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Course **Regulation: Theory and Practice (Advanced)**
Nr.1236 (V) D/MA/Dok
Prof. Dr. Höffler

Lecture: Tuesdays (starting from April 8th 2014) 17:45h - 19:15h
             Hörsaalgebäude, Hörsaal F
Class: Wednesday (starting from April 16th 2014) 12:00 – 13:30h
             Philosophikum, S54

Regulation is one of the most important policy applications of microeconomics. This course focuses on the regulation of network industries, like telecommunications, energy, or rail. It aims at providing a thorough understanding of the underlying theory, but we will spend considerable time relating the theory to important policy applications. The course is suitable for advanced Master students and PhD students. Participants should have a very solid knowledge of standard microeconomics and game theory. Special expertise in information economics / contract theory will help, but is not a must.

The course consists of a lecture and a (voluntary) class / reading group. In class, we will discuss problem sets but we will also have a closer look at some of the articles. Participants are also invited to propose alternative material, or to discuss ideas for own research.

Syllabus

Part 1: Introduction: Privatization and Liberalization

We introduce the topic. A typical sequence in many regulated industries is that the sectors were originally run as state operations. These operations were first privatized, then opened to competition, and finally, to enable competition, became subject to sector specific regulation. In the beginning, we ask why and when privatization makes sense, and what could be benefits from introducing competition.

- Klaus M. Schmidt, Incomplete contracts and privatization, *European Economic Review* 1995, 569-579.
- Klaus M. Schmidt, Managerial incentives and product market competition, *Review of Economic Studies* 1997, 191-213.

Part 2: Optimal Final Customer Pricing

We lay the foundation for optimal price regulation by looking at optimal pricing under symmetric information as a (second best) benchmark. We deal with natural monopoly and Ramsey-Boiteux pricing.

- W. J. Baumol, J.C. Panzar, and R. D. Willig: Constestable markets and the theory of industry structure, Harcourt Brace Jovanovich 1988, 1-29.
- Ronald R. Brautigam, Optimal policies for natural monopolies, Handbook of Industrial Organization, Elsevier 1989, 1289-1346.
- Felix Höffler, Monopoly prices and Ramsey-Boiteux prices: Are they "similar", and: Does it matter? *Journal of Industry, Competition, and Trade* 2006, 27-43.
- Thijs ten Raa, Monopoly, Pareto and Ramsey Mark-ups, *Journal of Industry, Competition, and Trade* 2009, 57-63.

Part 3: Price cap regulation

Among the "more economic approaches" to regulation, price caps are the most popular concept among regulators. We analyze an interesting classical "non-Bayesian" approach and discuss the value of models with myopic players.

- Ingo Vogelsang and Jörg Finsinger, A regulatory adjustment process for optimal pricing by multiproduct monopoly firms, *Bell Journal of Economics* 1979, 157-171.

Part 4: Improving productive inefficiency

In regulatory practice, in particular in energy regulation in Germany, some form of yardstick competition (in Germany referred to as "incentive regulation") is frequently used. We want to understand the theoretical concept behind this, which again is a "non-Bayesian" approach, and compare it to the classical Bayesian approaches of regulation under asymmetric information. The latter is essentially an application of a standard problem of moral hazard plus adverse selection.

- Andrei Shleifer, A theory of yardstick competition, *RAND Journal of Economics* 1985, 319-327.
- Jean-Jacques Laffont and Jean Tirole, A theory of incentives in procurement and regulation, MIT Press 1993, 84-86 und 53-63.

Part 5: Access pricing

Most regulation nowadays focuses on regulating the access to monopolistic bottleneck infrastructures, like the electricity grid, the "last mile" in telecoms, or rail tracks. We want to understand the economics behind (second-best) optimal pricing of "one-way" access, but also extend the analysis to "two-way access", i.e., interconnection fees between communication networks (termination fees in mobile, or fees between internet service providers). If time allows, we will discuss the hotly debated topic of "net neutrality".

- Mark Armstrong, The theory of access pricing and interconnection, Handbook of telecommunication economics, Chapter 8, Elsevier 2002.

- Jean-Jacques Laffont, Patrick Rey and Jean Tirole, Network competition: I. Overview and non-discriminatory pricing, *RAND Journal of Economics* 1998, 1-37.
- Felix Höffler, Mobile termination and collusion, revisited, *Journal of regulatory economics* 2009, 246-274.

Part 6: Vertical integration and discrimination

In many network industries, the owners of the monopolistic bottleneck are also active in vertically related markets, e.g., the own the telecommunications network and offer services, own railtracks and offer transport, own distribution networks and are active in electricity generation and retail. This has led to many complaints of competitors that the incumbent "sabotages" their business by not providing non-discriminatory access.

- David M. Mandy and David E.M. Sappington, Incentives for sabotage in vertically related industries, *Journal of regulatory economics* 2007, 235-260.
- Felix Höffler and Sebastian Kranz, Legal unbundling can be a golden mean between vertical integration and ownership separation, *International Journal of Industrial Organization* 2011, 576-588.

Part 7: Regulatory capture

Regulators may not act as true agents of the public interest. Stigler argued that regulation may best be explained by a "demand" for regulation from the industry; i.e. an industry is not regulated to protect the consumers, but to increase the profits of the industry. This is known as "regulatory capture". Theoretically, this can be analyzed in a three-tier hierarchy with a benevolent government, a better informed, but potentially corrupt regulator, and regulated firm which may bribe the regulator.

- Jean-Jacques Laffont and Jean Tirole, A theory of incentives in procurement and regulation, MIT Press 1993, 475-514.
- Felix Höffler and Sebastian Kranz, Using financial instruments to reduce regulatory capture, Working Paper 2013.