

AGRARIAN INSTITUTIONS, CONTRACTS AND BARGAINING MODELS: THEORY AND APPLICATIONS

Instructors

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Course Description

For many co-ordination, allocation, monitoring, and control problems in the agricultural sector markets are not the only possible solution. There is a wide range of alternatives to exchange systems which are characterized as contractual arrangements, hierarchical structures, collective actions or partnership solutions. It is the aim of this module to introduce scholars into the modeling of these schemes. From a more general perspective, the arrangements can be summarized as agrarian institutions which have a wide range of applications, especially in resource allocation problems as well as monitoring and control of the provision of services. Institutions and the design of collective action schemes are also topics which are of major interest in resource and environmental economics. Especially incentive schemes and management of common pool resources are important topics which require an understanding of behavior and its modeling. For example, participants will be introduced to the conceptual outline of bargaining models and their structuring based on interest functions, definitions of potential interactions and designs of contractual arrangements. Applications will be on water management, provision of landscape elements and nature production.

Course Outline

1. Introduction

- Definition of (Agrarian) Institutions
- Transaction Costs
- Efficient Institutions
- Theories on Institutional Change

2. Principal-Agent Modeling

- Concept
- Contract Derivation
- Deterministic Solution
- Risk Implementation
- Stochastic Solution

3. Share Cropping

- Reference and
- Comparative Statics and Comparison to Market Solutions

4. Collective Action

- Hierarchical Coordination
- Common Property Management

5. Incentive Schemes

- Adverse Selection

- Truth Telling Mechanism
- Scheme Design
- 6. Application to Agri-Environmental Schemes**
- Hidden Information
- Differentiation of Programs
- 7. Political Economy Bargaining Models**
- Structure
- Exchange Mechanism
- Power Functions
- Negotiation Depiction
- Solving Models and Implementation
- 8. Partnership Solutions to Free-Riding Problems**
- The Heintzelman Approach
- Options for Applying the Approach

Teaching methods

Lectures (50%), seminar style (30%), PC demonstrations (10%), hands-on exercises (10%)

Grading

Presentation (30%), assignments (70 %), participation (20 %)

Credit points

3

Requirements

Knowledge on Calculus, Common Property Problems, and Optimization Techniques

References

- BARDHAN, P. (1989): *The Economic Theory of Agrarian Institutions*, Clarendon Press, Oxford.
- CANTON, J., DE CARA, S., AND P.-A. JAYET (2009) Agri-environmental schemes: Adverse selection, information structure and delegation. *Ecological Economics* 68 (2009), pp. 2114–2121.
- HEINTZELMAN, M.D., SALANT, S.W., SCHOTT, S., (2009): Putting Free Riding to Work: A Partnership Solution to the Common-Property Problem. *Journal of Environmental Economics and Management* 57, pp. 309–320.
- LAFFONT, J.J. AND J. TIROLE, A (1994): *Theory of Incentives in Procurement and Regulation*. MIT Press, Cambridge.
- MOXEY, A., WHITE, B., AND A. OZANNE (1999): Efficient Contract Design for Agri-Environment Policy *Journal of Agricultural Economics*, Vol.50, No. 2, 187-202
- NUPPENAU, E.-A., BABU, T.S. (2009): Bargaining for Risk Reduction; A Political Economy Model on the Specification of Regulations in the Use of GM Crops. *Yearbook of Socioeconomics in Agriculture*. Schweizerische Gesellschaft für Agrarwirtschaft und Agrarsoziologie, pp. 113-142.
- RICHTER, G. FURUBOTN, E.,G. (1997): *Institutions and Economic Theory: An Introduction to and assessment of New Institutional Economics*. Ann Arbor.
- ZUSMAN, P. (1976): The incorporation and measurement of social power in economic models. "International Economic Review", Vol. 17, No. 2, pp. 447-462.

Software
GAMS

Language
English or German (depending on participants)

Organization and time
as a one-week module at Justus Liebig University in Giessen.
For further information contact Prof. Dr. Ernst-August Nuppenau (ernst-august.nuppenau@agrار.uni-giessen.de; Tel. 0641 99 37022). The next course will take place from August 13 to August 17, 2012.