Department of Economics and Politics
VISVA-BHARATI

M Phil/PhD Course Work Syllabus

M Phil Semester I

Paper I: Research Methodology (Compulsory Paper)

1. **Research Concepts**

Identification of a research problem, understanding a research issue, framing of research questions, testable hypothesis, different types of data – qualitative and quantitative, identification of study variables, qualitative responses, appropriate scaling, some examples.

2. **Research Methods**

Outline of alternative methodologies of empirical research in Social Sciences – experimental, descriptive, econometric, some examples

3. **Research Tools and Design of a Primary Survey**

Types of primary data collection, FGD, personal interview, deciding on data unit

Determination of a sample frame for primary survey

Sample size and sample selection

Questionnaire designing – open and close ended questions, coding, pre-testing of questionnaire, use of a pilot survey

Sample questionnaire – Living Standard Measurement Studies (LSMS)

4. **Research With Secondary Data**

Different sources of secondary data – International and data on Indian Economy

5. **Regression Analysis with Cross Section Data**

Multiple Regression Analysis – Estimation and Inference

Multiple Regression Analysis and Diagnostic Tests– Heteroscedasticity Problem, Autocorrelation Problem and Multicollinearity Problem

Multiple Regression Analysis – Functional Form, Specification and Data Issues

Multiple Regression Analysis with Qualitative Information: Binary (or Dummy) Variables

Limited Dependent Variable Models and Sample Selection Corrections

6. **Regression Analysis with Time Series Data**

Basic Regression Analysis with Time Series Data

Univariate time series modelling and forecasting - MA, AR and ARMA process, Building ARMA models: the Box–Jenkins approach, Forecasting using ARMA models

Multivariate models - Vector autoregressive models

Modelling long-run relationships - Stationarity and unit root testing, Cointegration, Equilibrium correction or error correction models

Modelling volatility - Autoregressive conditionally heteroscedastic (ARCH) models,

Autoregressive conditionally heteroscedastic (ARCH) models

7. **Panel Data Methods**

Fixed Effects Estimation, Random Effects Models, The Correlated Random Effects Approach

8. **Carrying Out an Empirical Project**

References:

1. Grootaert C and K F Cheung (1985) *Household Expenditure Surveys: Some Methodological Issues*, Living Standard Measurement Study (LSMS) Working Paper No.22, World Bank
2. Wahab M A (1980) *Income and Expenditure Surveys in Developing Countries: Sample Design and Execution*, Living Standard Measurement Study (LSMS) Working Paper No.9, World Bank
3. Questionnaires and Surveys: A Free Tutorial http://www.statpac.com/surveys/
4. The World Bank Data and Resaerch Section www.econ.worldbank.org
5. Wooldridge, J (2016):***Introductory Econometrics A Modern Approach***, (6th Edition) South Western Cengage Learning.
6. Cameron, A C and Trevedi, P K (2005): ***Micro Econometric Methods and Applications***, Cambridge University Press.
7. Brooks Chris (2014): Introductory Econometrics for Finance (3rd Edition), Cambridge University Press, Cambridge.
8. Green, W (2004): ***Econometric Analysis***, Pearson Education, Delhi, 5th Edition.
9. Bhaumik S K (2015): ***Principles of Econometrics: A Modern Approach using E-views,*** Oxford University Press, New Delhi

Paper II: Two Optional Papers to be chosen

Optional Paper A: Advanced Micro Economics

i) Industrial organization, Regulation and Labour Economics
ii) Game Theory and Information
iii) International Economics: The New Trade Theories, Trade and Industrial Organization, Trade and Public Policy

References:

i) Tirole: Industrial Organization
ii) Papers from Journal
iii) Fudenberg and Tirole: Game Theory
iv) Laffont and Martimort: Economics of Incentives
v) Helpman and Krugman: Market Structure and Foreign Trade

Optional Paper B: Economics of Corruption

Brief

Corruption is an economic, political, and human rights problem. Almost every country on the planet has some form of corruption. Corruption can undermine economic growth and political stability; lead to efficiency losses; and impede access to resources such as credit or public health; and ultimately reduce governance credibility and effectiveness. Corruption distorts trade and investment flows and it can facilitate illegal activities such as trafficking in women, drugs, or money laundering. In this course, we propose to examine corruption from real world as well as scholarly perspectives. We will use case studies, debates, and items from the news to examine how corruption can affect effective governance at the national and international levels and its trade spillovers. We will also examine how new technologies and strategies (from cell phones to the Extractive Industry Transparency Initiative) can reduce corruption and improve governance.

Course Objective

Upon completing the course, students will:

• Understand the roots of corruption and its variants;

• Understand the debate among scholarly disciplines on corruption;

• Evaluate how corruption affects and distorts economic growth;

• Be able to assess global and national strategies to reduce corruption; and

• Evaluate how technology can facilitate and undermine accountability.

Reference:

- Biswas A.K. & S. Sengupta, 2015, Corrupt Importers, Domestic Producers & Welfare: Role of Trade Policy. Economics & Politics 27/3.
- Biswas, A.K. &SugataMarjit, Mis-invoicing and Trade Policy, Journal of Policy Reforms, Vol. 8, No. 3, 2005.
- Biswas, A.K. & M. Thum, Corruption, Environmental Regulation and Market Entry (), Environment and Development Economics, Vol. 22/1, February, 2017.
- Biswas, A.K., Farzanegan, M.R., and Thum, M. 2012, Pollution, Shadow Economy and Corruption: theory and evidence, Ecological Economics, 75, 114-125.
- Biswas, A.K., Import Tariff Led Export Under-invoicing: A Paradox, Journal of International Trade and Economic Development, Vol. 21/3, 2012.
- Marjit, S. & Shi, H. (1998), On Controlling Crime with Corrupt Officials, Journal of Economic Behaviour & Organization, 34.
- Marjit, S., Ghosh, S. & Biswas, A. K. (2007), Informality, corruption and trade reform, European Journal of Political Economy, 23.
- Mukherjee, D. &Png, I.P.L., (1995), Corruptible Law Enforcers: How Should They Be Compensated?, Economic Journal, 105, 145-159.
- Rose-Ackerman, S. (1975), The Economics of Corruption, Journal of Public Economics, 4, 187 – 203.
- Shleifer, A., &Vishny, R. (1993), Corruption, Quarterly Journal of Economics, 108.

Optional Paper C: Development Economics

Course Outline

1. Critical analysis of the paradigm of 'Development' based on accumulation and growth introduced during the first half of the 20th Century
2. Critical discussion on the present day ideas of 'inclusive growth' and 'development management' – Their relations with capital accumulation
3. Macro model involving formal sector, agriculture and informal sector in the context of a developing economy like that of India – critically analyzing the paradigm of 'inclusive growth'.
4. Macro model involving formal sector, agriculture and the government playing a developmental role (e.g., MGNREGP) in the context of a developing economy like that of India – critically analyzing the paradigm of 'development management'.

References:

1. Sanyal K. 2007. Rethinking Capitalist Development: Primitive Accumulation, Governmentality and Post Colonial Capitalism, New Delhi: Routledge.
2. Chakraborty, Saumya. 2016. Inclusive Growth and Social Change: Formal Informal Agrarian Relations in India, OUP
3. ChakrabortyAnjan, AnupDhar and ByasdebDasgupta 2016. The Indian Economy in Transition, Cambridge University Press
4. Chakraborty, Saumya. 2013. Interrogating inclusive growth: duality, complementarity, conflict, Cambridge Journal of Economics, doi:10.1093/cje/bet016

5. Chakraborty, Saumya. 2011. A macroeconomic structure of employment: peripheral – MS conflict in a Kaleckian framework, Review of Radical Political Economics, 43(2):172-197.

Optional Paper D: International Trade Theory

I. Introducing Competitive Trade Theory and New Trade Theory
(This is primarily based on leading journal articles)

II. Some Recent Developments in Trade Theory
(This is primarily based on leading journal articles)

Readings:

- ✓ R. Caves, J. Frenkel and R. Jones, *World Trade and Payments*, 4th edition,
- ✓ R. Jones, *International Trade: Essays in Theory*, North Holland,1979.
- ✓ P. Krugman, *Rethinking International Trade*, 1994, MIT press.
- ✓ Helpman&Krugman (1987): *Market Structure and Foreign Trade*, MIT Press
- ✓ H. Kierzkowski (ed.): *Monopolistic Competition and International Trade*, 1984, OUP
- ✓ R. Findlay: *International Trade and Development Theory*, Columbia University Press, 1973.
- ✓ S. Marjit: *International Trade and Economic Development- Theory and Policy*, OUP, 2008.
- ✓ T. Kikuchi (2013),Time Zones, Communications Networks, and International Trade, *Taylor and Francis*.
- ✓ Kikuchi, T., S. Marjit and B. Mandal, (2013), ”Trade with Time Zone Differences: Factor
- ✓ Market Implications," *Review of Development Economics*, 17(4), 699-711.
- ✓ Mandal, B., (2014), "Distance, production, trade and growth: A note," *Economics Discussion Papers 2014-14*, Kiel Institute for the World Economy.
- ✓ Marjit, S., (2007), “Trade Theory and Role of Time zones”, *International review of Economics and Finance*”, 16, 153-160.

- ✓ **Journal articles to be supplied during classes.**

Optional Paper E: Advanced Topics in Growth and Development Economics I

Unit 1 The long run Heckscher-Ohlin-Samuelson model.

- Two sector general equilibrium model, the Rybczinski theorem, endowment and the pattern of trade: the Heckscher-Ohlin theorem
- Commodity prices and factor prices, factor price equalization and the Stolper-Samuelson theorem.
- Inter-sectoral factor mobility and the relationship between the short-run and long run transformation schedule

Unit 2 Review of traditional Growth Models

Unit 3 The Solow Model as a bench mark and its extensions

Unit 4 The Representative Agent Neoclassical Macro Model or the Ramsey-Cass-Koopmans (Ramsey-Solow Model)

Unit 5 New Growth Theory

(Arrow Model, Barro Model, Lucas Model, Romer Model)

References:

- Jagdish N. Bhagwati, T. N. Srinivasan and ArvindPanagariya, Lectures on InternationalTrade, MIT Press, 1998
- Charles I Jones, Introduction to Economic Growth (2nd edition), W. W. Norton & Co.

(Indian edition: Viva Books Private Ltd., 2006)

- D. Romer, Advanced Macroeconomics (3rd ed), McGraw-Hill, 2006. Ch 3
- R J Barrow and Xavier, Sala-i-Martin, Economic Growth, McGraw-Hill, 1995.
- Robert Barro, Macroeconomics, MIT Press, 1997

Optional Paper F: Economic Development and Environmental Economics

Policy Instruments for Environmental and Natural Resource Protection

1. **The Need for Environmental and Natural Resource Policy**

A. Public Economics and Information
B. Adapting Models to Ecosystem : Ecology, Time and Space
C. The Evolution of Rights

2. **Policy Instruments for Protection**

A. Direct Regulation of the Environment
B. Experimental Evaluations of Policy Instruments

3. Selection of Policy Instruments

A. Efficiency of Policy Instruments
B. Role of Uncertainty and Information Asymmetry
C. Equilibrium Effects and Market Conditions
D. Politics and Psychology of Policy Instruments
E. Design of Policy Instruments

4. Imperfect Information and Optimal pollution control

A. Mechanism Design for the Environment
B. The Theory of Incentives: The Principle Agent Model

5. Policy Instruments for Industrial Pollution

A. Case study in developed countries
B. Case studies in Less Developed Countries

Reference

1. Sterner and Correa (2012):Policy Instruments for Environment and Natural Resource Management, Resources for the future
2. Jennifer Rietbergen-McCracken, Hussein Abaza (2014): Economic Instruments for Environmental Management: A Worldwide Compendium of Case Studies: Routledge.
3. Rohan D' Souza ed. (2012):Environment, Technology and Development: Critical and Subversive Essays edited: Orient Blackswan.
4. Karl Goran Maler and Jeffrey R. Vincent (2003): Handbook of Environmental Economics (Volume 1),: Environmental Degradation and Institutional Responses; Elsevier
5. World Development Report (1992): Development and the Environment; OUP
6. Baumol and Oates (1988): The Theory of Environmental Policy (2/e);OUP
7. Cornes and Sandler (1986): The Theory of Externalities, public goods and Club goods; OUP
8. Titenberg (1990): 'Economic Instruments for Environmental Regulation' Oxford Review of Economic Policy; March

Please note that relevant papers from various journals will be referred in class.

Optional Paper G: Indian Economic Problem

Course Outline

i) Critical assessment of strategies and policies for growth and development in India
ii) Development experience in India: a critical review

Ref:

i) A Bhaduri and D Nayyar: Intelligent persons' guide to liberalization
ii) Indian Council of Agricultural Research, New Delhi: Hand Book of Agriculture
iii) Hoda and Gulati: WTO negotiations on agriculture and developing countries
iv) Ashok Rudra: Myths and realities
v) Harriss-white: A political economy of agriculture markets in South India
vi) Mccalla and Nash: Reforming agricultural trade in developing countries
vii) Anderson and Martin: Distortions to agricultural incentives in Asia
viii) Gulati and Narayanan: The subsidy syndrome in Indian agriculture
ix) Anderson and Martin: Distortions to agricultural incentives in Asia
x) Asian Development Bank: Macro economic development and government finances
xi) T J Byres: Current debates on Indian economy
xii) Basu: India's emerging economy

M Phil Semester II

Paper III:Two Optional Papers to be chosen

Optional Paper A: Valuation of Environmental Resources and Services

Course Outline

1. Importance of valuation of Environmental Goods and Services in the context of Green Accounting, market failure and externalities

2. Total Economic Value (TEV) and its components

3. Different Valuation Methods: Revealed and Stated Preference Approaches

4. Contingent Valuation Method (CVM): Willingness to Pay (WTP) and Willingness to Accept (WTA)

5. Valuation of Environmental Services by Productivity Method: Theory and Application

6. Valuation of Environmental Amenities by Hedonic Price Method: Theory and Applications

7. Valuation of Recreational Services by Travel Cost Method: Theory and Applications

8. Valuation of Environmental Services by Averting Expenditure Method: Theory and Applications

Readings:

1. Hanley, Shogren& White: *Environmental Economics in Theory and Practice* (Mcmillan, India)
2. Bhattacharya R. N. (ed): *Environmental Economics: An Indian Perspectiv*e (Oxford University Press)
3. Kolstad C. D.: *Environmental Economics* (Oxford University Press)
4. Titenberg T.: *Environment and Natural Resource Economics* (6^{th} Ed) (Pearson education)
5. Conrad J. M.*: Resource Economics* (CambridgeUniversity Press)

[In addition, Journal articles on specific applications of different valuation methods will be identified by assignments given to the students]

Optional Paper B: Introduction to Health Economics

1.1. The economic way of thinking about health

Fuchs, Victor R. "What is Health Economics?" In The Future of Health Policy. Boston: Harvard University Press, pp. 27-40.

Weisbrod (1991) "The Health Care Quadrilemma: An Essay on Technological Change, Insurance, Quality of Care, and Cost Containment" Journal of Economic Literature 29(2): 523- 552

Fuchs (1996) "Economics, Values, and Health Care Reform," American Economic Review 86(1):1-24

1.2. Health measurement, determinants and long run trends

Health Measure?" Journal of Human Resources, 39(4), pp.1067-1093

Cutler, David, Angus Deaton and Adriana Lleras-Muney, "The Determinants of Mortality," Journal of Economic Perspectives, Vol 20, Number 3, Summer 2006.

Angus Deaton. 2013. The Great Escape, Princeton University Press. Chapter 1.

1.3. Health care spending – some facts

Aaron, H. and P. Ginsburg. 2009. "Is Health Spending Excessive? If So, What Can We Do About it?" Health Affairs, 28(5): 1260-1275.

NIHCM Data Brief, July 2012. The Concentration of Health Care Spending.

Kaiser Family Foundation, May 2012. Heath Care Costs: A Primer.

2. Economic Models of Health

Grossman, Michael. 1972. On the Concept of Health Capital and the Demand for Health. Journal of Political Economy 80 (2): 223–255.

Becker, Gary S., Tomas J. Philipson, and Rodrigo R. Soares. 2005. The Quantity and Quality of Life and the Evolution of World Inequality. American Economic Review. 95(1): 277-91.

Heckman, James J. 2007. The economics, technology, and neuroscience of human capability formation. Proceedings of the National Academy of Sciences, USA. 104(33):13250-5. Epub 2007 Aug 8. (see also https://www.aft.org//sites/default/files/periodicals/Heckman.pdf for a summary)

3. Health Insurance

3.1. Introduction and Moral Hazard

Manning, Willard; Newhouse, Joseph; Naihua, Duan; Keeler, Emmett; and Leibowitz, Arleen. “Health Insurance and the Demand for Medical Care: Evidence from a Randomized Experiment.” American Economic Review 77 (June, 1987): 251-277.

3.2. Adverse Selection in Health Insurance

Akerlof, George. “The Market for Lemons,” Quarterly Journal of Economics, 84, August 1970: 488-500.

Michael Rothschild and Joseph Stiglitz, “Equilibrium in Competitive Insurance Markets: An Essay on the Economics of Imperfect Information,” Quarterly Journal of Economics, 90 (4), November 1976, pp. 630-649.

Krugman, Paul, “Health Economics 101,” New York Times, November 14, 2005.

Cutler, D. and Reber, S. “Paying for Health Insurance: The Trade-Off Between Competition and Adverse Selection,” Quarterly Journal of Economics, May 1998:434- 466.

Gruber, Jonathan, “Why We Need the Individual Mandate,” Center for American Progress Report, April 8, 2010.

4. Unhealthy behavior: evidence and policyissues

Fenelon, Andrew and Samuel H. Preston. 2012. Estimating Smoking-Attributable Mortality in the United States. Demography. 49: 797-818.

Becker, Garry S. and Murphy Kevin M., “A Theory of Rational Addiction,” Journal of Political Economy, 1988; 96(4):675-700.

Manning W. G., E.B. Keeler, J. P. Newhouse, E. M. Sloss and J. Wasserman, “Taxes of Sin: Do smokers and Drinkers pay their way?,” Journal of the American Medical Association 261(11), 1989

Cutler, Glaeser, and Shapiro (2003) “Why Have Americans Become More Obese?” NBER Working Paper #9446

Lakdawalla, Philipson, and Bhattacharya (2005) “Welfare-Enhancing Technological Change and the Growth of Obesity” American Economic Review 95(2):253-7.

Bhattacharya J and Sood N (2010) “Who Pays for Obesity” Journal of Economic Perspectives

5. Health and economic development

Acemoglu, Daron and Simon Johnson. 2007. Disease and Development: The Effect of Life Expectancy on Economic Growth. Journal of Political Economy. 115(6): 925-85.

Thomas, Duncan et al. (2006). "Causal Effect of Health on Labor Market Outcomes: Experimental Evidence," mimeo, UCLA.

Alwyn Young. The Gift of the Dying: The Tragedy of AIDS and the Welfare of Future African Generations. Quarterly Journal of Economics, 120(2):423-466, May 2005.

Bleakley, C. Hoyt. 2007. Disease and development: Evidence from hookworm eradication in the American South. Quarterly Journal of Economics 122(1): 73-117.

Bleakley, C. Hoyt. 2010b. Malaria in the Americas: A Retrospective Analysis of Childhood Exposure. American Economic Journal: Applied, 2(2):1-45, April.

Bleakley, C. Hoyt. 2010a. Health, Human Capital, and Development. Annual Review of Economics, 2:283–310.

Change, Insurance, Quality of Care, and Cost Containment." Journal of Economic Literature, 29 (1991): 523-552.

Fisher, Elliot, Jonathan Skinner and Douglas Staiger, "Is Technological Change in Medicine Always Worth It? The Case of Acute Myocardial Infarction," Health Affairs, Web Exclusive, February 7, 2006.

Kremer, Michael, "Pharmaceuticals and the Developing World," Journal of Economic Perspectives, 16(4): 67–90, 2002.

Cutler and McClellan (2001) "Is Technological Change in Medicine Worth It?" Health Affairs,

Optional Paper C: Sustainability and Economic Policy

1. **Foundations of Sustainability; relevance for Economics**

   (i) Introduction to Sustainability Science - What is Sustainability? What is the Economics of Sustainability

   (ii) Foundations of Sustainability and the Relevance of Economic Thought

2. **Sustainability Challenges: The Environment**

   (i) Global, Regional and Local Environmental Change

3. **Sustainability Challenges: Socio-economic issues**

   (i) Global, regional and local issues

   (ii) Linked ecosystems and socio-economic systems

   (iii) From Sustainability Challenges to Sustainable Development; Efforts towards Sustainable Development; Sustainability entering the policy realm. History, Interpretations, and Meaning

4. **Present efforts towards Sustainable Development**
5. **Measuring Sustainability: Macroeconomic Approaches**

Is Prosperity without Growth possible?

6. **Measuring Sustainability: Microeconomic approaches**

(i) Neoclassical/ marginalist economics approach - Valuing environmental amenities;
(ii) Ecological economics approaches: ecosystem services valuation; the economics of ecosystems and biodiversity

7. **Modeling Sustainability: social-ecological systems**

(i) Quantitative methods: Dynamic optimization; System dynamics; Agent-based models

8. **Governance of Sustainability**

References

Alberti, M. 1996, Measuring urban sustainability, Environmental Impact Assessment Review, 16:381-424.

Arrow, K.J., Ehrlich, P. and Levin, S.A., 2013, Some perspectives on linked ecosystems and socio-economic systems (June 29, 2013). Available at SSRN: https://ssrn.com/abstract 2287329 or http://dx.doi.org/10.2139/ssrn.2287329

Barbier, E.B. and Burgess, J. C., 2017, The Sustainable Development Goals and the systems approach to sustainability, Economics: The Open-Access, Open-Assessment E-Journal, 11 (2017-28): 1-22. http://dx.doi.org/10.5018/economics-ejournal.ja.2017-28

Bartelmus, P., 2012, Sustainability economics: an introduction, Routledge.

Barnosky, A.D., 2012, Approaching a state shift in Earth's biosphere, Nature 486, 52-58. doi:10.1038/nature11018

Baumgartner, S. and M. Quaas, 2010, What is sustainability economics? Ecological Economics, 69(3), 445-450.

Clayton, A.M.H. and N.J. Radcliffe, 1996, Sustainability: a systems approach, Routledge, 270 pages.

Costanza, R. et al., 2015, An Introduction to ecological economics, 2nd edition, CRC Press.

deVries, B.J.M., 2013, Sustainability science, Cambridge, U.K., Cambridge University Press.

Fragkias, M. 2016, Urbanization, economic growth and sustainability, The Routledge Handbook of Urbanization and Global Environmental Change, Seto, K.C., Solecki, W.D. and Griffith, C.A. (Eds.), London, U.K., Routledge.

Harris, G., 2007, Seeking sustainability in an age of complexity, Cambridge, U.K., Cambridge
University Press
Hawken, P. et al., 1999, Natural capitalism, Boston, MA: Little Brown and Co.
Heal, G., 1998, valuing the future: economic theory and sustainability, Columbia University
Press.
Heal, G., 2012, Reflections - defining and measuring sustainability, Review of Environmental
Economics and Policy.
Heckbert, S. Baynes, T. and A. Reeson, 2010, Agent-based modeling in ecological economics,
Issue: Ecological Economics Reviews, Ann. N.Y. Acad. Sci, 1185, 39-53.
Levin, S. et al., 2013, Social-ecological systems as complex adaptive systems: modeling and
policy implications, Environment and Development Economics, 18(2), 111-132.
Matson, P., Clark, W.C., Andersson, K., 2016, Pursuing sustainability: a guide to the science and
practice, Princeton University Press
Norgaard, R.B., 2017, Sustainability: Growing pains, Nature 542, 162. [doi:10.1038/542162a]
Pearce, D. and E. Barbier, 2000, Blueprint for a sustainable economy, Earthscan.
Rao, P.K. 1999, Sustainable development: economics and policy, Blackwell Publishing.
Rockstrom, J. 2009, A safe operating space for humanity, Nature, 461, 472-475
Ruth, M., 2006, A quest for the economics of sustainability and the sustainability of economics,
Ecological Economics, 56, 332-342
Steffen, W., P.J. Crutzen, J.R. McNeill, 2007, The Anthropocene: are humans now overwhelming
the great forces of nature?, Ambio 36(8): 614-621.
Solow, R., 1993, Sustainability: an economist's perspective, Economics of the Environment:
Selected Readings, Vol. 3, pp. 179-187
Soubbotina, T. P., 2004, Beyond economic growth: an introduction to sustainable development,
Second Edition. Washington, DC: World Bank. World Bank.
https://openknowledge.worldbank.org/handle/10986/14865 License: CC BY 3.0 IGO.
TEEB, 2010, The Economics of Ecosystems and Biodiversity: Ecological and Economic Foundations. Edited by Pushpam Kumar. Earthscan, London and Washington.
http://www.teebweb.org/our-publications/teeb-study-reports/ecological-and-economic foundations/#.Ujr1xH9mOG8

Optional PaperD: Water Economics and Governance

Overview

This course aims to discuss the integrities of economics principles and governance for sustainable water management. The course will largely cover topics including the basic concept of economics of water resources, sustainable water uses, water rights, valuing and pricing water with various pricing models, methods of economic evaluation of water projects, water governance in India including water policies and water acts. The purpose of this course is to instill in students the comprehensive knowledge and understanding on the economics of water resources and economics involved in water management.

Syllabus

1. Introduction: General outlines; Water availability and uses: national and international scenario; Challenges in water management.

2. Economics of Water Resources: Water as an Economic Resource, Optimal Extraction of Groundwater

3. Water Rights: Need of water rights; Right to Water; Entitlements and criteria.

4. Water Sustainability: Concept of sustainable water uses; The Dublin statement; Sustainable water management with economical, engineering, ecological and social viewpoints; Stakeholders' participation.

5. Valuing Water: The use and non-use values of water; Valuation methods; Non-revenue waters (NRW) and unaccounted for water (UFW); Metering water uses; Water management through economic instruments.

6. Water Pricing - Approach and Models: Significance of water pricing; Average and marginal cost pricing; Short run marginal cost pricing; Water pricing models - flat rate, uniform rate, increasing block tariff and seasonal rate models.

7. Water Governance: Elements and dimensions of water governance; Building blocks; Effective water governance schemes; Benchmarking water governance; Indicators of good governance.

References

1. Griffin C. Ronald, (2016) "Water Resource Economics: The Analysis of Scarcity, Policies, and Projects". The MIT Press, USA.

2. DinarAriel and Kurt Schwabe (2015) "Handbook of Water Economics". Edward Elgar, USA

Note:

Relevant papers would be given in class for further study.

Optional Paper E: Advanced topics on Growth and Development Economics II

Course Outline

Labour market distortions (labour unions, unemployment etc.) and endogenous growth.

Environmental pollution and endogenous growth.

Public capital and endogenous growth.

Review of traditional growth models, efficiency results, barriers to growth, technical progress. AK models of growth/growth models with linear production functions - alternative foundation.

Education and growth. Market structure and innovation. Obsolescence, Schumpeterian growth. Distribution and Political Economy of growth. Open growing economies, trade policies.

References:

Income Distribution in Macroeconomic Models, by G. Bertola, R. Foellmi, J. Zweimuller, Princeton University Press, 2005.

Optional Paper F: International Trade Policy

1. Instruments of Trade Policy Import Tariffs and Export Subsidies, Import Quotas and Voluntary Export Restraints, Welfare Analysis of Trade Policies.

2. The Political Economy of Trade Policy The Case For and Against Free Trade, Voting Models of Trade Policy, International Trade Agreements.

3. Outsourcing of Goods and Services Definition, Value Chain, and a Model of Outsourcing.

4. Economic Growth and International Trade; Developing countries and International Trade as a vehicle; Factors of Production, Technology,Large country/Small country

Reference list

- R. Caves, J. Frenkel and R. Jones, *World Trade and Payments*, 4th edition.
- P. Krugman, M. Obstfeld& M. Melitz, *International economics – Theory and Policy*, Pearson Education, 10th Edition.
- Robert C. Feenstra: *Advanced International Trade:Theory and Evidence*.Princeton University Press.

- R. Findlay, *International Trade and Development Theory*, Columbia University Press, 1973.
- S. Marjit, *International Trade and Economic Development- Theory and Policy*, OUP, 2008.
- J. Daniels, L. Radebaugh, D. Sullivan& P. Salwan, *International Business*, 16th Edition (Pearson Education)
- E. Helpman, *Globalization and Inequality*, Harvard University Press, 2018.
- J. Stiglitz, *Globalization and Its Discontents*, WW Norton and Company, 2002.

Paper IV

Group A: Term Paper
Group B: Book Review

M Phil Semester III

Review of Literature/Work in Progress

M Phil Semester IV

Dissertation

PhD Course Work

Course I and **Course II** are same as Paper I and paper II in M Phil semester I respectively

Course III
Review of Literature

Head
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