

Jan Evangelista Purkyně University in Ústí nad Labem

Faculty of Environment

Study material

APPLIED ECONOMIC THEORY AND EXPERIMENTS

doc. Mgr. PhDr. Silvester van Koten, Ph.D.



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MINISTRY OF EDUCATION,
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Objectives

The course focuses on applied economic problems such as extractive (too high) prices, lack of competition, monopoly (mis)behaviour, environmental degradation and how microeconomics, game theory and experimental economics can contribute to addressing these problems. The concepts of supply and demand, profit maximization, Nash equilibria, and imperfect information are applied to analyze these problems. The course is interactive as economics experiments are used to support and deepen learning, as well as to teach students how to formulate an economics experiment themselves.

Study topics

In the course we will draw upon the insights of microeconomics, game theory and experimental economics to investigate a number of practical issues.

The first part focuses on competition. The basic theory of supply and demand is presented, and – in an interactive session – exchange market competition is explored and how experimental economics contributes to a better understanding in different settings. The practical issue of extractive (too high) prices is addressed by covering the theory of monopoly and monopolistic behavior. Next, we focus on the concept of the Nash equilibrium, and apply this on a number of well known games (such as the prisoners' game) using experiments. The concept of a Nash equilibrium is then used to address cournot competition and it is shown that extractive prices are often still an issue in oligopolic markets. Governmental regulation is often applied, but the effect of imperfect information is highlighted.

The second part focuses on the problem of public or common goods, such as the quality of the environment. The problem of wrong or insufficient incentives is addressed as the underlying cause for the existence of externalities and public goods. Again, experiments will be used to highlight these concepts.

The third part focuses on auction, and the different types, such as private versus common value and single-unit versus multi-unit auctions. Auctions play an important role in creating markets, often instead of (regulated or unregulated) monopolies. An example, addressed in an experiment is that of the cap-and-trade program addressing decarbonization efforts such as in the EU and California.

Study literature

Obligatory literature

EASLEY, David and Jon KLEINBERG. Networks, crowds, and markets: reasoning about a highly connected world. New York: Cambridge University Press, s. 249-259, 2010. ISBN 978-0521195331.

HOLT, Charles A. Boston: Pearson Addison Wesley, 2007. ISBN 978-0321419316.

PERLOFF, Jeffrey M. Microeconomics: theory and applications with calculus. Fourth edition. Boston: Pearson, 2017. ISBN 978-0134167381.

PERLOFF, Jeffrey M. Microeconomics. 8th edition. New York, NY: Pearson, 2018. ISBN 978-0134519531.

VAN KOTEN, Silvester a Andreas ORTMANN. Structural versus behavioral remedies in the deregulation of electricity markets: An experimental investigation motivated by policy concerns. *European Economic Review*. 2013, 64, 256-265. DOI: 10.1016/j.euroecorev.2013.09.004. ISSN 0014-2921.

VARIAN, Hal R. Intermediate Microeconomics: A Modern Approach. 9th Edition. W.W. Norton & Company, 2014. ISBN 978-0393123975.

Recommended literature

ALLAZ, Blaise a Jean-Luc VILA. Cournot Competition, Forward Markets and Efficiency. *Journal of Economic Theory*. 1993, 59(1), 1-16. DOI: 10.1006/jeth.1993.1001. ISSN 0022-0531.

LE COQ, Chloé a Henrik ORZEN. Do forward markets enhance competition? 2006, 61(3), 415-431. DOI: 10.1016/j.jebo.2004.11.012. ISSN 0167-2681.

ROLAND, Gérard. Transition and economics: politics, markets, and firms. Cambridge, Mass.: MIT Press, s. 205-209, 2000. ISBN 02-621-8203-3.