

Course description

Analysis of Imperfect Markets

1. Course name, ECTS, quarter/semester, contact hours

Analysis of Imperfect Markets, 3 ECTS, 3 quarter, 42 contact hours

2. Author of the course

Sergey Kokovin, leading scientist Department of economics, cand.phis-mat.science

3. Outline

The course is intended to extend knowledge of Microeconomic from graphs and ideas used in the 1st grade of university to proofs of effects, alike Varian's book. It starts with perfect market as a baseline, and then considers on-by-one several typical market imperfections, discussed in microeconomics: taxes, externalities, imperfect information (leaving aside risk considered in courses of Finance and oligopoly considered in IO). The stress is on developing logic and abilities to solve the models and *prove* main effects known in these fields, rather than memorizing some information without proofs.

4. Structure and content

1. Perfect Markets

Walras equilibrium in Arrow-Debreu economy: Differential characteristic.

Pareto-optimum and its Differential characteristic. 1st and 2nd welfare theorem. Counterexample to the theorem.

2. Quasi-linear economy

Definition of the quasi-linear economy.

Characterization of the Pareto-optimal states of quasi-linear economy. The indicator of welfare.

Manufacturer's and the consumer's programs in a quasi-linear economy. The consumer surplus.

Characterization of demand functions.

The existence of a representative consumer.

3. Taxes

Taxing consumption in general equilibrium. Optimality condition.

Taxes on the purchase (sale) in general equilibrium. The theorem of optimality.

Optimum second-best: taxes in partial equilibrium. The net loss, the problem of minimizing the non-interacting with the markets (problem Ramsey).

4. Externalities

Economy model with externalities. The problem of externalities. Determination of market equilibrium and Pareto optimum, their characteristics. Theorem on the fail-balance. Discussion of the possibility of Pareto improvement

Solutions to the problem of externalities (basic idea): the quota for externalities, taxes on externalities (Pigou taxes), market externalities (the optimal balance), bargaining, trade quotas externalities.

5. Public goods

The concept of public goods. Optimality conditions for the economy to the public good.

Model of the economy with public goods: voluntary funding, Lindahl equilibrium, equity financing mechanism Groves- Clark.

6. Markets with asymmetric information

Akerloff model with continuous and discrete quality.

Models of contracts (Principal-Agent) with complete information.
Model with hidden action. Model with hidden information

5. Prerequisites

Basic calculus, Optimization, Basic micro, Game theory

6. Assessment

- written examination 60 %
- homeworks - 20%
- class performance - 10%
- attendance of lectures 10%