

Syllabus:

Application of Contract Theories in Environmental Economics and Development Economics: Some New Perspectives

1 Aims

The main aim of the course is to help the participants develop conceptual and analytical frameworks to analyze sustainable development problems using advanced contract theories and game theories. The course will help students understand development economics theories and their latest developments. The course covers three major parts:

1. A General Analytical Framework (2-4 lectures)

- What Is Sustainable Development? – Economics Perspectives
- Analytical Methodologies
 - Review some contract theories
 - Review some game theories

2. Environmental Perspective of Sustainable Development: What Should A Regulator Know & Do? (4-8 lectures)

- Environmental Economics: Problems
 - Externalities in general
 - Non point source water pollution
 - Deforestation and Concession Schemes
 - Biodiversity, Endangered Species and Invasive Species
- Regulatory Tools and Informational Problems: Theory and Practice
 - Property Right Approach – Economics of Land Takings and others
 - Price Mechanisms – Pigouvian Tax and Ambient Tax revisited
 - Contract Mechanisms
- Applying Contract Theory in Environmental Economics: A Dual Information Collection Model and EU Case Studies
 - Status Information Asymmetry
 - Ability Information Asymmetry
 - Dual Information Asymmetry and Biodiversity Conservation
- Diffusion of Environmental Policies
 - Review of Diffusion Literature in Political Science, Sociology and Economics
 - Interactive Diffusion Process Between Structure and Legitimacy: A Game Theoretical Model
 - Application 1: Diffusion of Eco-labeling
 - Application 2: Diffusion of Sustainable Development Plans after Rio 1992

3. Economic Growth Perspective of Development: Why Does Income Growth Diverge Across Countries? (5- 8 lectures)

- Review of Growth Models and Recent Literature on Poverty Traps

- Classical Growth Models: What are the ideas?
 - More Recent Theoretical Development and Empirical Studies
- Poverty Measures Across Countries: Theory and Practice
 - Poverty Indices (Headcount ratio, poverty gap, poverty depth, and Sen's measure): theoretical and practical problems
 - Inequality Measures: theoretical and practical problems
 - An example: Semi Parametric Estimates of Measuring Error in Ethiopia's 2000 Household Survey Data
- Poverty Traps Mechanisms: Human Capital Trap and Credit Rationing Trap
- Rural Credit Market: Formal Institutions and Informal Institutions – A Dynamic Game Model
 - Stiglitz's peer review and crow out
 - Besley's account of informal institutions
 - A dynamic game model of ROCAS
 - Thoughts on China's Hui.
- Land Tenure and Investment : A Dynamic Contract Model and A Case Study of Pakistan

2 Objectives

Upon completing the course, the participants should have

- Acquired knowledge and understanding of how latest economic theories approach sustainable development problems.
- Acquired knowledge and understanding of development economics theories, contract theories, and dynamic game theories.
- Acquired knowledge and understanding of
 - i) the merits of various regulation instruments, such as environmental taxes, performance standards and pollution permits, and
 - ii) the role that the market mechanism can play in controlling environmental problems.
 - iii) Different policy diffusion models
 - iv) How does structure factor interact with legitimacy factor in public policy diffusion? How is political feasibility modeled?
- Acquired knowledge and understanding of
 - i) What are poverty traps and how they become possible?
 - ii) Concepts such as multiple equilibria, path-dependent, and coordination failure etc.
 - iii) How do informal institutions have "peer review" as well as "crowded out" effect on formal institutions?
 - iv) How does land tenure structure impact on investment?

3 Timeline of Lectures

About ten to twenty lectures will be given at two universities within one month. Specific structure of teaching at either university will depend on university's arrangement.