporation (LIC) Unit Trust of India (UTI) and Foreign Capital. A financial system densely interconnected network of financial intermediaries, facilitators, and markets that allocates capital, shares risks, and facilitates intertemporal trade. Is a densely interconnected network of intermediaries, facilitators, and markets that serves three major purposes: allocating capital. The Financial system helps efficiently direct the flow of savings and investments in the economy. Here financial institutions like banks play a major role. ... These savings are then channelized by the banks to provide credit to different business entities, which are involved in production and distribution.

Open Elective-1:
EMT 308: INTRODUCTION TO ECONOMETRICS

Ragnar Frisch, along with Jan Tinbergen, pioneered development of mathematical formulations of economics. He coined the term econometrics for studies in which he used statistical methods to describe economic systems. Econometrics is the use of statistical methods using quantitative data to develop theories or test existing hypotheses in economics or finance. Econometrics relies on techniques such as regression models and null hypothesis testing. Econometrics can also be used to try to forecast future economic or financial trends. By taking this introduction to econometrics you will gain an overview of what econometrics is about, and develop some “intuition” about how economic things work.

Course Objectives

The objective of this course is to provide the basic knowledge of econometrics that is essential equipment for any serious economist or social scientist, to a level where the participant would be competent to continue with the study of the subject in a Master’s programme.

- ✓ This course is designed to define Econometrics, Steps in Empirical Economic Analysis, Different types of data involved in econometric Analysis.
- ✓ The courses involved Simple and Multiple Linear regression model and Functional forms of Non-Linear Regression models.
- ✓ Basic concept of Auto regressive distributed lag model (ARDL) developed which will be helpful for future research work with time series data.

Unit 1: Nature of Econometrics and Economic Data

Definition of Econometrics – Steps in Empirical Economic Analysis - Econometric Model – The Role of Measurement in Economics – The Structure of Economic Data: Cross-Sectional data, Time Series data, Pooled Cross Section data, Panel Data.

Unit 2: Simple Regression Model

Two Variable Linear Regression Model: Assumptions, Estimation of Parameters, Tests of Significance and Properties of Estimators – Functional forms of Regression models – Log-linear models, Semi log- models and Reciprocal models – Choice of Functional Form.

Unit 3: The General Linear Model

Review of Assumptions, Estimation and Properties of Estimators: Un-biasness, BLUEs and Tests of significance of estimates – Analysis of Variance - **Dummy variables** - Nature of Dummy variables – Use of Dummy Variables – Errors in Variables and its consequences.

Unit 4: Auto-regressive and Distributed Lag Models

Introduction – Types of Lag schemes - Koyck’s lag model, Almon’s Lag scheme, Partial Adjustment and Expectations models - Causality in Economics – The Granger Causality Test.

Unit 5: Simultaneous Equation Models

Specification – Simultaneous Bias – Inconsistency of OLS Estimators - The concept of Identification, Rank and Order conditions for Identification – Indirect Least Squares - Two stage Least Squares (without proof), Problems.

TEXT AND REFERENCE BOOKS:

1. Johnston,J: Econometric Methods, McGraw-Hill Book Co., New York.
2. Maddala, G.S: Econometrics, McGraw-Hill Book Co., New York, 3rd Rd.
3. Gujarathi, D.N: Basic Econometrics, Fourth Edition, Tata McGraw-Hill, New Delhi.
4. Tintner,G: Econometrics, John Wiley & Sons, New York.
5. Wooldridge, Jeffery M: Econometrics, Cengage Learning India Pvt. Ltd, New Delhi.

Learning Outcomes

After successfully completing the course Introduction to Econometrics the graduate is able to:

At the end of the programme, the students will have adequate competency in the frontier areas of economic theory and methods. Formulation and estimation of a multiple regression model. Decision about the statistical significance of individual explanatory variable and also over all model. Impacts for the violation of one of the important assumptions for application of OLS regression. The students will acquire additional specialization topics are estimation of system of equations, estimation of panel data models, generalized method of moments, discrete response models, censored regression models and estimation of average treatment effects.

Open Elective - 2
EMT 309: INDIAN ECONOMY

Indian economy is termed as the developing economy of the world. Some features like low per capita income, higher population below poverty line, poor infrastructure, agriculture based economy and lower rate of capital formation, tagged it as a developing economy in the world. Today, India is considered a mixed economy: the private and public-sectors co-exist and the country leverages international trade. India, as a developing country, features a mixed economy in the world. The major characteristics of developing economy are low per capita income, overpopulation, maximum population below the poverty line, poor infrastructure, agro-based economy and a lower rate of capital formation. The secondary sector is the backbone of the Indian economy. There is a promising future for this sector with more development and growth in the coming years. The Tertiary sector is similar to the secondary sector in terms that it too adds to the value of the products.

Course Objectives

The objective of this course is to provide the basic knowledge of Indian economy Structure of the Indian Economy, Agricultural Sector, Industrial Sector, Tertiary and Foreign Sectors and Planning and Development of the Indian economy that is with the study of the subject in a Master's programme.

Unit 1: Structure of the Indian Economy

Indian Economy on the Eve of Independence- Basic Characteristics of the Indian Economy as Developing Economy - Major issues of Development in Indian Economy- Growth and Structural Changes in the Indian Economy - Population- Poverty – Measurement of Poverty, Anti Poverty Programmes - Inequality- Natural Resources - Infrastructure- Human Development in India-Prices, Price Policy and Economic Growth - Balanced Regional Development - Unemployment in India.

Unit 2: Agricultural Sector

Role Agriculture in Indian Economy - Share of Agriculture - Interrelationship between Agriculture and Industry – Land Tenure System - Farm Size and Productivity - Institutional and Technological Aspects - New Agricultural Policy - Food Security in India - Rural Credit - Agricultural Marketing - Regional Disparities in Indian Agriculture - Irrigation and other Agricultural Inputs.

Unit 3: Industrial Sector

Industrial Structure and Economic Growth - Large and MSMEs - Industrial Labour Problems and Labour Policy - Industrial Sickness Causes and Remedial Measures - Economic Reforms

and Industrial Growth - Pattern of Industrialization - Public and Private Industrial Finance in India - Unorganized Sector and Informalisation of the Indian Economy.

Unit 4: Tertiary and Foreign Sectors

Service Sector - Role, Growth and Structure of Service Sector in India – Growth, Composition and Direction of India's Foreign Trade – Trade Policy and its Reforms in India – India's Balance of Payments - WTO and Indian Economy.

Unit 5: Planning and Development

Objectives and Strategy of Planning - Public Sector and Indian Planning- Re-Organization of Planning Commission (NITI Aayog) - Privatization and Globalization and its impact on India - Government Subsidies in India - Problems of Capital Formation - Foreign Capital, Foreign aid and Economic Development in India.

TEXT AND REFERENCE BOOKS:

1. Ghosh. Alak, Indian Economy – Its Nature and Problems, A New Look Indian Economics, Calcutta, The World Press Private Limited, 1989.
2. Jalan.B, The Indian Economy Problems and Prospects, Viking Publications, New Delhi, 2006.
3. Ruddar Datt and Sundaram. K.P.M, S.Chand and Company, New Delhi, 2008.
4. S.K.Misra and V.K. Puri, Indian Economy, Himalaya Publishing House, New Delhi, 2006.
5. Sen R.K and B.Chatterjee, Indian Economy-Agenda for 21st Century, Deep and Deep Publications, New Delhi, 2001.
6. Uma Kapila, Indian Economy Since Independence, Agricola Publications Academy, New Delhi, 1998.

Learning Outcomes

After successfully completing the course Indian economy the graduate is able to:

At the end of the programme, the students will have knowledge of structure of the Indian Economy, Agricultural Sector, Industrial Sector, Tertiary and Foreign Sectors and Planning and Development of the Indian economy that is with the study of the subject in a Master's programme. Here we detail about the six major objectives of planning in India, i.e., (a) Economic Growth, (b) Attaining Economic Equality and Social Justice, (c) Achieving Full Employment, (d) Attaining Economic Self-Reliance, (e) Modernisation of Various Sectors, and (f) Redressing Imbalances in the Economy. The objectives of industrial policy were: a high growth rate, national self-reliance, reduction of foreign dominance, building up of indigenous capacity, encouraging small scale industry, bringing about balanced regional development, prevention of concentration of economic power, reduction of income inequalities.

Open Elective - 3

EMT 310: ECONOMICS OF INSURANCE

Insurance is one of the main and important fields of the economy. The main aim of the insurance is to protect people from risks and from dangers. As we know in modern period there are too many accidents, bad events and unexpected dangers. People always think about this problem, how to escape from these risks. Insurance generates significant impact on the economy by mobilizing domestic savings. ... Insurance enables to mitigate loss, financial stability and promotes trade and commerce activities those results into economic growth and development. Thus, insurance plays a crucial role in sustainable growth of an economy. Insurance turn accumulated capital into productive investments. Insurance also enables mitigation of losses, financial stability and promotes trade and commerce activities those results into sustainable economic growth and development. Thus, insurance plays a crucial role in the sustainable growth of an economy. The function of insurance is to safeguard against financial loss by having the "losses of the few" paid by "contributions of the many" that are exposed to the same risk. Insurance companies invest premium dollars collected annually in a wide range of investments.

Course Objectives

Generally, households or firms with insurance make regular payments, called premiums. The insurance company prices these premiums based on the probability of certain events occurring among a pool of people. Members of the group who then suffer a specified bad experience receive payments from this pool of money. The objective of this course is to provide the basic knowledge of Economics of Insurance, Element of Risk and Risk Management, Life and Health Insurance, Risk and Insurance, General and Other Types of Insurance and Regulation of Insurance are explained.

Unit 1: Element of Risk and Risk Management

Fundamental of Risk and Uncertainty – Classification of Risk – Risk Pooling and Risk Transfer - Concept of Risk Management – Essentials and Elements of Risk Management – Risk Assessment and Risk Control.

Unit 2: Risk and Insurance

Definition of Insurance – Role and Functions of Insurance – General and Specific Principles of Insurance Contract – Insurance and Economic Development – Insurance as Financial Intermediaries and Investment Institutions – Classification of Insurance - The Concept of Re-insurance.

Unit 3: Life and Health Insurance

Fundamental Principles of Life and Health Insurances – Functions of Life and Health Insurances – Plans of Life and Health Insurance – The Process of Underwriting Life and Health Insurance- Group Insurance

Unit 4: General and Other Types of Insurance

Definition of General Insurance – Marine, Motor Vehicular, Fire and other types of Insurances –Physical and Moral Hazards in General Insurance – The General Insurance Corporation (GIC Re) and General Insurance Companies, NOUN – Growth of General Insurance business in India.

Unit 5: Regulation of Insurance

Organization and Growth of LIC - Monopoly of LIC - Need for Insurance Regulation in India - Functions and Duties of Insurance Regulation and Development Authority (IRDA) of India — Entry of Private and Foreign Insurance Companies – Implications – Prospects of Insurance Companies.

TEXT AND REFERENCE BOOKS:

1. Misra, M. N. and V. K. Puri, (2008), Insurance Principles and Practice, New Delhi: S. Chand.
2. Periasamy, P. (2007), Principles and Practice of Insurance, Mumbai: Himalaya Publishing House.
3. Palande, P. S., Shah, R. S. and Lunawal, M. L. (1983), Insurance in India, Changing Policies and Emerging Opportunities, New Delhi: Response Books, A Division of Sage Publications.
4. Bhole, L. M. (1990), The Indian Financial System, New Delhi: Tata McGraw Hill.
5. Black, K. Jr. and H. D. (2000), Life and Health Insurance, New Jersey: Prentice Hall.
6. Bailey, R. (1999), Underwriting and Life and Insurance, Atlanta: LOMA.
7. Bickelhaupt, D. L. (1992), General Insurance, Burr Bridge: Irwin Inc.
8. Hedad, G. L. AND Horn I. I. (1991), Essentials of Risk Management, Vol. I Insurance Institute of America.

Learning Outcomes

After successfully completing the course Economics of Insurance the graduate is able to:

Generally, households or firms with insurance make regular payments, called premiums. The insurance company prices these premiums based on the probability of certain events occurring among a pool of people. Members of the group who then suffer a specified bad experience receive payments from this pool of money. Insurance generates significant impact

on the economy by mobilizing domestic savings. Insurance enables to mitigate loss, financial stability and promotes trade and commerce activities those results into economic growth and development. Thus, insurance plays a crucial role in sustainable growth of an economy. Insurance is an instrument of social policy. By providing significant social benefits, such as compensation for injuries at work and rebuilding property after catastrophes, insurance contributes to the rebuilding of people's livelihoods, as well as to the economy as a whole. Its aim is to reduce financial uncertainty and make accidental loss manageable. It does this substituting payment of a small, known fee—an insurance premium—to a professional insurer in exchange for the assumption of the risk a large loss, and a promise to pay in the event of such a loss
