Master Course: Microeconomics

Markus Walzl*

Winter 2012-13

Objectives

The course provides an introduction into modern microeconomics. Students will be trained in applications of the standard microeconomic toolkit at an advanced level of mathematical and conceptual rigor. Central goal of the course is the mastery of key techniques of microeconomics such as the axiomatic analysis of individual choice with and without uncertainty, and the computation of equilibria in closed economies and games. Special emphasis is given to situations of strategic interaction with incomplete and asymmetrically distributed information with applications to incentive and insurance theory, financial and labor contracting, and industrial economics.

Conceptually, the course is divided into three phases: In the first two weeks, we will analyze individual decisions (among certain and uncertain prospects) in isolation. The second two weeks will discuss competitive markets where such individual decisions are aggregated to demand and supply and form a market equilibrium. The final two weeks start with the observation that the positive welfare results derived for competitive markets break down as soon as the strategic interaction and informational asymmetries between market participants become pronounced. In these cases, markets alone will not yield efficient resource allocations. We therefore discuss economic institutions such as contracts and auctions that are able to (partially) overcome this market failure.

Staff

Lectures are given by

- Markus Walzl, Professor of Economics, markus.walzl@uibk.ac.at, Office hours: Feel free to contact him right after class or make an appointment via email.

The Proseminar is organized by

- Christopher Kah, christopher.kah@uibk.ac.at, Office hours: Feel free to contact him right after class or make an appointment via email.

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Lecture and Proseminar

Lectures will discuss the corresponding reader and provide illustrative and relevant examples and applications. The proseminar will deal with exercises that deepen your understanding of the key concepts and techniques and prepare you for the exam.

Literature

Textbooks on microeconomic theory

- Jehle, Geoffrey A.; and Philip J. Reny (2011). Advanced Microeconomic Theory. Addison Wesley, 3rd Edition.

- Gravelle, H. and R. Rees, Microeconomics, London: Prentice Hall, 3.Auflage, 2004.

- Varian, H.R., Intermediate Microeconomics, New York: Norton, 5.Auflage, 1999.

- Kreps, D., A Course in Microeconomic Theory, New York: Harvester Wheatsheaf, 1990.

- Mas-Colell, A., Whinston, M. und J. Green, Microeconomic Theory, Oxford: Oxford University Press, 1995 (the impressive standard book, but a little bit beyond the level of the course).[1]

Further reading

- McAfee, P., Introduction to Economic Analysis, CalTech 2006, lecture notes available via OLaT.

- Milgrom, P. and J. Roberts, Economics, Organisation and Management, London: Prentice Hall, 1992 (a standard book on managerial economics, provides a treatment of the topics from a more practical perspective)

- Gibbons, R.: A Primer in Game Theory, 1. Aufl., New York, Harvester/Wheatsheaf, 1992 (Alternative title: Game Theory for Applied Economists – very good introduction into standard game theory)

- Binmore, K.: Fun and Games, 1. Aufl., Lexington, Mass: D.C. Heath and Company, 1992 (a non-standard introduction into game theory)

- vanZandt, T.: Introduction to the Economics of Uncertainty and Information, INSEAD 2002, lecture notes, available via OLaT.

More references will be provided on the lecture slides and will be available via OLaT.

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[1] One of these five textbooks on advanced microeconomics will do for this course, references for the different topics are typically given for Jehle and Reny

Schedule

Week 1: Preferences, Choice, and Utility (7-12-12)

In particular in connection with the most recent financial crisis, economists have been frequently criticized for using a highly artificial and unrealistic model of individual decision making: rational payoff maximization. While numerous laboratory experiments indicate that payoff maximization is not a very accurate description of individual decision making, violations of rationality are less straightforwardly identified in simple problems of choice. In the first week, we will introduce and discuss the key concepts of individual decision making (preferences and choice). Specifically, we will ask when a choice is regarded as a rational choice and when the individual's preferences can be represented by a utility function. As we shall see, it is not so much the general framework of rational choice that yields unrealistic predictions and motivates debatable policy advice but simplifying assumptions that are all too popular in the literature on applied economics.

Literature: vanZandt ch. 1.1, Jehle and Reny ch. 1.2

Week 2: Decision making under uncertainty (14-12-12)

Many important choice problems have a particular structure. When deciding upon insurance or an investment, we consider alternatives that generate different outcomes with certain probabilities (i.e. the alternatives are probability distributions over outcomes – this is what an economist calls a lottery). Without having an accident an insurance just reduces my income but with an accident (that may happen with a small, but positive probability) my expenses are covered. We will discuss when it is appropriate to analyze choices between lotteries using expected utility theory, and when it is necessary to use alternative models. As an application, we will analyze choices in insurance markets and ask how to identify a competitive insurance market.

Literature: vanZandt ch. 1.2 and Reny ch. 2.4

Week 3: Consumption and Exchange (11-01-13)

Perhaps the most intensively studied decision in economics is consumption. We will review consumer theory as discussed in undergraduate studies and translate the concepts into the choice framework that we established in the first week. But given the consumption decision for a given budget, how can markets arise when individuals are endowed with certain commodities that they may want to exchange? And what are the welfare properties of such markets? To consider an example from practice: What would be the benefit of a platform that allows students in the Bachelor programs to exchange their Proseminar slots, or why does the EU insist that start and landing slots at airports not used by the purchasing airline are exchanged with other airlines?

Literature: Jehle and Reny ch. 1.3 and 5.1.

Week 4: General Equilibrium (18-01-13)

The positive welfare effects of exchange can be translated into economies with production, provided that these economies are competitive, i.e., economic agents are equally well informed price takers. We shall see that under very general assumptions on preferences and production opportunities, market clearing in a competitive equilibrium ensures a Pareto efficient coordination of demand and supply. This coordination effect is the most important benefit of a competitive market. In reality, however, deviations from assumed information symmetry and price-taking behavior may lead to market failures and a resulting scope of government intervention and economic institutions.

Literature: Jehle and Reny ch. 5.3

Week 5: Contracts and Incentives (25-01-13)

One reason for market failure which is in particular prominent in corporate governance or insurance and financial markets is the information asymmetry created by actions by some market participants that are unobservable to other market participants. Consider, for instance, a manager whose actions are not perfectly monitored by the board or a bank that receives government aid but is only imperfectly controlled by the government. In these situations, incentive contracts can provide a partial remedy. We shall discuss the optimal design and the limits of such contracts and the empirical validity of our findings.

Literature: Jehle and Reny ch. 8.2 and 8.3

Week 6: Trade mechanisms (01-02-13)

As information asymmetries may induce market failures, it seems natural to ask in how far trade institutions can be designed to overcome this problem. In particular, auctions are a very promising tool in this regard. We shall discuss the optimal design of auctions (or trade mechanisms in general) in public procurement and Consumer-to-Consumer trade. This explains to some extend why auctions are so prominent for a wide variety of applications ranging from the allocation of governmental licenses to the selling of unique pieces of art at Sotheby's or millions of mobile phones on eBay.

Literature: Jehle and Reny ch. 9.1-9.3