



Centre for Development Studies

**M.A. Applied Economics
Syllabus**

Centre for Development Studies

Prasanth Nagar, Ulloor

Thiruvananthapuram - 695 011

Kerala, India.

www.cds.edu

Introduction

MA (Applied Economics) in CDS is a unique master's programme in economics that aims at providing a rigorous training in theory, tools and methods for applied economic analysis, with a special focus on issues of economic development. The degree is awarded by Jawaharlal Nehru University (New Delhi).

MA students will be part of a vibrant research community at CDS, comprising of faculty, research scholars and visitors, working on various facets of development within an inter-disciplinary framework. Trained as applied economists, students are expected to be well prepared for careers in academia, government, national and international development agencies, research institutions, the corporate sector and the media.

List of Courses

Core Courses		Credits
AE 101 Fundamentals of Microeconomic Theory		4
AE 102 Fundamentals of Macroeconomic Theory		4
AE 103 Mathematical Methods		4
AE 104 Statistics		4
AE 105 Econometric Methods		4
AE 106 Economic Development		4
AE 107 International Economics		4
AE 108 Indian Economic Development		4
AE 208 Project		4
Optional Courses*		
AE 201 Public Economics		4
AE 202 Industrial Organisation		4
AE 203 Topics in Trade and Development		4
AE 204 Economics of Technology and Innovation		4
AE 205 Population and Development		4
AE 206 History of Economic Thought		4
AE 207 Economic History of Modern India		4
AE 209 Environment and Sustainable Development		4
AE 210 Gender and Development		4
AE 211 Labour and Development		4
AE 212 Law, Economics and Development		4
AE 213 Issues in Indian Agriculture		4
AE 214 Issues in Indian Industry		4
AE 215 Political Economy, Development and Governance		4
AE 216 Economics of Project Evaluation		4
AE 217 Behavioural Economics		4
AE218 Macroeconomic Stabilization in Open Economies		4
AE219 Financial Programming		4

*Not all optional courses will be offered every year.

AE101: Fundamentals of Microeconomic Theory

The objective of this course is to introduce students to basic concepts, theories and methods in microeconomics.

Course Outline

1. Choice (Consumer Behaviour and Uncertainty)
2. Theory of the Firm (production, cost)
3. Competitive Markets and Monopoly
4. Market Structure (Cournot, Bertrand and Stackelberg) with an introduction to Game Theory
5. General Equilibrium, Welfare Theorems and Social Welfare functions.
6. Information Economics (Moral Hazard and Adverse Selection)

Readings

1. Varian, Hal R. (1992) *Microeconomic Analysis*, W.W Norton & Company, New York.
2. Geoffrey A. Jehle and Philip J. Reny, (2011) *Advanced Microeconomic Theory* 3rd Edition, Prentice Hall.
3. David M. Kreps, (1990) *A Course in Microeconomic Theory*, Princeton University Press.

AE102: Fundamentals of Macroeconomic Theory

This is a graduate level foundations course on Macroeconomic theory.

1 What is Macroeconomics?

Subject matter of macroeconomics, National Income Accounting, Macroeconomic identities, Overview of data on broad empirical patterns

2 Classical Macroeconomics

Classical Dichotomy, Quantity Theory of Money, Great deflation, Origins of modern macroeconomics

3 Keynesian Macroeconomics

Say's law, Loanable funds vs. liquidity preferences, Effective demand, Role of Investment, Keynes-Kahn Multiplier, Output determination, Paradox of thrift, Role for stabilization policy

4 Neoclassical Synthesis

IS-LM model, Aggregate supply and aggregate demand, Phillips curve, Adaptive expectations, Stagflation, Lucas critique

5 Money, Inflation and Monetary Policy

Functions of Money, Determination of price level and Interest rates, Monetarist view (Friedman), Monetary Policy, Instruments and Targets, Stable Monetary Rules, Inflation dynamics, Endogenous Money

6 New Classical Macroeconomics

Micro foundations, Neoclassical (optimal) Growth models, OLG Model, Lucas supply curve, Rational Expectations, Policy Ineffectiveness proposition, Dynamic Inconsistency, New Keynesian viewpoint, Nominal rigidities, Dynamic Stochastic General Equilibrium Model

7 Unemployment

Classical vs. Keynesian Unemployment, Natural rate hypothesis, Efficiency wage models, Search and matching in labour market

8 Business Cycles

Measurement, Endogenous theories (Hicks, Goodwin, Kaldor), Exogenous theories - Real Business Cycle theories, Financial cycles (Minsky), Growth cycles

9 Budget Deficits and Macroeconomic Policy

Debt dynamics, Domar instability condition, Ricardian Equivalence, Monetisation of the debt, Contemporary Macroeconomic debates in India and the world

Suggested Readings

Books (Selected chapters)

- Romer, David (2006), *Advanced Macroeconomics*, McGraw-Hill/Irwin, NY, 3rd edition.
- Keynes, John Maynard (1936), *The General Theory of Employment, Interest and Money*, Macmillan and Co., Limited, London.
- Taylor, Lance (2004) *Reconstructing Macroeconomics - Structuralist Proposals and Critiques of the Mainstream*, Harvard University Press, Cambridge, Massachusetts.
- Heijdra, B.J. and F. van der Ploeg (2002), *Foundations of Modern Macroeconomics*, Oxford University Press, UK.

- Ljungqvist, L and Thomas J Sargent (2000), *Recursive Macroeconomic Theory*, The MIT Press, Cambridge, Massachusetts.
- Phelps, E. (1990), *Seven Schools of Macroeconomic Thought*, Oxford University Press, Oxford

Papers / Chapters

- Friedman, M. (1948), A Monetary And Fiscal Framework For Economic Stability, *American Economic Review*, 38, 245?64.
- Friedman, M. (1968), The Role of Monetary Policy, *American Economic Review*, 58, 1?17.
- Goodwin, R. (1951), The Nonlinear Accelerator and the Persistence of Business Cycles, *Econometrica*, Vol.19, No. 1, (Jan., 1951), 1?17.
- Goodwin, R. (1967), Socialism, Capitalism and Economic Growth: Essays Presented to Maurice Dobb, Chapter A *Growth Cycle*, pp. 54?58. Cambridge University Press, Cambridge.
- Hicks, J. R. (1937), Mr. Keynes and the Classics ? A Suggested Interpretation, *Econometrica*, v. 5 (April): 147?159
- Kydland, F. E and Prescott, E. C. (1977), Rules rather than discretion: the inconsistency of optimal plans, *Journal of Political Economy*, vol. 85, no 3, 473?92
- Kydland, F. E. and Prescott, E. C. (1982), Time to build and aggregate fluctuations, *Econometrica*, vol. 50, no. 6, 1345?69
- Lucas, R. E., and Sargent, T. J. (1981), After Keynesian macroeconomics, pp. 295?319 in *Rational Expectations and Econometric Practice*, London, George Allen & Unwin
- Prescott, Edward C (2004b), *The Transformation of Macroeconomic Policy and Research*, Nobel Prize Lecture, December, 8; pp. 24.

AE103: Mathematical Methods

This course offers a rigorous training in basic mathematical methods, essential for studying the modern economics literature. The importance of the use of mathematics in economic analysis will be captured by way of illustrations of all mathematical methods introduced in this course with relevant economic applications.

Course Outline

1. Introductory Concepts: Mathematical logic and Set Theory
2. Real Linear Algebra
3. Real Analysis;
4. Static Optimization
5. Differential Equations, Dynamic System and Dynamic Optimization

Suggested Readings

- Patrick Suppes, Introduction to Logic
- Anjan Mukherji and Subrata Guha, Mathematical Methods and Economic Theory
- A.H. Smith and W. A. Albrecht Fundamental Concepts of Analysis
- C.P.Simon and L.E. Blume, Mathematics for Economists
- Gilbert Strang, Linear Algebra and its Application
- R.K.Sundaram, A first course in Optimization Theory

- M. Hoy, J. Livernois, C. McKenna, R. Rees, T. Stengos Mathematics for Economics
- A.C. Chiang, Elements of Dynamic Optimization
- Kamien and N.I.Schwartz, Dynamic Optimization Calculus of Variations and Optimal Control in Economics and Management

AE104: Statistics

This course offers an introduction to the theory and application of basic statistical and econometric analysis. Students will also apply the techniques learned in this course using Stata/PcGive/E-views. The course is structured in 40 hours of lectures plus tutorials over 14 weeks of a semester.

Course Outline

- **Introduction:** Recapitulating descriptive statistics.
- **Probability theory:** random variables; standard and sampling distributions; law of large numbers.
- **Statistical Inference:** Theory of estimation; Properties of estimators; Methods of estimation: least square method, method of moments and maximum likelihood; Tests of Significance: parametric and nonparametric methods.
- **Bivariate distributions:** Contingency tables, joint and conditional distributions, conditional mean and variance, Analysis of variance; Analysis of Covariance.
- **The classical linear regression model** Ordinary Least Squares (OLS): Estimation and Inference: simple and multiple regression models; Functional forms and structural change; Non-linear regression; Growth rates; Dummy variable regressors.
- **Generalised Least Squares:** Violations of OLS assumptions; Misspecification test.

Suggested Readings

- Hamilton, Lawrence C. (1990) *Modern Data Analysis: A First Course in Applied Statistics*, Brooks/Cole, California.
- Marsh, Catherine (2009) *Exploring Data: An Introduction to Data Analysis for Social Scientists*, Polity Press, UK, Second Edition
- Stock, James H., and Mark W. Watson (2006): *Introduction to Econometrics*, Second Edition, (Addison-Wesley Series in Economics).
- Wooldridge, Jeffrey M. (2003): *Introductory Econometrics: A Modern Approach*, Second Edition, Thomson South Western, USA.
- De Groot, Morris H. and Schervish, Mark J.: *Probability and Statistics*
- Hogg ;and Craig: *Mathematical Statistics*

AE105: Econometric Methods

Course Objectives

This course introduces students to advanced econometric methods that are commonly used in applied economic analysis. This course places particular emphasis on application and interpretation of these methods and therefore the lecture sessions will include a number of illustrations of empirical econometric studies.

Course Outline

- **Systems of Equations:** Seemingly unrelated regression (SUR) model; Recursive equation system; Simultaneous equation model; Identification; Estimation.
- **Multivariate analysis:** Discriminant analysis; Factor Analysis/Principal Component Analysis, Multi-Dimensional Scaling, Cluster Analysis.
- **Models with Limited Dependent and Qualitative Variables:** Binary choice models - linear probability model, probit, and logit models; Multi response models - multinomial logit and ordered probit models; Truncated and Censored regressions: Tobit model.
- **Time Series Analysis:** Stationarity; Autocorrelations and Partial Autocorrelation Functions; Unit roots and Units roots tests; ARIMA modelling; ARCH/GARCH models; VAR models; Cointegration: Engle-Granger and Johansen procedures; ARDL model.
- **Models for Panel Data:** Fixed Effects and Random Effects method; Dynamic Panel Data models.

Suggested Readings

- Baltagi, B. H. (2008) *Econometric Analysis of Panel Data*, 4th edition, John Wiley.
- Enders, Walter (2009), *Applied Econometric Time Series*, 3rd Edition, Wiley
- Everitt, Brian S and Dunn, Graham. (2001). *Applied Multivariate Data Analysis*. Second Edition. Arnold.
- Greene, W. (2008), *Econometrics Analysis*, Pearson
- Johnston, J. and John DiNardo, (1997): *Econometric Methods*, 4th Edition, McGraw-Hill Companies, Inc., London
- Wooldridge, Jeffrey M. (2003): *Introductory Econometrics: A Modern Approach*, Second Edition, Thomson South Western, USA.

AE106: Economic Development

The objective of this course is to provide a comprehensive introduction to the theoretical paradigms of economic development. By its very nature, the scope is interdisciplinary in nature, incorporating non-economic dimensions like culture, norms and values as well as political, historical and social processes. The discourse, however, is essentially based on the logic and theoretical framework of standard economic analysis.

Course Outline

1 Introduction

- Concept and Measurement
- A Theoretical Framework for Economic Development
- Structural Features of Underdevelopment: A Comparative Perspective

2 Population Growth, Resource Constraint and Economic Development

- Demographic transition
- Macro and Micro Inertia
- Fertility Choice at the Micro level
- Malthusian Theory
- Ricardo Model

3 Dual Economy Models and Labour

- Lewis Model
- Rural Urban Migration (Harris-Todaro)
- Labour Turnover Model
- Wage Productivity Model
- Child Labour

4 Capital Accumulation, Technological Progress

- Classical Thinkers: Smith, Ricardo, Marx
- Balanced growth, Harod-Domar and Low level equilibrium trap
- Neoclassical growth theories: Solow model and growth accounting
- New growth theories: Endogenous growth
- Technological Capability of LDCs

5 Special Topics in Economic Development

- Poverty and Inequality
- Agriculture and the Rural Economy

Suggested Readings

- Y.Hayami, (2001) *Development Economics: From Poverty to the Wealth of Nations*, 2nd Edition, OUP
- K.Basu, (1997) *Analytical Development Economics*, MIT Press
- Debraj Ray, (1999) *Development Economics*, Oxford University Press

AE107: International Economics

The objective of this course is to introduce students to world trade and payments. The course covers not only the foundations of pure and monetary theories of international trade but also includes applied topics of contemporary relevance, like trade agreements and currency crisis.

Course Outline

1 Introduction

Autarky, Sources of Trade, Pattern of Trade, Gains from Trade, Components of GFT, Terms of Trade

2 Orthodox Trade Theory

Adam Smith and Absolute Advantage, Comparative Advantage and Ricardian Model of Technology and Trade, Factor Endowment and the four core theorems (Heckscher-Ohlin, Factor Price Equalization, Stolper-Samuelson and Rybczynsky)

3 Trade Policy

Tariff, Quota and VER, Optimal Tariff, Tariff-Quota Equivalence

4 Trade Agreements

Free Trade versus Protection, PTAs, Economic Integration, Multilateralism, WTO

5 Balance of Payments

Balance of Payments, Capital Flows, National Accounts

6 Exchange Rates

Determinants and Forex Market Equilibrium

7 Open Economy Macroeconomics

The Elasticity Approach, Marshall-Lerner Condition, Multipliers, Mundell-Fleming Model, Purchasing Power Parity, Fischer Effect, Monetary Approach, Overshooting, Monetary Policy and Fiscal Policy

8 Exchange Rate Regimes

Fixed and Flexible Exchange Rate Regimes, Sterilization, Monetary and Fiscal Intervention, Devaluation and BOP Crisis, Capital Flight.

9 Macroeconomic Policy Regimes

Internal and External Balances, Zones of Economic Discomfort, Expenditure Reducing and Switching, Absorption Approach

10 Financial and Currency Crisis: Introduction

Speculative Attack, Currency Crisis, Banking Crisis, Mexican and South-east Asian Experiences

Suggested Readings

- Caves, R E., J. A. Frankel and R. W. Jones (2006), *World Trade and Payments: An Introduction*, Pearson Education.
- Dornbusch, Rudiger (1980) *Open Economy Macroeconomics*. Basic Books.
- Gandolfo, Giancarlo (2004). *Elements of International Economics*. Springer.

- Gandolfo, Giancarlo (2014). *International Trade: Theory and Policy*, Springer.
- Krugman, P R. and M. Obstfeld (2008). *International Economics*, Pearson Education.
- Salvatore, D (2011), *International Economics: Trade and Finance*, Wiley.

AE108: Indian Economic Development

This course offers an analytical introduction to the main aspects of the Indian economic policy and performance in the post independence period. We examine Indian economic problems in the light of relevant economic theory(ies), and in a comparative perspective. The course is expected to enable the students to appreciate the evolution of the economy, its institutional framework, nuances in using statistical information for analysing public policy, and to get familiar with the issues for research.

Course Outline

(Number of Lectures in Parenthesis)

1. Indian economic growth, distribution and structural change: Comparative historical perspective(3).
2. Planning for economic development: Changing contours of state & market in India (2)
3. Poverty and inequality: Trends and policies (2)
4. Land, labour, agriculture and agrarian relations (2)
5. Industry, public sector and technology (2)
6. Trade, investment and aid (external sector) (2)
7. Finance and development (3)
8. Monetary policy, and the transmission mechanism (2)
9. Public finance in Indian economy (3)
10. Health and education (2)
11. Evolution of economic reforms: (4)

Readings

1. Indian economic growth, distribution & structural change: Comparative historical perspective.
 - R M Sundrum (1987) *Growth and Income Distribution in India*, Sage, New Delhi.
 - Isher J Ahluwalia (1985) *Industrial Growth in India: Stagnation since the Mid-sixties*, Oxford University Press, New Delhi.
 - Vijay Joshi and I M D Little (1994) *India: Macroeconomics and Political Economy 1964-1991*, Oxford University Press, New Delhi.
 - T J Byres (1998) (ed.) *The Indian Economy: Major Debates since Independence*, Oxford University Press, New Delhi.
 - R Nagaraj (2000) "Indian Economy Since 1980: Virtuous Growth or Polarisation?", *Economic and Political Weekly*, Vol.35, No.32, pp.2831-2839.
 - S R Osmani (1996) "Is Income Equality Good for Growth?" In Abu Abdullah and Azizur Rehman Khan (ed.) *State, Market and Development*, Oxford University Press, New Delhi, pp.33-64.
2. Planning for economic development: Changing contours of state and market in India
 - P C Mahalanobis (1955) "The Approach of Operational Research to Planning in India", *Sankhya*, December, Vol.16, No.1/2, pp.3-130.
 - Bhagwati and Chakravarty (1969) "Contributions to Indian Economic Analysis", *American Economic Review*, (Supplement), September, Vol.59, No.4, Part 2, pp.1-73.
 - Bhagwati, Jagdish and Padma Desai (1971) "India: Planning for Industrialisation", OECD and Oxford University Press, *Revue economique*, September, Vol.22, No.5, pp.893-895.
 - Sukhamoy Chakravarty (1987) *Development Planning; The Indian Experience*, Clarendon Press, Oxford.
3. Poverty and inequality:, Trends and policies
 - Michael Lipton and Martin Ravallion (1995) "Poverty and Policy", In Jere Behrman and T N Srinivasan (ed.) *Handbook of Development Economics Vol.3B*, North-Holland Publications, UK, Chapter- 41.

- A Vaidyanathan (2000) *Poverty and Development Policy*, Kale Memorial Lecture, Gokhale Institute of Economics and Politics, Pune.

4. Land, labour and agrarian relations

- J Mohana Rao (1998) "Distribution and Growth in Indian Agriculture", In Terence J Byres (ed.) *The Indian Economy: Major Debates since Independence*, Oxford University Press, New Delhi, pp. 193-248.
- A Vaidyanathan (1994) "Performance of Indian Agriculture since Independence", In Kaushik Basu (ed.), *Agrarian Questions*, Oxford University Press, USA, pp.18-74.
- Keith Griffith et al (2002) "Poverty and the Distribution of Land", In V K Ramachandran and Madhura Swaminathan (ed.), *Agrarian Studies: Essays on Agrarian relations in Less-developed countries: Proceeding of the International conference on Agrarian relations and Rural Development in Less-developed countries*, Tulika, New Delhi.

5. Industry, public sector and technology

- K L Krishna (2002) "Industrial Growth and Diversification", In Uma Kapila (ed.), *Indian Economy since Independence*, Academic Foundation, New Delhi, Chapter-17.
- R Nagaraj (2003) "Industrial Policy and Performance since 1980: Which Way Now?", *Economic and Political Weekly*, Vol. 38, No. 35, pp. 3707-3715.
- R Nagaraj (2006) "Public Sector Performance since 1950: A Fresh Look", *Economic and Political Weekly*, Vol. 41, No. 25, pp. 2551-2557.
- Deepak Nayyar (1994) (ed.) *Industrial Growth and Stagnation: The Debate in India*, Oxford University Press, New Delhi.

6. Trade, investment and aid (external sector)

- *World Development Report 1987*, The World Bank, Oxford University Press, New York.
- Manmohan Agarwal (1991) "Trade and Development: A Review of Issues", in Dipak Banerjee (ed.), *Essays in Economic Analysis and Policy*, Oxford University Press, New Delhi, pp.153-178.

- Manmohan Agarwal (1993) "India in the World Economy", in Tapas Majumdar (ed.), *Nature, Man and the Indian Economy*, Oxford University Press, New Delhi.
- R Nagaraj (2003) "Foreign Direct Investment in India in the 1990s: Trends and Issues", *Economic and political weekly*, Vol. 38, No. 17, pp.1701-1712.

7. Finance and development

- *World Development Report 1989*, The World Bank, Oxford University Press, New York.
- RBI (1995) *Report of the Committee to Review the Working of the Monetary System* (Chairman: Sukhamoy Chakravarty); chapters 1-5.
- Huw Dixon (1997) "Controversy: Finance and Development", *Economic Journal*, May, Vol. 107, No. 442, pp.752-753.
- Anand Chandavarkar (1992) "Of Finance and Development: Neglected and Unsettled questions", *World Development*, Vol. 20, Issue 1, pp.133-142.

8. Evolution of economic reforms

- Vittorio Corbo and Stanley Fischer (1995) "Structural Adjustment, stabilisation and Policy Reform: Domestic and International Finance.", In Jere Behrman and T N Srinivasan (ed.) *Handbook of Development Economics*, Vol. 3B, North-Holland Publications, UK, Chapter-44.
- John Williamson (1997) "Washington Consensus Revisited", in Louis Emmerij (ed.), *Economic and Social Development into the 21st Century*, Inter-American Development Bank, Washington D C, pp. 48-61.
- Amit Bhaduri and Deepak Nayyar (1996) *The Intelligent Persons Guide to Liberalisation*, Penguin India, New Delhi.
- Pranab Bardhan (1990) "Symposium on the State and Economic Development", *Journal of Economic Perspective*, Vol. 4, and No. 3, pp. 3-7.
- Pranab Bardhan (2005) "Nature of Opposition to Economic Reforms in India", *Economic and Political Weekly*, Vol. 40, No. 48, pp.4995-4998.
- J Mohan Rao and Amitava Krishna Dutt (2006) "A Decade of Reforms: The Indian Economy in the 1990s", In Lance Taylor (ed.), *External Liberalisation in Asia, Post-Socialist Europe and Brazil*, Oxford University Press, New York, Chapter 5, pp. 139-179.

- Arvind Panagariya (2004) *India in the 1980s, and the 1990s: Triumph of Reforms*, IMF working paper, WP/04/43, Washington D C.
- Montek S Ahluwalia (2002) “ Economic Reforms in India Since 1991: Has Gradualism Worked?” *Journal of Economic Perspective*, Vol. 16, No. 3, pp. 67-88.

Additional References

1. P C Mahalanobis (1955) “The Approach of Operational Research to Planning in India”, *Sankhya*, December, Vol.16, No.1/2, pp.3-130.
2. Bhagwati, Jagdish and Padma Desai(1971) *India: Planning for Industrialisation*, OECD and Oxford University Press, *Revue economique*, September, Vol.22, No.5, pp.893-895.
3. Isher Judge Ahluwalia (1985) *Industrial Growth in India: Stagnation since the Mid-sixties*, Oxford University Press, New Delhi.
4. Pranab Bardhan (1984) *The Political Economy of Development in India*, Oxford University Press, New Delhi.
5. Jagdish Bhagwati (1993) *India in Transition: Freeing the Economy*, Oxford University Press, USA.
6. T J Byres (1998) (ed.), *The Indian Economy: Major Debates since Independence*, Oxford University Press, New Delhi.
7. P Patnaik (1995) (ed.) *Macroeconomics*, Oxford University Press, New Delhi.
8. Deepak Nayyar (1994) (ed.) *Industrial Growth and Stagnation: The Debate in India*, Sameeksha Trust, Bombay, Oxford University Press.
9. R M Sundrum (1987) *Growth and Income Distribution in India*, Sage, New Delhi.
10. Vijay Joshi and I M D Little (1994) *India: Macroeconomics and Political Economy 1964-1991*, The World Bank, Washington D C.

AE201: Public Economics

1 Role of State and Macroeconomic Perspective of Public Finance

1. Role of Government: Issues related to market failure and government intervention
2. Changing Role of State: Issues in Public Finance in a Globalising World with special emphasis on global public goods
3. Macroeconomics of Public Finance: The Interaction between Fiscal and Monetary Policy and Fiscal Stabilization

2 Theory of Taxation and Tax Policy Issues

1. Tax Incidence: The General and Partial Equilibrium Analysis
2. Shifting and Incidence of Taxes
3. Theory of Optimal Taxation
4. Environmental Externalities
5. Environmental Policy and Regulations
6. Pollution Taxes
7. Distributional Considerations in Public Finance
8. Issues Related to Tax Policy in Developing Countries
9. Indian Tax System: An Assessment
10. Practical Issues in Tax reform India
11. An Introduction to Value Added Tax
12. Value Added Tax : Design Issues and Options
13. Value Added Tax in Federal Set-up: Cross Country Experience
14. Value Added Tax and Federalism

3 Public Expenditure Theory and Applied Issues

1. Pure Theory of Public Expenditure
2. Public Sector Pricing: Pricing of Public Utilities
3. The Median Voter Theorem: Basic Idea and Applications to Public Finance
4. Taxonomy and Growth of Public Expenditure in States
5. Public Expenditure Management & Control
6. Concepts, Measurement and Magnitude of Subsidies
7. Social Infrastructure and Financing Human Development

4 Fiscal Federalism: Theory and Practice

1. Theory of Fiscal Federalism: The Decentralization Theorem
2. Fiscal Federalism: An Economic Approach
3. Economic Efficiency Issues in Multilevel Government
4. Assignment Issues in Multilevel Government
5. Theory of Intergovernmental Transfers
6. Issues of Indian Federalism and Intergovernmental Transfers in India
7. Issues in Fiscal Decentralization in India in the context of 73rd and 74th Constitutional Amendments

5 Fiscal Imbalance and Management of Public Debt

1. Measurement and Macroeconomic Impact of Deficits: Alternative Paradigms
2. Fiscal deficit and Interest rate: Analytical and Empirical Issues
3. Trends in and financing pattern of deficits in India and its macroeconomic implications
4. Public Debt Burden and Intergenerational Equity
5. Issues Related to Public Debt Sustainability

6 Current Issues in Indian Public Finance

1. Trends and Developments in Indian Fiscal Policy: Recent Experience
2. Fiscal Responsibility and Budget Management Act: An Evaluation
3. Pricing of Public Utilities and Non-Tax Revenues: Issues and Reforms
4. State Level Pension Reforms
5. Sub-National Fiscal Reforms in India: Recent Initiatives
6. Implications of the Recommendations of Finance Commission
7. Plan Financing and its Implications
8. Centrally Sponsored Schemes and the Implications for Federalism

Suggested Readings

Books

1. Jean-Jacques Laffont, (1989) *Fundamentals of Public Economics*, MIT press, Boston.
2. Alan J. Auerbach and Martin Feldstein, (1985 & 1987) *Handbook of Public Economics Vol. 1 & 2*, Elsevier, Amsterdam, North Holland.
3. Anthony Barnes Atkinson and Joseph E. Stiglitz, (1980) *Lectures in Public Economics*, McGraw Hill, New York.
4. Alan T. Peacock, (1979) *The Economic Analysis of Governments, and Related Themes*, St Martin Press, New York.
5. Amaresh Bagchi, (2005) *Readings in Public Finance*, Oxford University Press, USA.
6. Raghbendra Jha, (1998) *Modern Public Economics*, Routledge, London.

Papers

1. James M. Buchanan, (1965) "An Economic Theory of Clubs", *Economica*, New Series Vol. 32, No. 125, pp. 1-14.
2. Martin Feldstein, (2001) "The Transformation of Public Economics Research: 1970-2000", *Journal of Public Economics*, Vol. 86, Issue 3, pp. 319-326 (or from NBER website).

3. Agno Sandmo, (1976) "Optimal Taxation: An Introduction to Literature", *Journal of Public Economics*, Vol. 6, Issues 1-2, pp. 37-54.
4. R. H. Coase, (1974) "The Lighthouse in Economics", *Journal of Law and Economics*, Vol. 17, No. 2, pp. 357-376.
5. Paul A. Samuelson, (1955) "A Diagrammatic Exposition of the Theory of Public Expenditures", *Review of Economics and Statistics*, Vol. 37, No. 4, pp. 350-356.
6. Paul A. Samuelson, (1954) "The Pure Theory of Public Expenditure", *Review of Economics and Statistics*, Vol. 36, No. 4, pp. 387-389.
7. Steven T. Berry and Joel Waldfogel, (1999) "Public Radio in the United States: Does it Correct Market Failure or Cannibalize Commercial Stations?", *Journal of Public Economics*, Vol. 71, Issue 2, pp. 189-211 (or from NBER website).
8. Charles M. Tiebout, (1956) "A Pure Theory of Local Expenditures", *Journal of Political Economy*, Vol. 64, No. 5, pp. 416-424.

AE202: Industrial Organisation

Course Objective

The course provides a graduate level introduction to Industrial Organization. It is designed to provide a broad introduction to topics and industries that current researchers are studying as well as to expose students to a wide variety of techniques. It will start the process of preparing economics PhD students to conduct thesis research in the area, and may also be of interest to economics and related fields. The course presumes that students have a familiarity with micro theory, basic game theory and some econometrics.

1 Preliminaries

- The SCP paradigm
- Relationship between a measure of concentration and measure of market power.
- Additional cost concepts: Switching costs, Transaction costs. Asset specificity and hold-up problems.
- Game theory – normal and extensive form games. Nash equilibrium. Subgame-perfect equilibrium in extensive form games with perfect information.

2 Pricing Strategies

- Price Discrimination: First, Second, Third Degree
- Durable Goods monopoly
- Bundling and Tying

3 Market structures

- The Cournot model: First order and second order conditions.
- Conjectural variations and the coefficients of cooperation.
- Cournot competition with many firms.
- Bertrand competition with homogeneous products.
- The Stackelberg equilibrium reinterpreted as subgame-perfect equilibrium
- Strategic substitutes and complements.
- Strategic Commitments: Direct and Strategic effects; Commitments;
- Taxonomy of strategies; Flexibility and option value.

4 Product differentiation

- Horizontal and vertical product differentiation
- Bertrand competition with product differentiation
- Hotelling's model
- Vertical product differentiation model

5 Cartels and collusion

- Explicit collusion; Size of cartel; Cheating in a cartel; Successful operation of a cartel
- How severe should punishment be? What characteristics should punishments have to deter cheating?
- Tacit Co-operation: Price leadership, Focal point pricing, Pre-announcing future price increases, Industry associations
- Cartel success and failure

6 Entry Barriers

- Bain: The three types of entry barriers
- Conditions of entry: the Dixit model
- The Limit Pricing Model- The Sylos Postulate
- The Limit Pricing Model-Excess capacity creation, plant proliferation, product proliferation, reputation-building
- Predatory pricing.

7 Advertising

- Informative advertising and persuasive advertising.
- The Dorfman-Steiner model. Two possible extensions.

8 Multi-market operations

- Vertical Integration and vertical control
- Conglomerate diversification
- Related vs. Unrelated Diversification.

9 Network externalities

- Compatibility and standards
- Two-sided markets

10 Contracts and Incentives

- Unobservable efforts.
- Incentive from ownership.
- Incentives and insurance.

- Internal labour markets.
- Efficiency wage theory.

11 Innovation

- R&D
- Creative destruction
- The incentive to innovate: The sunk cost effect; The replacement effect; The efficiency effect; Innovation competition
- Patent races,
 - Deterministic patent races
- Process innovation

12 Competition Policy

- Two main aspects of a competition policy
- Why competition policy?
- Two main domains of antitrust law
- Per se violations and the Rule of reason
- Different Approaches to Regulation
- Some Issues in Competition Law
- International Harmonization of Competition Laws
- Competition Policy in Dynamic Markets

Essential Readings

- David Besanko, David Dranove, Mark Shanley and S. Schaefer–The Economics of Strategy. John Wiley (Student edition for India, New Delhi: Oxford University Press.
- R. Schmalensee and R. Willig (ed.) Handbook of Industrial Organization Vols. 1 & 2, Amsterdam: North Holland.
- Baumol, W., J. Panzer and R. Willig (1982): Contestable Markets and the Theory of Industry Structure, New York: Harcourt Brace Jovanovitch.
- Chamberlin, E. (1962): The Theory of Monopolistic Competition, Cambridge: Harvard University Press.
- Osborne, M. (2004): Introduction to Game Theory, New York: Oxford University Press.
- Tirole, J. (1988) The Theory of Industrial Organization. Cambridge, MA: MIT Press.
- Sylos-Labini, P., (1962), Oligopoly and Technical Progress (Harvard University Press, Cambridge, Mass).
- Williamson, O. (1975): Markets and Hierarchies: Analysis and Antitrust Implications, New York: The Free Press.
- Laffont, J.J. and J.Tirole (1993): A Theory of Incentives in Procurement and Regulation, MIT Press.
- Church, J. and R. Ware,(2000), Industrial Organization: A Strategic Approach, McGraw-Hill.
- Gibbons, R., Game Theory for Applied Economists. Princeton: Princeton University Press.
- Stephen Martin,(1993) Advanced Industrial Economics, Blackwell Publishers.
- Oz Shy, (1996) Industrial Organization: Theory and Applications, The MIT Press.
- Waldman, D.E. and E.J. Jensen (2001) Industrial Organization: Theory and Practice, 2001, Pearson Education.

- Oz Shy, (1995), Industrial Organization: Theory and Applications, The MIT Press.
- Paul Milgrom and John Roberts, (1992) Economics, Organization and Management, Prentice-Hall International

AE203: Topics in Trade and Development

The objective of the course is to introduce students to advanced topics in international economics that are particularly relevant for the study of economic development.

Course Outline

1 Gains from Trade: Revisited

1. Gains from Trade: Technology and Trade (Ricardo); Endowment and Trade (Heckscher-Ohlin).

2 Comparative Costs and Developing Countries

1. Implications of Comparative Costs in LDCs
2. HO in light of LDCs
3. Comparative Advantage and Dynamics

3 New Trade Theories

1. Increasing Returns, Monopolistic Competition and Trade
2. Economies of Scale, Product Differentiation and Trade
3. Intra Industry Trade
4. Introduction to Spatial Economics

4 Trade, Wages, Unequal Exchange and Inequality

1. Recap: Factor Price Equalization, Stolper-Samuelson and Rybczynsky Theorems

2. New Trade Theories and Wages
3. Trade and Wage Inequality in Developing Countries
4. Convergence in Theory and Practice
5. Unequal Exchange and Inequality

5 Trade and Factor Movements

1. Trade in Factors, Factor Content of Trade, HO-Vanek Theorem
2. International Capital Flows, FDIs, TNCs
3. International Migration

6 Resources, Trade and Development

1. Trade, Accumulation and Development
2. The Narrow-moving Band, the Dutch Disease

7 Regionalism, Economic Co-operation and Development

1. Regionalism in Trade
2. Gainers and Losers from Economic Integration
3. Selected Case Studies
4. South-south Cooperation

Suggested Readings

1. Acharyya, Rajat (2013). *International Economics*. OUP.
2. Baldwin, R E and AJ Venables (2004). "Regional Economic Integration". In: *Handbook of International Economics*. North Holland.
3. Bhagwati, J., A. Panagariya and TN Srinivasan (2003). *Lectures on International Trade*, 2nd Edition. OUP.

4. Bliss, Christopher (1989). "Trade and Development". In: Chenery, H. and T N Srinivasan (Eds.) *Handbook of Development Economics*, Vol. 2. North Holland.
5. Ethier, WJ (2009) "Contemporary Regionalism", *International Handbook of Economic Integration*.
6. Evans, David (1989). "Alternative Perspectives on Trade and Development". In: Chenery, H. and TN Srinivasan (Eds.) *Handbook of Development Economics*, Vol. 2. NorthHolland.
7. Fujita, M., AJ Venables and Paul A. Krugman (1999). *The Spatial Economy: Cities, Regions and International Trade*. MIT Press.
8. Gandolfo, Giancarlo (1998). *International Trade Theory and Policy*. Springer.
9. Krugman, Paul A. (1990). *Rethinking International Trade*. MIT Press.
10. Krugman, Paul A. (2008). *Trade and Wages Reconsidered*. Brookings Papers.
11. Marjit, Sugata (2008). *International Trade and Economic Development*. OUP.
12. Winters, LA (1996). *Regionalism versus Multilateralism*. WB Policy Research Working Paper No. 1687.

AE204: Economics of Technology and Innovation

Course Objective

The course takes the students through an engagement with the varied literature dealing with concepts, measurement and analytical methods involved in understanding generation of innovation, its diffusion and the effects of this diffusion in a typical developing country. After attending this course, the student is not only exposed to the theoretical developments in generation and diffusion of innovations but also its application.

Course Outline

1. **Introductory topics:** Nature and importance of innovation- Invention- Innovation- Incremental innovation- innovation in the context of developing countries- radical and disruptive innovations and user led innovations.
2. **Conceptualization of Innovation:** Linear versus Chain-linked models.
3. **Systemic perspective on Innovation:** National System of Innovation- Empirical implementation- Meaning of national systems of innovation in the context of globalisation- Sectoral and Regional systems of Innovation: explanation of why one sector/region is more innovative than another one.
4. **Measuring Innovation:** Conventional vs new indicators - Composite measures of innovation.
5. **Understanding the process of diffusion of innovations in an economy:** Estimating the relationship between diffusion of innovation and economic growth in a nation – the concept of total factor productivity(TFP).
6. **Policy instruments to stimulate generation of innovation and diffusion of innovations:** Financial instruments (R&D tax incentives, Research Grants, Loans and Venture Capital) - Non financial instruments (Supply

of human resource in science and engineering, industrial standards and clustering) - Measuring the effectiveness of innovation policy instrument.

7. **Market structure and Innovation:** Empirical measurement and evidence across time and space.
8. **Internal organization of firms and its effect on innovations:** organizational culture and innovations.
9. **International technology transfer:** The market for disembodied technologies and issues related to technology transfer: channels of technology transfer; Relationship between technology imports and local technology generating efforts- Changes in international governance rules with respect to promotion of innovation: R&D subsidies, public procurement, and Potential and actual effects of TRIPS compliance of domestic patent regimes.
10. **MNCs as a source of technology spillovers to local companies:** Evidence from across countries and industries
11. **Some emerging issues:**
 - (a) Effect of technological innovations on wages and inequality in incomes.
 - (b) Below-the-radar (frugal) innovations-measuring and identifying it and policy instruments for promoting it: the increasing role of the organized sector in pro-poor innovations.
 - (c) **Technological development of India:** Policies; India as an emerging high technology giant?

Essential Readings

- Greenhalgh, Christine and Mark Rogers (2010), *Innovation, Intellectual Property, and Economic Growth*, Princeton: Princeton University Press.
- Swann, Peter G M. (2009), *The Economics of Innovation*, Cheltenham, UK and Northampton, MA, USA: Edward Elgar.
- Fagerberg, Jan, David Mowery and Richard Nelson (eds., 2004), *The Oxford Handbook of Innovation*, New York: Oxford University Press.
- Hall, Bronwyn and Nathan Rosenberg (eds., 2010), *Handbook of the Economics of Innovation, Volumes I and II*, Amsterdam: Elsevier.

AE205: Population and Development

A course on Population and Human Development will inform on the following:

- Divergent views on Population and Development: Theories, debates;
- Paradigm Shift in Concept and Definition of Development;
- Population and Development Linkage: challenges, trends and
- Programmatic responses; and
- Socio-economic implications of Population growth: case studies from developing countries.

Course Outline

- Trends and patterns of world population growth,
- Sources of population Data,
- Fertility and Nuptiality, Mobility and Mortality,
- Migration, Urbanization,
- Concepts of development, Measures of development,
- Development Theories, Divergent views on population & development,
- Human development and Millennium Development Goals,
- Population and Health, Population & Poverty,
- Population and Aging,
- Gender Issues and Development,
- Thoughts on development and environment,
- Use of Population Data in Development Planning.

Essential Readings

- Birdsall, N, A.C. Kelley and S.W. Sinding (eds.) (2001). *Population Matters: Demographic Change, Economic Growth and Poverty in the Developing World*, OUP.
- Birdsall, N. (1988) "Analytical approaches to population growth", in H. Chenery & T. N. Srinivasan (eds.), *Handbook of development economics*, vol. 1.
- Bloom, David, E at al. (2003), *The Demographic Dividend: A new Perspective on the Economic Consequences of Population Change*, Population Matters, Rand, USA.
- Caldwell, J and P. Caldwell (1986). "Routes to low mortality in poor countries *Population and Development Review*, 12.
- Cassen, R. (1994). *Population and Development: Old debates and new conclusions*, Washington, D.C. Overseas Development Council.
- Dasgupta, P. (1995) "The population problem: Theory and evidence", *Journal of economic Literature* 33, 1879-1902.
- Demeny, Paul and McNicoll, Geoffrey (1998), *The Earthscan Reader in Population and Development*, Earthscan Publications Ltd. UK.
- Dyson, Tim. (2001), "A partial theory of world development: the neglected role of the demographic transition in the shaping of modern society", *International Journal of Population Geography*, 7, 67-90.
- Dyson, Tim, R.Cassen and Leela Visaria. (eds.) (2004), *Twenty-First Century India: Population, Economy, Human Development and Environment*, Oxford University Press.
- Harris, J.R and Michael P. Todaro (1970) Migration, Unemployment and Development: A Two-Sector Analysis *The American Economic Review*, Vol. 60, No. 1. (1970), pp. 126-142.
- Kelley, A.C. (1988) "Economic consequences of population change in the Third World", *Journal of Economic Literature* 26.

- World Bank,(1984) *World development Report 1984: Population*, World Bank, Washington DC.
- World Bank(2000) *Beyond Economic Growth* Chapter III on 'World Population Growth'.

AE206: History of Economic Thought

This course surveys the main schools in the history of the development of economic thought, beginning with that in ancient civilizations. The course concludes with a consideration of the 'Epic' recession and the recent financial crisis. Throughout the course, economic theories will be examined in the light of the interrelationships between theory, policies and conditions, including responses to the current financial and economic global crises. To increase the students understanding and appreciation of the development, progression, and regression of human understanding of how humans do and should act in "the ordinary business of life". Beginning with ancient civilizations we will progress historically (as far as we are able) to the present day, taking a broad view of what constitutes 'economic thought', (e.g., a mixture of institutional, philosophical, policy oriented, and 'purely' theoretical) put into the general historical context of human affairs (political, religious, social, and scientific).

Course Outline

1 Economic Thought Before Adam Smith

- An Introduction to Epistemology, Methodology and the Philosophy of Science
- Economic Thought in Ancient Civilizations: India, China, Middle East, and Europe.
- Mercantilism and Cameralism
- The Natural Law-Natural Rights Tradition
- Cantillon, Turgot and the Physiocrats
- British Economics: Setting the Stage for Smith

2 Classical Theories of Value, Growth and Distribution

- Smith and Ricardo on the Theory of Value
- Later Subjectivist Theories of Value
- Classicalists on the Determinants of Economic Growth
- Classical Theories of Income Distribution

3 Classical Economics on Money, Banking, and Policy

- Classical Monetary Theory
- Classical Public Finance
- Say's Law, Gluts, and Business Cycles
- Classical Economic Policy in Theory and Practice

4 Marxist Economics: Classical Or Not?

- Marx and the Labour Theory of Value
- Marx's Theory of Money
- Marx on Distribution
- Marx's Theory of Capital Accumulation and Crises

5 Marginalists, Marshall, and Neoclassical Economics

- Pre-Marginalism (French, German, and Italian contributions)
- The Marginal Revolution: Jevons, Menger, and Walras De-homogenized
- Alfred Marshall and Neo-Classicalism
- Capital Theory
- Wicksell, Fisher and the Development of the Quantity Theory
- Mises and Hayek: On Socialism and Business Cycles
- Schumpeter, Fisher & Kalecki on Business Cycles

6 Keynes: Theory of Money, Investment, and Cycles

- Keynes Vs. Say's Law and Classical Economics
- Keynes' Theory of Investment
- Keynes on Money and Speculation
- Keynes on the Business Cycle

7 Neoclassical Synthesis and Monetarist Challenge

- The Hicks-Hansen-Samuelson IS-LM Transformation
- Phillips Curve Debates
- Friedman's Fundamental Monetarist Propositions
- Critiques of Monetarism

8 Economic Thought at Historical Crossroads?

- The Rise of Mathematics and Statistics in Economics
- Public Choice and Constitutional Economics
- Competition and Knowledge: Perfect, Imperfect and Rivalrous
- Rational Expectations, Real Business Cycles & Efficient Markets
- Hyman Minsky's Financial Instability Hypothesis.
- Understanding 'Epic' Recession and Financial Crisis, 2007-09

Assessment

Review questions and homework problems will be handed out for each section of the course. Knowledge of these review questions will be very helpful when taking the exams. Students are encouraged to work out answers to these questions and discuss them among themselves.

Suggested Readings

1. Schumpeter, Joseph Alois, (1954) *History of Economic Analysis*, Oxford University Press, USA.

2. Blaug, Mark, (1997) *Economic Theory in Retrospect, 5th Edition*, Cambridge University Press, Cambridge, UK.
3. Rothbard, Murray N., (1995) *Economic Thought Before Adam Smith: An Austrian Perspective on the History of Economic Thought (Vol. I)*, Edward Elgar Publishers, UK.
4. Rothbard, Murray N., (2006) *An Austrian Perspective on the History of Economic Thought (Vol. II)*, Ludwig von Mises Institute, Auburn, Alabama.
5. Brian Snowdon, Howard A. Vane and Peter Wynarczyk, (1994) *A Modern Guide to Macroeconomics: An Introduction to Competing Schools of Thought*, Edward Elgar Publishers, USA.
6. Backhouse, Roger E., (2004) *The Ordinary Business of Life: A History of Economics from the Ancient World to the Twenty-First Century*, Princeton University Press, Princeton, New Jersey.
7. Brue, Stanley L., (2000) *The Evolution of Economic Thought, 6th ed.*, Dryden Press, Oak Brook, Illinois, USA.
8. Canterbury, E. Ray, (2003), *The Making of Economics, 4th ed.*, World Scientific Publishing Co. Ltd., Singapore.
9. Coleman, William Oliver, (2002) *Economics and Its Enemies: Two Centuries of Anti-Economics*, Palgrave MacMillan, New York.
10. Ekelund, Robert B., (1996) *A History of Economic Theory & Readings in Economic Thought*, McGraw-Hill, UK.
11. Ekelund, Robert B. and Herbert, Robert F., (1997) *A History of Economic Theory and Method*, McGraw-Hill, UK.
12. Rasmus, Jack, (2010) *Epic Recession: Prelude to Global Depression*, Pluto Press, London.

AE207: Economic History of Modern India

This course you will have some understanding of

1. the factors that have influenced the pace of long run economic growth in the Indian economy.
2. key institutional, demographic, political, social, and cultural changes that have influenced the course of Indian economic development.
3. the major debates and controversies in the study of the economic history of India

1 Introduction to Economic History

2 Themes and Debates in World Economic History

3 Major Themes in the Economic History of India (1757-1947)

1. Before the 'Event' of Colonialism
2. The Impact of Colonialism on Development: Debates
3. The eighteenth and early nineteenth Century Transition
4. The eighteenth Century Transition: the Divergence Debate

4 Agriculture

1. Commercialization
2. Peasant Revolts: Impacts and Effects

5 The Artisan Industry

6 Industry and Business in Colonial India

7 People in Economic History

1. The Demographic Experience
2. Migration and Indian Diasporas
3. Gender in Economic History
4. Health and Well Being in Economic History

8 'Space' in Economic History

1. The Environment
2. Urbanisation and its Challenges

9 Innovation and Technology in Economic History

Suggested Readings

- Douglass C. North,(1990) *Institutions, Institutional Change, and Economic Performance*, New York: Cambridge University Press.
- Kenneth Pomeranz,(2000) *The Great Divergence: China, Europe, and the Making of the Modern World Economy*, Princeton, The Princeton University Press.
- Angus Maddison, (2007) *Contours of the World Economy, 1-2030 A.D: Essays in Macroeconomic History* Oxford: OUP.
- Paul M. Hohenberg,(2008)“Toward a More Useful Economic History”, *The Journal of Economic History* 68,2.
- Y. M. Brenner,(2000) “Economic Theory without Economic History is Scholasticism and Economic History Without Theory is Blind”, *Journal of Income Distribution*, 9,:1-3.
- B.R. Tomlinson,(1988)“The Historical Roots of Indian Poverty: Issues in the Economic and Social History of Modern South Asia 1880-1960”, *Modern Asian Studies*,22(1), 123-40.
- Irfan Habib, “Potentialities of Capitalistic Development in the Economy of Mughal India” *The Journal of Economic History*”, 29, 1969, 32-78.
- Frank W. Ellis, (?) “In What Way, and to What Degree, Did the Mughal

State Inhibit Smithian Growth in India in the Seventeenth Century?", London School of Economics, WorkingPaperavailableat<http://eprints.lse.ac.uk/22477/1/wp14.pdf>

- David Washbrook,(2007), "India in the Early Modern World Economy: Modes of Production, Reproduction and Exchange", *Journal of Global History*, 2, pp. 87-111.
- C. A. Bayly, (1985) "State and Economy in India over Seven Hundred Years", *Economic History Review*, 38(4), pp.583-96.
- Binay Chaudhuri, (2008) *Peasant History of Late Pre-colonial and Colonial India*, Delhi: Pearson Longman, 2008, Chapter 3 (pages 49-107).
- "On peasant property rights", selections from: *Cambridge Economic History of India*, vol. 2, chapters on agrarian relations
- Alan Smalley, (1983) "The Colonial State and Agrarian Structure in Bengal", *Journal of Contemporary Asia*, 13(2), 1983, 176-197.
- R.C. Allen,(2007) 'India in the Great Divergence', in J.G. Williamson, T.J. Hatton, K.H. O'R'urke, A.M. Taylor, (eds.),*The New Comparative Economic History: Essays in Honour of Jeffrey G. Williamson*, Cambridge Mass.: M.I.T. Press, pp. 9-32.
- Prasannan Parthasarathi, (1999)"Rethinking Wages and Competitiveness in the Eighteenth Century: Britain and South India", *Past and Present*, 158, pp. 79-109
- S. Broadberry and B. Gupta,(2006), "The Early Modern Great Divergence: Wages, Prices and Economic Development in Europe and Asia, 1500-1800", *Economic History Review*, 59(1), pp. 2-31.
- Roman Studer,(2008)"India and the Great Divergence: Assessing the Efficiency of Grain Markets in Eighteenth-and Nineteenth-Century India", *Journal of Economic History*, 68(2), pp. 393-437.
- Tirthankar Roy,(2010), "Economic Conditions in Early Modern Bengal: A Contribution to the Divergence Debate", *Journal of Economic History*, 70(1),pp. 179-194.
- David Clingingsmith and Jeffrey G. Williamson,(2008)"Deindustrialization in 18th and 19th century India: Mughal decline, climate shocks and British industrial ascent", *Explorations in Economic History*, 45(3),pp. 209-234.
- David Ludden, (ed.)(1994) *Agricultural Production in Indian History*, Delhi: Oxford University Press. (Selected essays and the introduction).

- KN Raj, N Bhattacharya, S Guha, S Padhi, (eds.)(1985) *Essays on the Commercialization of Indian Agriculture*, Delhi: Oxford University Press.
- Ian Derbyshire,(1987) "Economic Change and the Railways in North India, 1860-1914", *Modern Asian Studies*, 21(3), pp. 521-45.
- Imran Ali,(1987), "Malign Growth? Agricultural Colonization and the Roots of Backwardness in the Punjab", *Past and Present*, 114, pp. 110-32.
- M.B. McAlpin, (1974) "Railroads, Prices, and Peasant Rationality: India 1860-1900", *Journal of Economic History*, 34(3), pp. 662-84.
- David Washbrook,(1994) "The Commercialisation of Agriculture in Colonial India: Production, Subsistence and Reproduction in the 'Dry' South 1870-1930", *Modern Asian Studies*, 28(1), pp.129-64.
- Peter Harnetty,(1971) "Cotton Exports and Indian Agriculture, 1861-1870", *Economic History Review*, 24(3), pp. 414-29.
- Amiya Bagchi, (1976) "De-industrialization in India in the Nineteenth Century: Some Theoretical Implications", *Journal of Development Studies*, 12,pp.135-64.
- Douglas Haynes,(2001) "Artisan Cloth-Producers and the Emergence of Power loom manufacture in Western India, 1920-1950", *Past and Present*, 172, pp.170-98.
- Tirthankar Roy, (1999) *Traditional Industry in the Economy of Colonial India*, Cambridge; Cambridge University Press, (Introduction and Chapter 4 on handloom weaving).
- Morris D. Morris, "Growth of Large-scale Industry to 1947", *Cambridge Economic History of India*, vol. 2.
- Rajat K. Ray, in Rajat Ray, (ed.), (1994) *Entrepreneurship and Industry in India 1800-1947*, Delhi: Oxford University Press, pp. 1-69.
- A.K. Bagchi,(1988) "Colonialism and the Nature of 'Capitalist' Enterprise in India", *Economic and Political Weekly*, 23(31), pp. PE38-PE50.
- Vinay Bahl,(1994) "The Emergence of Large-scale Steel Industry in India under British Colonial Rule, 1880-1907", *Indian Economic and Social History Review*, 31(4), pp. 413-460.
- A-M. Misra,(2000) "Business Culture' and Entrepreneurship in British India, 1860-1950", *Modern Asian Studies*, 34(2), pp. 333-48.

- B.R. Tomlinson, (1981) "Colonial Firms and the Decline of Colonialism in Eastern India 1914-47", *Modern Asian Studies*, 15(3), pp. 455-486.
- Morris D. Morris, (1979) "South Asian Entrepreneurship and the Rashomon Effect, 1800- 1947", *Explorations in Economic History*, 16, pp. 341-361.
- Leela Visaria and Pravin Visaria,(1983) "Population, 1757-1947", in *Cambridge Economic History of India*, pp. 463-533.
- Tim Dyson, (2004) "India's Population-The Past", in *Twenty-First Century India: Population, Economy, Human Development and the Environment* (eds.) Tim Dyson, Robert Cassen and Leela Visaria, Oxford: OUP,pp.15-32.
- M.C. Madhavan, (1985) "Indian Emigrants: Numbers, Characteristics, and Economic Impact", *Population and Development Review*, 11(3),pp. 457-81.
- Arjan De Haan,(1997) "Unsettled Settlers: Migrant Workers and Industrial Capitalism in Calcutta",*Modern Asian Studies*, 31(4), pp. 919-49.
- Tirthankar Roy, (2007) "Sardars, Jobbers, Kanganies: The Labour Contractor and Indian Economic History", *Modern Asian Studies*, 42(5), pp. 971-998.
- Samita Sen,(1999) "Will the land not be tilled?: Women's work in the rural economy" and "Away from Homes: Women's work in the Mills", In *Women and Labour in Late Colonial India: The Bengal Jute Industry* Cambridge, CUP, pp.54-142.
- Vijaya Ramaswamy, (1985) "Aspects of Women and Work in Early South India",*Indian Economic and Social History Review* 26,1 pp.81-99.
- Amartya Sen, (1999) "The Great Bengal Famine" and "Entitlements and Deprivation" , In *Poverty and Famines: An Essay on Entitlement and Deprivation*, Oxford: OUP, pp.54-86, 154-67 as well as 'Appendix D: Famine Mortality: A Case Study', 195-217.
- David Arnold (1994) 'Discovery' of Malnutrition and Diet in Colonial India' *Indian Economic and Social History Review*, 31, 1 1-26.
- Sumit Guha ()*Health and Population in South Asia from the Earliest times to the present*, Orient Black Swan, pp. 1-24, 156-185.
- James Heitzman, (2008) Middle towns to middle cities in South Asia,1800-2007, *Journal of Urban History*, vol. 35, pp. 15-40.
- Robert C. Allen,(2009) "The Industrial Revolution in Miniature: The Spinning Jenny in Britain, France and India", *Journal of Economic History* 69, pp. 901-27.

AE 209: Environment and Sustainable Development

The objective of the course is to introduce the concerns about environmental damage, depletion of natural resources, and sustainability as part of economic development. It should also provide students the concepts, tools and policy instruments used in economics to address these concerns. It also touches upon some macro-issues like the incorporation of environmental impact in growth accounting and also the conceptualisation and measurement of sustainable development.

1 Introduction to Environmental Impacts of Development

2 Introducing Environmental Economics

- Environmental problem as an Externality
- Environmental Conservation as a Public Good
- Correcting Market Failures leading environmental damage and resource depletion
- Government Failure and Environmental Impacts

3 Economics of Natural Resources

- Optimal Extraction Non-renewable Resources
- Common Property Management
- Failure of Open access Management
- Possibilities of collective/Community Management

4 Environment and Macroeconomics

- Assessing the impact of environmental damage on macroeconomic variables
- Environment and System of National accounts

5 Sustainable Development

- Defining Sustainable Development
- Different Approaches to Sustainability
- Measurement of Sustainability

6 Cost-Benefit Analysis and Environment

- Need for CBA and Valuation
- Market-Based Valuation
- Use of Surrogate Market
- Use of Stated Preference Methods
- Applications

7 Policy Instruments

- Bases for judging among Instruments
- Static and dynamic efficiency
- Standards, Taxes, subsidies, Market Based Instruments
- Liability Provisions
- The Provision of Information; Information disclosure
- Issues of Enforcement
- Citizens? actions

Suggested Readings

- Nick Hanley, Jason F. Shogren and Ben White, **Environmental Economics-In Theory and Practice**, MacMillan Press Ltd.. Hampshire
- Russell, Clifford. S., **Economics of Natural Resources and Environment**, Oxford University Press, New York.
- Bojo Jan, Maler Karl Goran and Lena Unemo, **Environment and Development: An Economic Approach**, Kluwer Academic Publishers, Dordrecht

Supplementary Readings

- David Pearce and Dominic Moran, **The Economic Value of Biodiversity**, Earth Scan Publications Ltd., London
- Tom Tietenberg, **Environmental and Natural Resource Economics**, V Edtn., Addison-Wesley, Massachusetts
- Barbier, Edward B., **The Economics of Environment and Development, Selected Essays**, Edward Elgar, Cheltenham
- Tom Tietenberg, **Environmental and Natural Resource Economics**, IV Edition, HarperCollins Publishers, New York
- Ian Goldin and L. Alan Winters, **The Economics of Sustainable Development**, Cambridge University Press, New York
- Sterner and Coria. **Policy Instruments for Environmental and Resource Management**, Francis and Taylor, 2011.

AE210: Gender and Development

General Objectives

The main objective of the course is to introduce the students to the use of gender as an analytical category in the context of development. The course seeks to equip students with an understanding of the major concepts that are used in the gender analysis of development. It seeks to provide a historical overview of gender and development as it emerged as a domain of knowledge with multiple and contentious theoretical underpinnings. Taking up some of the major development issues, the course seeks to demonstrate the methodological and empirical problems that gender analyses raises. In the context of development issues, it also seeks to provide an understanding of new conceptualizations and methodologies that gender analyses gives shape to.

1 Key Concepts in Gender and Development

1. Gender
2. The Household
3. Power and Empowerment
4. 'Feminisation' and 'Flexibility'
5. Caring Labour
6. Sex, Sexuality, Gender
7. Caste, Class, Patriarchy, Age

2 Gender and Development as a Field

1. Gender perspectives on Development
2. Gender and Planning
3. Gender and Micro finance
4. Gender and Governance

3 Women, Work and the Labour Market

1. Methodological issues in measurement of women's work
2. Women's contribution to national income
3. Gender and the Labour market
4. Employment and Social Policy

4 Gender and Well Being

1. Engendering Poverty
2. Conceptualisation and measurement of Well Being as if gender mattered
3. Gender, literacy / education and health
4. Sex Ratios

Suggested Readings

- Kabeer Naila, (1995) *Reversed realities: Gender hierarchies in development thought*, New Delhi: Kali for women
- Blau, F., M. Ferber and A. E. Winkler (1998) *The Economics of Women, Men and Work*, Prentice Hall, (3rd. edition), pp. 1-11.
- Elson, D. (1990) "Male Bias in the Development Process: An Overview", in Diane Elson(ed) *Male Bias in the Development Process*, Manchester: Manchester University Press, pp. 1-15.
- Agarwal, B. (1997) "Bargaining and Gender Relations: Within and Beyond the Household", *Feminist Economics*, spring, pp. 1-25.
- A Chhachhi and R Pittin (eds.) *Confronting State, Capital and Patriarchy*, The Hague ISS.
- Kabeer, N. (1999) "Resources, Agency Achievements: Reflections on the Measurement of Women's Empowerment", *Development and Change* 30.3: 435-464.
- Susie Jolly (2000) "Queering Development: Exploring the Links between Same-Sex Sexualities, Gender, and Development", *Gender and Development*, Vol. 8, No. 1, [Globalization and Diversity], pp. 78-88.

- C Jackson and R Pearson ed. (1998) *Feminist Visions of Development*, Routledge.
- Leela Kasturi, (2004), *Introduction and excerpts from the report of the sub committee women's role in planned economy*, National planning committee series 1947, In M Chaudhuri (ed.) *Feminism in India*, Delhi: Women Unlimited.
- Shahra Razavi (ed.) (2009.) "The gendered impacts of liberalization: Towards embedded liberalism?" New York: Routledge (for UNRISD).
- Maria S Floro (1995) 'Economic Restructuring, Gender and Allocation of time' *World Development*, Vol. 23, (11).
- Goldin, C. (1994) 'The U shaped female labour force function in economic development and economic history' Working Paper 4707, NBER.
- Anker. R. (2001). 'Theories of Occupational Segregation by Sex: An Overview' In: Martha Loutfi ed. *Women, Gender and Work: What is equality and how do we get there?* ILO
- Phillips A and B Taylor. (1980). 'Sex and skill: Notes towards a feminist economics?', *Feminist Review*, Vol 6, pp 79 - 88
- Maithreyi Krishnaraj. (1990). 'Women's work in the Indian census', *Economic and Political Weekly*, Vol 25 (48) pp 2663-72.
- Indira Hirway. (2002). 'Employment and unemployment situation in the 1990s ? How good is the NSS data?' *Economic and Political Weekly*, Vol 37 (21), pp 2027-36.
- Jayati Ghosh. (2002). 'Globalisation, export oriented employment for women and social policy: A Case study of India?', *Social Scientist*, Vol 30 (11 and 12), 17 ? 60.
- T D Troung, S E Wieringa and A Chhachhi ed. (2006). *Engendering Human Security: Feminist Perspectives*, London: Zed Press
- Basu, Alaka, (2002). 'Why does education lead to lower fertility? A critical review of some possibilities', *World Development*, 30 (10)
- Ravindran, S. (1999). 'Female Autonomy in Tamil Nadu: Unraveling the complexities' *Economic and Political Weekly*, April 17-24, pp 34-44
- Karen Oppenheim Mason, 'Gender and Demographic Change: What do We Know?', in *The Continuing Demographic Transition* ed. Jones, et al (Oxford: OUP, 1997), 158-83.

AE211: Labour and Development

At the end of the course the student should:

- Have an empirical understanding of the Indian labour market;
- be able to understand applications of formal theoretical models in labour economics to the Indian labour market; and
- would be able to appreciate structural transformation of labour market in developing economies and learn theoretical models specific to labour markets in developing economies.

It is assumed that the student has a basic grounding in *Intermediate Micro and Macro Economics* and *Basic Econometrics*.

The course is organized in terms of three lectures (four and half hours) per week initially. At the end of each module three sessions (four and half hours) would be spend on tutorials. Tutorials will focus on empirical applications of theoretical models discussed in the lecture sessions. Students would be assigned with home works, group exercises, classroom experiments; short field works etc as part of the tutorials of the course. Tutorials will also be used for homework solutions and clarification of lecture material.

Module 1: Concepts, types and measurement of Labour Force, Workforce, participation rates, Employment, Unemployment, wages.

Module 2: Individual and aggregate labour demand.

Module 3: Individual and aggregate labour supply.

Module 4: labour market equilibrium: Wages and productivity.

Module 5: Human Capital: education and training.

Module 6: Unions and labour market.

Module 7: Features of Labour market in India.

1. Unemployment and underemployment
2. Labour Market Discrimination: caste and gender
3. Labour market duality (segmentations)
4. urban and rural labour markets
5. Income distribution, income inequality and poverty

Models 8: Globalization and labour market in India

1. Mobility: migration and turnover
2. Trade, technology, industrial organization and employment
3. Labour market flexibility

Module 9: Labour market and public policy in India.

1. Public policies of employment generation.
2. Worker's welfare programmes–social security for workers

Basic Readings

- Ronald G. Ehrenberg and Robert Smith (2005) *Modern Labour Economics, 5th Edition*. New York: McGraw-Hill.
- Other handouts.

AE212: Law, Economics and Development

The main objectives of the course are the following: (a) to have an introductory exposure to law, legal theory and the way legal system functions, (b) to understand the economic or developmental dimensions of Indian constitution (c) to make the students understand the importance of law and legal process on the efficiency of economic activities/transactions; (d) to use the approach of economic analysis to assess the efficiency of specific laws and steps in legal process; (e) to critically understand the empirical literature on the relationship between economic growth and the status of legal institutions in developing countries, and (f) to enable them to understand the role of law (or its limitations) in development through specific cases. Though standard text books on 'law economics' will be used for the course, case examples from Indian laws and legal institutions will also be used for this purpose.

- 1 An Introduction to Law, Legal Principles, and the functioning of Legal system**
- 2 Economic and Development Aspects of Indian Constitution**
- 3 An Introduction to Law And Economics**
- 4 Property Right**
 - The Legal Concept of Property
 - An Economic Theory of Property
 - Public and Private Property
 - The Public Use of Private Property: Takings and Regulation
 - Applications
- 5 Contracts**
 - Bargaining Theory: An Introduction to Contracts
 - An Economic Theory of Contract
 - Legal Remedies Applications

6 An Economic Theory of Tort Law

7 Economics of Legal Process

- Trial
- Appeals
- Judiciary
- Lawyers' Profession

8 Crime and Punishment

- An Economic Theory of Crime and Punishment
- Does Punishment Deter Crime
- Efficient Punishment
- The Death Penalty

9 An Introduction to Indian Law and Legal Institutions

- The Civil Law and the Common Law Traditions
- The History of Indian Legal Tradition
- Indian Judicial System
- Economics of Some Indian Laws
 - Land Acquisition
 - Contract
 - Patent Protection
- Delays in Indian Legal System
- Weak Enforcement in India
- Citizens' action and Judicial Activism

10 Law and Development: Specific Cases from India

Essential Readings

- Cooter, R. and T. Ulen (2004), *Law and Economics*, Boston: Pearson Addison Wesley

Supplementary Readings

- Melvin Aron Eisenberg, *The Nature of the Common Law* (1989), Harvard University Press, Cambridge
- BarzelYoran, *The Economics of Property Rights* (1988), Cambridge University Press
- Eldin Aaron S and Stefan Reichelstein, *Holdups Standard Breach Remedies and Optimal Investment*, American Economic Association
- Hart Oliver, *Firms, Contracts and Financial Structure* (1995), Oxford University Press
- William Landes and Richard A. Posner, *The Economic Structure of Tort Law* (1987), Harvard University Press, Cambridge
- Steven Shavell, *An Economic Analysis of Accident Law* (1987), Harvard University Press, Cambridge
- Cooter Robert and Rubinfeld Daniel, *Economic Analysis of Legal Disputs and their Resolution* (1989), American Economic Association
- Landes William, *An Economic Analysis of the Courts* (1971), The University of Chicago Press, Chicago
- Gary S. Becker, *Crime and Punishment: An Economic Approach* (1968), National Bureau of Economic Research

AE213: Issues in Indian Agriculture

The intent of this course is to provide a deeper understanding of the Indian agricultural economy since independence. It will start with an overview of the performance of agriculture, followed by an analysis of the factors and determinants including, the role of the price, technology, organization and institutions. Some of the important topics that will be covered in the course are as follows:

1 Performance of Agriculture since Independence:

- Agricultural growth in India since 1950-51.
- Planning for agricultural growth.
- Changes in agrarian structure in India.
- Agro-climatic conditions and agricultural pattern.
- Analysis of agricultural growth and its component elements.
- Trends in agricultural diversification.

2 Technological Change in Agriculture:

- Trends in irrigation development (water management) and its impact on agricultural productivity and stability.
- Bio - physical technology and productivity growth.
- Impact of agro - mechanical technology.
- Technological change and distribution of gains.
- Post harvest technology and Remote sensing in agriculture.
- Issues in agricultural competitiveness.

3 The Role of the Price Factor:

- Price and supply response in Indian agriculture.
- Costs and returns to scale.

- Agricultural industry linkages.
- Terms of Trade.
- Agricultural subsidies, commodity prices and state intervention.

4 Organizational Issues in Agriculture:

- Inter-linked market and agricultural development.
- Land tenure.
- Rural labour market.
- Agricultural commodity and credit markets.

5 The Institutional Issues:

- Land reforms.
- Commercial banks and Co-operative credit.
- Agricultural research and extension.
- Public investment in agriculture and rural infrastructure.
- Economic reforms and agriculture.
- Trade liberalization and its impact on agriculture.

6 Market for Agricultural Commodities:

- Changes in domestic demand and consumption.
- Issues with respect to marketed surplus, marketing channels, price spread, producers share in consumer's rupee, value-chain, etc.
- Exports of agricultural commodities.

7 The Livestock Sector:

- Contribution of livestock to the national economy.
- Trends in livestock population, productivity and output and its determinants, technology and resource utilization.
- Role of institution in livestock development.

8 The Fisheries Sector:

- Trends in production, consumption and export of fish and fish products.
- Technological changes in marine and island fisheries and the tragedy of commons.
- Socio-economic conditions of fisher folk.
- Changes in institutional environment in the fisheries sector.

9 Sustainable Agricultural Growth and Development:

- Widening disparity between agriculture and non-agriculture.
- Reforming agriculture, constraints and scope.
- Impact of agricultural growth on the environment.
- Climate change and agriculture.

10 Rural Livelihoods and Agriculture:

- Education, other socio-economic overheads and its effect on agriculture.
- Public employment programmes, food security and other social welfare programmes on rural population.
- Panchayati Raj and other rural institutions in agriculture and rural development.
- Sustainable livelihoods and rural households.

Essential Readings:

1. Acharya, S.S and N.L. Agarwal, (2004) *Agricultural Marketing in India, 4th edition*, Oxford University Press, New Delhi.
2. Bhalla, G.S., (2007) *Indian Agriculture Since Independence*, National Book Trust, New Delhi.
3. Bhalla, G.S. and Yoginder L. Alagh, (1979) *Performance of Indian Agriculture: A District-wise Study*, Sterling Publishers Pvt. Ltd., New Delhi.
4. Bhalla, G.S. and D.S. Tyagi, (1989) *Patterns in Indian Agricultural Develop-*

- ment: A District Level Study*, Institute for Studies in Industrial Development, New-Delhi.
5. Kaushik Basu, (2005) *Collected Papers in Theoretical Economics: Development, Markets, and Institutions*, Oxford University Press, New Delhi.
 6. Pranab Bardhan, (1998) *The Economic Theory of Agrarian Institutions*, Clarendon Press, New York.
 7. Kaushik Basu, (1997) *Analytical Development Economics: The Less Developed Economy Revisited*, MIT Press, Massachusetts.
 8. Frank Ellis, (2000) *Rural Livelihoods and Diversity in Developing Countries*, Oxford University Press, New York.
 9. Frank Ellis and H.Ade Freeman (eds.), (2005) *Rural Livelihoods and Poverty Reduction Policies*, Routledge, Taylor and Francis Group, London.
 10. Department of Agriculture and Cooperation, (2004) *State of the Indian farmer- A Millennium Study, 27 Volumes*, Academic foundation under arrangement with Ministry of Agriculture, Government of India, New Delhi.
 11. Dharm Narain, K.N. Raj, Amartya Sen and C. H. Hanumantha Rao (eds.), (1988) *Studies on Indian Agriculture*, Oxford University Press, New Delhi.
 12. Kakkadan Nandanath Raj, (1990) *Organizational Issues in Indian Agriculture*, Oxford University Press, New Delhi.
 13. Roger Rose, Carolyn Tanner and Margot A. Bellamy (eds.), (1997) *Issues in Agricultural Competitiveness: Markets and Policies*, International Association of Agricultural Economists, Occasional paper 7, Dartmouth Publishing Company Ltd., England.
 14. Ashok Rudra, (1982) *Indian Agricultural Economics: Myths and Realities*, Allied Publishers Pvt., New Delhi.
 15. Vaidyanathan, A., (2010) *Agricultural Growth in India: The Role of Technology, Incentives and Institutions, 2nd edition*, Oxford University Press, New Delhi.
 16. Rao, C. H. Hanumantha, (2005) *Agriculture, Food Security, Poverty and Environment: Essays on Post - Reform India*, Oxford University Press, New Delhi.
 17. Subba Reddy, P. Raghu Ram, T. V. Neelakanta Sastry and I.Bhavani Devi, (2004) *Agricultural Economics*, Oxford & IBH Publishing Co. Pvt. Ltd., New Delhi.

18. Virmani, S.M., J.C. Katyal, H.Eswaran and I.P. Abrol (eds.), (1994) *Stressed Ecosystem and Sustainable Agriculture*, Oxford & IBH Publishing Co., New Delhi.

Apart from these essential readings, the current issues appeared in the journals of national as well as international importance- Indian Journal of Agricultural Economics, Economic and Political Weekly, Indian Journal of Labour Economics, American Journal of Agricultural Economics, Journal of development studies, Journal of Agrarian Change, etc.- are also suggested.

AE214: Issues in Indian Industry

The course will familiarise the participants with the importance of industrialization for growth and employment creation. It will introduce them to all the major issues with respect to India's industrial sector while at the same time acquaint them with the major databases underlying these issues. The student will thus be equipped with the researchable issues, methods of analysing data and drawing policy conclusions.

List of topics:

1. Preliminary concepts: Firm, Industry, Manufacturing, Services, Extractive and Construction-the concept of value added
2. Evolution of the industrial sector-place assigned to industries in India's five year plans
3. The policy support to industrialization over the years with a special emphasis on the New Industrial Policy Statement of 1991- Land as a constraint for industrialization- Conflicts
4. The growth performance of the industrial sector since independence- what we have learnt from the stagnation debate- performance of the industrial sector since liberalization
 - (a) Understanding the database of the industrial sector: The Index of Industrial Production-Industrial Sector in the National Accounts Statistics- Annual Survey Industries- the Prowess Database of CMIE
5. Growth of private industrial entrepreneurship - indicators - state support - role of finance - venture capital - incubators and other support mechanisms
6. The role assigned to public sector enterprises and the recent policy on privatization - evaluation of privatization efforts
7. The Small and Medium Scale Sector (SME) - definitional changes-Performance of the SME sector
8. Foreign Companies in the industrial sector - their share in total gross domestic investments-Performance of foreign companies-contribution of foreign companies to exports, technology and employment.

9. Outward FDI from India-its magnitude-geographical and industry-wide distribution-financing of outward FDI-Contribution of Outward FDI
10. Financing of industries-Internal vs External funds- Growth of the capital market.
11. Relationship between the growth of industrialization and employment especially since economic liberalization.
12. Energy intensity in Indian industries - trends over time - are the industries becoming energy efficient mover time?.
13. Green issues w.r.t industrialization- pollution control and monitoring instruments – effect of international governance rules.

Readings:

- Bala, Subrahmanya, M. H. (2004), 'Small Industry and Globalisation Implications, Performance and Prospects', *Economic and Political Weekly*, vol. 39, NO: 18
- Goldar, B N (2010), *Energy Intensity of Indian Manufacturing Firms: Effect of Energy Prices, Technology and Firm Characteristics*, Delhi: Institute of Economic Growth, http://www.mse.ac.in/Frontier/m13_2010/Goldar_2010.pdf
- Lall, Sanjaya (1982): *Developing Countries as Exporters of Technology*, Macmillan, London.
- Lall, Sanjaya (1983): "The Rise of Multinationals from the Third World", *Third World Quarterly*, Vol. 5, No. 3, July.
- Mani, Sunil and M. Vijayabaskar (1998), "A Curmudgeon's Guide to Economic Reforms in India's Manufacturing Sector", *Economic and Political Weekly*, Vol. 33, No. 51.
- Morris, Sebastian (1987): "Trends in Foreign Direct Investment from India (1950-1982)", *Economic and Political Weekly*, Vol. 22, No. 46 and 47, November 14 and 21.
- Nagaraj, R (2003): "Industrial Policy and Performance: Which Way Now?" , *Economic and Political Weekly*, August 30-September 5, Vol. 38, No. 35.
- Nagaraj, R. (2006),"Public sector performance since 1950", *Economic and Political Weekly*, Vol. 41, No: 25.

- Nagaraj R (2006) "Indian Investments Abroad: What Explains the Boom?", *Economic and Political Weekly*, Vol. 41, No. 46, November 18.
- National Council of Applied Economic Research (2010), *FDI in India and its growth linkages*, Delhi: National Council of Applied Economic Research.
- Nayyar, Deepak (1994) *Industrial Growth and Stagnation: The Debate in India*, editor, Bombay; Oxford University Press.
- Nayyar, Deepak (2008): "Internationalisation of Firms from India: Investments, Mergers and Acquisitions", *Oxford Economic Studies*, Vol. 30, No. 1, March.
- Pushpangadan K. and N Shanta (2009), *The Dynamics of Competition: Understanding India's manufacturing sector*, New Delhi: Oxford University Press.
- Ramamurti, Ravi (2009): "What have we learnt about the emerging market MNEs?" , In: Ravi Ramamurti and Jitendra V Singh edited, *Emerging Multinationals in Emerging Economies*, New York: Cambridge University Press.

AE215: Political Economy, Development and Governance

It is well known that an effective government responding to the needs of the people is required not only for managing the economy well but also for the social and human development of the society. Public economics identifies the situations where non-market institutions and governance are required and how do 'efficient' governments mobilize and allocate resources. How do such well functioning institutions and governments come to exist? This is not addressed usually in public economics. This is the main focus of the proposed course. A political economy approach is used here, and the course is also used to introduce political economy to the students of MA Applied Economics.

Political economy is broadly about the relationship between political and economic interests. This is a two-way relationship. Political power facilitates influence over the sharing of public resources and also on public policies that may have a bearing on private wealth. Economic status of individuals may determine their specific positions in politics. Political economy influences development in different ways. First of all, it creates the environment within which economic activities take place including governance. Structures of governance and economic environment impact the prospects for economic growth, and this can affect development. Beyond economic growth, the development also depends on how the resources (especially the public resources) are allocated within a society. Are there enough schools and healthcare centres provided by the government? Is there an adequate social security for those people who are unable to gain an income from labour market? The answers to such questions would determine the nature of social and human development in a society. Political economy plays an important role in taking decisions on these matters. There are different ways of analysing political economy. First is the Classical political economy associated with people like Adam Smith. However Karl Marx had greater influence in reshaping classical political economy, and hence Marxism in its different forms has an impact on understanding

of political economy today. Of late, neoclassical economics and new institutional economics have strengthened what is called 'new political economy' and this is being used widely to understand the economic and political transition of different countries today.

This course proposes to cover the following issues

1. The need for non-market institutions - drawing lessons from public economics
2. Efficient and inefficient institutions
3. How do efficient institutions come to exist?
4. Institutions and Political Economy
5. What is political economy and the need to study it
6. Different traditions in political economy
 - (a) Classical Political Economy
 - (b) Marxist Political Economy
 - (c) New Political Economy
7. Political economy and Economic Growth
 - (a) Inequality and Economic Growth
8. Political economy and social/human development
9. Political economy and Governance
 - (a) Political Economy and Corruption
10. Political Transition in the development world
 - (a) Elite Capture
 - (b) Political Clientelism
 - i. Competitive Populism
 - (c) Transition to Liberal democracy
11. Special Topics
 - (a) Political economy and Economic/institutional reforms
 - (b) Political economy and local governance

Indicative references for teaching

- Acemoglu, D., Johnson, S. and Robinson, J.A. (2000) "The colonial Origins of Comparative Development: An Empirical Investigation", *American Economic Review*, 91(5), pp. 1369-1401
- Auty, R. A. (200), "Patterns of Rent Extraction and Development in Developing Countries: Implications for Governance, Economic Policy and Performance", in Mavrotas, G. and A. Shorrocks, Palgrave Macmillan-UNU Wider, New York.
- Bardhan (1989) *The Economic Theory of Agrarian Institutions*, Oxford: Oxford University Press.
- Alesina, A. and Rodrik, D., (1994) "Distributive Politics and Economic Growth", *Quarterly Journal of Economics*, 109, 2, 465-90.
- Bardhan, P., Mitra, S. Mukherjee, D. and Sarkar, A. , (2009) "Local Democracy and Clientelism: Implications for Political Stability in West Bengal" , *Economic and Political Weekly*, 28 February
- Bardhan, P. and Mukherjee, D., (1999) *Relative Capture of Local and Central Governments*, CIDER working paper no. C99-109.
- Chatterjee, P.,(2004) *Politics of the Governed*, New Delhi: Permanent Black.
- Diamon, L and M.F Plattner (1995) *Economic Reform and Democracy*, Baltimore: John Hopkins University Press.
- Dixit, A., (2009) "Governance Institutions and Economic Activity", *American Economic Review* 99, 1, 5-24
- Dreze, J and A. K. Sen (eds.), (1997) *Indian Development: Selected Regional Perspectives*, New Delhi: Oxford University Press.
- Gindle, M. S.,(1980) *Politics and Policy Implementation in the Third World* , Princeton NJ: Princeton University Press.
- Migdal, J. S., A. Kohli, and V. Shue, (1994) *State Power and Social Forces: Domination and Transformation in the Third World*, Cambridge: Cambridge University Press.
- North, D. (1990), *Institutions, Institutional Change and Economic Performance*, Cambridge: Cambridge University. Press

- Olson, M., (1993), "Dictatorship, Democracy, and Development", *American Political Science Review* 87: 567-576
- Prabhu, S. (2001) *Economic Reform and Social sector Development: A study of Two Indian States* , New Delhi: Sage.
- Roland, G. (2000) *Politics, Market and Firms*, The MIT Press: Cambridge, Mass.
- Santhakumar, V. (2008) *Analysing Social Opposition to Reforms*, Sage, New Delhi
- Santhakumar, V. (2011) *Economic Analysis of Institutions*, Sage, New Delhi
- Shleifer, A. and Vishny, R., (1998) *The Grabbing Hand*; Cambridge, MA: Harvard University Press, (1998)
- Stein, B. and Subramanian, S., (1996) , *Institutions and Economic Change in South Asia*, Oxford: Oxford University Press.

AE216: Economics of Project Evaluation

Course Objectives

The aim of the course is to provide the students with the theoretical tools and practical experience necessary for the appraisal of investment projects and programmes. This course places particular emphasis on understanding the concepts and the advantages and drawbacks of each of the main approaches used. The course will also familiarise the students with case studies which demonstrate the use of these techniques in practice.

Course description

Part 1: Project Appraisal

Planning & Analysis

Overview

Phases of capital budgeting – Elementary investment strategies–Interest factors and notation– Discrete compound interest factors – Single payment compound amount factor

- single-payment present worth factor – Uniform series compound amount factor
- Uniform series present worth factor – Uniform series sinking fund factor – Nominal and effective interest rates – Economic interpretation of equivalent annual amount.

Project cash flows

Basic principles of measurement of cash flows – Components of the cash flow streams – Some measures of investment worth – The payback period – Appraisal criteria: Net Present Value and the Laplace transform – Benefit cost ratio criterion – Neoclassical theory of benefit cost analysis – Measuring equivalent variation and compensating variation – Internal rate of returns – Shadow price – Shadow wage rate.

Analysis of Risk

Types and measure of risk – Simple estimation of risk – Sensitivity analysis – Scenario analysis – the optimistic approach – the conservative approach – the minimax regret approach – the index of pessimism approach – the Laplace

approach - Monte-Carlo simulation - Decision tree analysis -- Risk analysis in practice.

Part 2: Programme Evaluation

Operational Evaluation of Public Policies

Issues in Targeting - Methodologies followed to evaluate targeting

Impact Evaluation

Causal Reasoning and Research Design - Experimental Approach: Randomised Control Trials- Use and Abuse - Non-Experimental Approach: Matching Techniques and Propensity Score, Difference-in difference method, Instrumental Variables, Regression Discontinuity

Introduction to Datasets, Field Surveys and STATA

Introduction to National Sample Survey data (Depending on the availability of time) - Conducting a household survey (Depending on the availability of time) - STATA commands for evaluation

Readings

Part 1: Project Appraisal

Cleland, David I., 1995 Project Management: Strategic, Design and Implementation, McGraw Hill, New Delhi.

Dasgupta, Partha, Amartya Sen and Stephen Marglin, 1972. Guidelines for Project Evaluation, Oxford & IBH, New Delhi.

Dasgupta, Ajit K and DW Pearce (1978) Cost-Benefit Analysis: Theory and Practice. Macmillan.

Eschenbach, Ted, Lynn E. Bussey, Neal A. Lewis, Joseph C. Hartman (2015) Economic Analysis of Industrial Projects, Oxford University Press,

Esty, Benjamin 2003 Modern Project Finance: A Casebook. John Wiley & Sons.
Finnerty, John D. 2007 Project Financing: asset based financial engineering, 2nd ed John Wiley & sons.

Ghattas, R.G. and Sandra L.McKee, 2003 Practical Project Management, Pearson Education, Delhi.

Kasor, Shrutika 2003 Project Management, Sumit Enterprises, New Delhi,

Little, IMD and JA Mirrlees (1974) Project Appraisal and Planning for Developing Countries. Heinemann Educational Books, London.

Mikkelsen, Britha 2005 Methods for Development Work and Research, Sage Publications, New Delhi.

Mishan, EJ (1977) Cost-Benefit Analysis, Second edition, George Allen & Unwin, London.

Pearce, DW and CA Nash (1981) The social Appraisal of Projects,

Macmillan. Pitale, R.L. 1987 : Project Appraisal Techniques, New Delhi,

Oxford and IBH Planning Commission Manual Project Appraisal:

industries, Govt of India UNIDO, Guidelines for practical project appraisal

Part 2: Programme Evaluation

Afridi, F. (2011). The impact of school meals on school participation in rural India. *Journal of Development Studies*, 47(11), 1636-1656.

Andaleeb, R. (2014). Revival of the Rural Public Distribution System: Expansion and Outreach, *Economic and Political Weekly*, 49(20).

Besley, T. and Coate, S. (1992). Workfare versus welfare: incentive arguments for Work Requirements in Poverty-Alleviation Programs, *American Economic Review*, 82(1), 249- 261.

Chapter 1 and 2: Angrist, J. and Pischke, J.S. (2009). *Mostly Harmless Economics: An Empiricist's Companion*. Princeton University Press.

Chapter 3: Khandekar, S.R., Koolwal, G.B. and Samad, H. (2010). *Handbook of Impact Evaluation: Quantitative Methods and Practices*, World Bank, Washington D.C.

Cornia, G.A. and Stewart, F (2006). Two errors of targeting, *Journal of International Development*, 5(5), 459-496

Das, U. (2014). Accuracy of targeting and rationing under the rural employment guarantee scheme. *Oxford Development Studies*, 43(3), 361-378.

- Das, U. Can the Rural Employment Guarantee Scheme Reduce Rural Out-migration: Evidence from West Bengal, India. *Journal of Development Studies*, 51(6)
- Dreze, J. (1990). Poverty in India and the IRDP Delusion, *Economic and Political Weekly*, 25(39)
- Duflo, E., Glennerster, R. and Kremer, M (2007). Using Randomization in Development Economics Research: A Toolkit, Review Article. Chapter 61, *Handbook of Development Economics*, Volume 4, 3895-3962
- Freedman, D.A. (1999). From Association to Causation: Some Remarks on the History of Statistics, *Statistical Science*, 14, 243-258.
- Holland, P.W. (1986). Statistics and Casual Inference. *Journal of American Statistical Association*, 81, 945-960.
- Jalan, J. and Ravallion, M. (2003). Does piped water reduce diarrhea for children in rural India?, *Journal of Econometrics*, 112(1), 153-173.
- Khera, R. (2011a). Revival of the public distribution system: evidence and explanations, *Economic and Political Weekly*, 46(44), 36-50
- Khera, R. (2011c). India's Public Distribution System: Utilisation and Impact. *Journal of Development Studies*, 47(7), 1038-1060.
- Marianne, B. and Mullainathan, S. (2004). Are Emily and Greg more employable than Lakisha and Jamal? A field experiment on labour market discrimination. *American Economic Review*, 94(4), 991-1013.
- Ravallion, M. (2001). The mystery of the vanishing benefits: An introduction to impact evaluation. *The World Bank Economic Review*, 15(1), 115-140.
- Ravallion, M. (2007). How relevant is targeting to the success of an Antipoverty Program. Policy Research Working Paper 4385, The World Bank.
- Ravallion, M. (2009). Evaluation in the practice of development. *The World Bank Researcher Observer*. 24(1).
- Rosenbaum, P.R. and Rubin, D.B. (1983). The central role of the propensity score in observational studies for causal effects. *Biometrika*, 70(1), 41-55.

AE217: Behavioural Economics

Course Objectives

Behavioural Economics is a field of economics that investigates the influence of psychology on economic behaviour. This course will introduce the students to behavioural economics and acquaint them with systemic biases that affect the judgment and decision-making. The course will also discuss the policy implications of incorporating these biases in decision making. It will focus on the following aspects of decision making:

- a) The rational decision making and flaws in the assumptions of rationality
- b) Mental accounting and consumer choice
- c) The biases involved in inter-temporal choices
- d) Biases in decision making under risk and uncertainty and
- e) Concerns of fairness and social preferences in decision making and
- f) Applications and limitations of behavioral economics

Course Description

The students of the course will engage with the following topics and the related questions

Unit 1 - Rational Decision Making and Mental accounting [6 lectures]

- What is rationality? What are the assumptions in rationality of human beings? How do rational agents make decisions?
- What are the axioms of rationality and do we violate these axioms of rationality?
- Do people make not-so-rational decisions? What are they? Why do they do so?
- What is a decoy effect? How do we mentally account for our transactions? What is a sunk cost fallacy? What are various biases in decisions made by consumers? What are the policy implications related to these biases

Unit 2 - Intertemporal Decisions – Why do we not want to things now when we wanted to do them earlier? [6 lectures]

- How do make decisions when your actions incur costs now but receive benefits later? Similarly, how do we make decisions when the actions have benefits now but incur costs later? What are the inconsistencies in intertemporal choices managers make?

- What are various ways of discounting time? What is hyperbolic discounting and quasi-hyperbolic discounting? What is present bias?
- How do we make decisions related to sequences? Do we prefer sequences that improve over time?
- What are the policy implications of present bias?

Unit 3- Decision Making under Risk and Uncertainty [6 lectures]

- How do we characterize risk and uncertainty? What are the biases inherent in decision making under risk and uncertainty? Do we take more risks in the loss domain than in the gains domain?
- What are various theories of decision making under risk, ambiguity, and uncertainty?
- What is expected utility theory? What is rank-dependent utility theory?
- What is prospect theory and cumulative prospect theory?
- What is Allais paradox and Ellsberg paradox? What are the explanations provided to explain these paradoxes?
- What are the policy implications that arise from using Cumulative Prospect Theory?

Unit 4 - Fairness and Other-regarding Preferences [6 lectures]

- What are the issues related to fairness in decision-making? Do individuals consider fairness or think about others while making decisions? Do you as a consumer punish unfair behaviour by firms?
- What are the findings related to ultimatum games, dictator games, and investment games? What are the inferences related to trust, and reciprocity from these games?
- Why do we tip? Why do people contribute charity?
- What is altruism? Is there a difference in types of altruism? What is a “warm-glow”?

Unit 5 - Applications and Limitations of Behavioural Economics [3 lectures]

- How could we use nudges to make people make better decisions?
- What are the critiques to the nudge program? What is libertarian paternalism? Does it actually work?
- What is ecological rationality? What is the difference between logical and ecological rationality?

Books

1. Erik Agner (2016). A Course in Behavioral Economics. Palgrave MacMillan. Second Edition.
2. Edward Cartwright (2018). Behavioral Economics. Routledge. Third Edition.
3. David Just (2013). Introduction to Behavioral Economics. Wiley Publications.
4. Richard Thaler (2015). Misbehaving.

Readings

Unit 1 - Rational Decision Making and Mental accounting

1. Anand, P. (1987). Are the preference axioms really rational?. *Theory and decision*, 23(2), 189-214.
2. Thaler, Richard. "Mental accounting and consumer choice." *Marketing Science* 4.3 (1985): 199-214.
3. Thaler, Richard H. "Mental accounting matters." *Journal of Behavioral Decision Making* 12.3 (1999): 183-206.
4. Shafir, Eldar, and Richard H. Thaler. "Invest now, drink later, spend never: On the mental accounting of delayed consumption." *Journal of Economic Psychology* 27.5 (2006): 694-712.
5. Hastings, Justine, and Jesse M. Shapiro. Mental accounting and consumer choice: Evidence from commodity price shocks. No. w18248. National Bureau of Economic Research, 2012.

Unit 2 - Intertemporal Decisions - Why do we not want to things now when we wanted to do them earlier?

1. Laibson, David. "Golden eggs and hyperbolic discounting." *The Quarterly Journal of Economics* 112.2 (1997): 443-478.
2. O'Donoghue, Ted, and Matthew Rabin. "Doing it now or later." *American Economic Review* 89.1 (1999): 103-124.
3. Loewenstein, George F., and Dražen Prelec. "Preferences for sequences of outcomes." *Psychological Review* 100.1 (1993): 91-108.
4. Duflo, Esther, Michael Kremer, and Jonathan Robinson. "Nudging farmers to use fertilizer: Theory and experimental evidence from Kenya." *American Economic Review* 101.6 (2011): 2350-90.
5. Haushofer, Johannes, and Ernst Fehr. "On the psychology of poverty." *Science* 344.6186 (2014): 862-867.

Unit 3- Decision Making under Risk and Uncertainty

1. Tversky, Amos, and Daniel Kahneman. "Prospect theory: An analysis of decision under risk." *Econometrica* 47.2 (1979): 263-291.
2. Tversky, Amos, and Daniel Kahneman. "Advances in prospect theory: Cumulative representation of uncertainty." *Journal of Risk and Uncertainty* 5.4 (1992): 297-323.
3. Andreoni, James, and Charles Sprenger. "Risk preferences are not time preferences." *American Economic Review* 102.7 (2012): 3357-76.
4. Andersen, S., Harrison, G. W., Lau, M. I., & Rutström, E. E. (2008). Eliciting risk and time preferences. *Econometrica*, 76(3), 583-618.
5. Tanaka, Tomomi, Colin F. Camerer, and Quang Nguyen. "Risk and time preferences: Linking experimental and household survey data from Vietnam." *American Economic Review* 100.1 (2010): 557-71.

Unit 4 - Fairness and Other-regarding Preferences

- 1.Andreoni, James. "Impure altruism and donations to public goods: A theory of warm-glow giving." *The Economic Journal* 100.401 (1990): 464-477.
- 2.Fehr, Ernst, and Simon Gächter. "Cooperation and punishment in public goods experiments." *American Economic Review* 90.4 (2000): 980-994.
- 3.Charness, Gary, and Uri Gneezy. "What's in a name? Anonymity and social distance in dictator and ultimatum games." *Journal of Economic Behavior & Organization* 68.1 (2008): 29-35.
- 4.Ruffle, Bradley J. "More is better, but fair is fair: Tipping in dictator and ultimatum games." *Games and Economic Behavior* 23.2 (1998): 247-265.
- 5.Falk, Armin, Ernst Fehr, and Urs Fischbacher. "Testing theories of fairness—Intentions matter." *Games and Economic Behavior* 62.1 (2008): 287-303.

Unit 5 - Applications and Limitations of Behavioural Economics

- 1.Thaler, Richard H., and Shlomo Benartzi. "Save more tomorrow™: Using behavioral economics to increase employee saving." *Journal of Political Economy* 112.S1 (2004): S164-S187.
- 2.Bertrand, Marianne, Sendhil Mullainathan, and Eldar Shafir. "A behavioral-economics view of poverty." *American Economic Review* 94.2 (2004): 419-423.
- 3.Berg, Nathan, and Gerd Gigerenzer. "As-if behavioral economics: Neoclassical economics in disguise?." *History of Economic Ideas* (2010): 133-165.

AE218: Macroeconomic Stabilization in Open Economies

This course helps to understand the impact of macroeconomic shocks including global spillovers on the domestic economy – at aggregate and sectoral levels; range of policy options and trade-offs; and the challenges for the conduct of monetary and fiscal policies in an open economy framework. The course is organized around a simplified 3-equation version of the workhorse New-Keynesian model due to Wendy Carlin and David Soskice consisting of the IS curve, Phillips curve and a monetary rule curve.

Course outline:

1) Microeconomic foundations of demand and supply sides: A review

- a) Demand side: Goods market equilibrium; the multiplier; forward-looking behaviour, consumption, investment and the IS curve
- b) Supply side: Unemployment; supply side effects on unemployment; nominal rigidities and demand-side policy, inflation and the business cycle
- c) A 3-equation model: Inflation and deflation, role of central bank in macroeconomic stabilization
- d) Expectations: Risk and uncertainty; expectation formation in real world; rational expectation hypothesis (REH); Phillips curve; the Lucas critique; inflation bias and time inconsistency
- e) Unemployment: Flows, matching and the Beveridge curve; unions and wage-setting arrangements; efficiency wage models; hysteresis and persistence of unemployment

2) Money and the financial sector in macro models

- a) Money, money supply and money demand
- b) A modern financial system: Interest rate setting by central banks, banks' lending rates, credit constraints and collateral; fractional reserve system; institutional arrangements – banks, central bank and the government
- c) Financial systems and balance sheets; banks and macroeconomic stabilization
- d) Bank behaviour, cycles and crises: asset price bubbles; the financial accelerator; housing and bank leverage-centred feedback processes
- e) Case study: The global financial crisis of 2007-08

3) Open economy macroeconomics

- a) Review of basic concepts: External sector in national accounts; balance of payment (BOP), foreign exchange market – bilateral exchange rates and NEER/REER; exchange rate regimes; covered and uncovered interest rate parity conditions
- b) A 3-equation model for open economy: foreign exchange market equilibrium; stabilization under flexible exchange rate regime; inflation shocks – comparing closed and open economies
- c) A medium-run open economy model: commodity price shocks, imbalances and macroeconomic stabilization

4) Monetary policy

- a) Monetary policy and economy's nominal anchor: Monetary, interest rate and inflation Targeting
- b) Central bank preferences: Sacrifice ratio and costly disinflation; active rule-based policy – Taylor rules; Taylor rules in practice
- c) Operating procedure: Institutional arrangements; liquidity forecast and management; choice of instruments; communication policy
- d) Monetary policy transmission: Channels
- e) Case studies: the Indian experience; monetary policy and the global financial crisis

5) Monetary policy challenges in open economies

- a) The impossible trinity
- b) BOP management: Current and capital account convertibility; drivers of capital flow
- c) Exchange rate pressures: volatility, drivers, passthrough, intervention/sterilisation
- d) Financial stability and policy safeguards
- e) Case study: Taper tantrum of 2013

6) Fiscal policy

- a) Fiscal policy and macroeconomic stabilization: Discretionary fiscal policy; automatic Stabilizers
- b) Government's budget constraint, debt dynamics and deficit bias
- c) Rule-based fiscal policy: Case study - the FRBM Act in India

- i) Fiscal and monetary policy coordination: Fiscal policy and inflation; central bank independence; fiscal dominance; areas of coordination and consequences of coordination failure

7) The New-Keynesian model and stabilization policy

- a) The real business cycle (RBC) model; impact of RBC modelling; criticisms of the RBC model
- b) The New-Keynesian model and macroeconomic stabilization: The New-Keynesian Phillips curve; stabilization bias; New-Keynesian DSGE modelling

Learning Outcome:

- 1. To understand how the real sector interacts with the financial and external sector
- 2. To understand the impact of macroeconomic shocks in open economies
- 3. To learn role of monetary and fiscal policy in conducting macro stabilization
- 4. To appreciate monetary and fiscal policy challenges in open emerging market economies including India

Main References:

- 1) Selected chapters from *Macroeconomics – Institutions, Instability and the Financial System* by Wendy Carlin and David Soskice, Oxford University Press, 2014.
- 2) Selected chapters from *Handbook of Monetary Economics, Volume 3* edited by Benjamin M. Friedman and Michael Woodford, North Holland, 2010.

Additional References: Main references to be complemented with papers, reports and other texts as and when deemed necessary by the instructor.

AE219: Financial Programming

Course Objective:

This course will help to understand and analyse the major macroeconomic sectors in the economy and their interlinkages. This in turn will help to diagnose macroeconomic and sectoral imbalances and propose policy options. The course would use extensive data from Indian economy to demonstrate its empirical part.

Course outcomes:

After completing the course, the students shall be able:

1. To understand the accounting and behavioral relationship between various macroeconomic sectors.
2. To understand how macroeconomic policies interact.
3. To understand the methods for short-run and medium run forecasting of various macroeconomic series.
4. Be capable of identifying macroeconomic vulnerabilities.
5. Gain interest to undertake empirical research on public policies.

Course outline:

1. Basic concepts, characteristics, and process of Financial Programming.
2. Interrelations among macroeconomic accounts.
 - i. Overview of four accounts: Real, External, Government, Monetary and Financial sectors.
 - ii. Interrelations among these accounts: Accounting and behavioral consistency.
 - iii. Financial links and flow of funds.
3. Real sector and inflation: Analysis and forecasting
 - i. Forecasting GDP from supply side.
 - ii. Forecasting inflation
4. Balance of Payment: Analysis and forecasting
 - i. Basics of balance of payment accounting: Trade, current, capital, and financial accounts.

- ii. Trade flows and exchange rate
 - iii. International investment position
 - iv. Forecasting balance of payments.
 - v. Current account sustainability norms and exchange rate misalignment.
 - vi. Assessing a country's external position: Reserve adequacy and external sustainability.
5. Fiscal sector: Analysis and forecasting.
- i. Basics of fiscal accounts.
 - ii. Government sector operations – Revenues, expenses, financing, and debt.
 - iii. Fiscal balances and indicators of fiscal position.
 - iv. Forecasting fiscal accounts
 - v. Fiscal policy and how to conduct it.
6. Monetary sector: Analysis and forecasting.
- i. Overview of monetary aggregates and depository institutions' balance sheets.
 - ii. Monetary liabilities and money demand functions.
 - iii. Basics of monetary policy instruments and policy, inflation targeting and central bank liquidity operations.
 - iv. Credit aggregates – linkages with other sectors.
 - v. Analysis and forecasting of monetary accounts.
7. Macro-Financial linkages.
- i. Analysis of macro-financial linkages.
 - ii. Identifying financial soundness and systemic risks.
 - iii. Preserving financial stability using macroprudential policy.
 - iv. Medium-term framework for macroeconomic stability.

Basic Readings:

1. IMF (2014) *Financial Programming and Policies – Vol. I*, International Monetary Fund.

2. John, J., Kumar, D., George, A. T., Mitra, P., Kapur, M. and Patra, M. D. (2023), 'A Recalibrated Quarterly Projection Model (QPM 2.0) for India', *RBI Bulletin*.
3. may Narayan, ArjunJayadev and J W Mason (2017) Mapping India's Finances: 60 Years of Flow of Funds, *Economic and Political Weekly*, vol. 52(18), pp. 49-56.
4. Mark Allen et al. (2002) *A Balance Sheet Approach to Financial Crisis*, Working Paper, No. WP/02/210, International Monetary Fund.
5. Johan Mathisen and Anthony Pellechio (2006) Using the Balance Sheet Approach in Surveillance: Framework, Data Sources, and Data Availability, Working Paper, No. WP/06/100, International Monetary Fund.
6. Mussa, Michael, and Savastano, A Miguel (1999) The IMF Approach to Economic Stabilization, Working Paper 99/104, International Monetary Fund

Basic reading will be complemented with journal papers and statistical reports related to macroeconomic data in India.