Ludwig Maximilians Universität München

Department of Economics

Advanced Industrial Organisation
Summersemester 2008

Reading List and Course Outline

Lecturers:

Prof. M. Schnitzer
Room: Akademiestr. 1/III
e-mail: schnitzer -at- lrz.uni-muenchen.de
Office Hour: Thursday, 1:00 - 2:00 p.m.

Prof. Dietmar Harhoff
Kaulbachstrasse 45, Room 203
e-mail: harhoff -at- bwl.lmu.de
Office Hour: by appointment, contact Frau Wilcox (tel.: 2239)

Dr. M. Reisinger
Kaulbachstr.45, Room 006
e-mail: markus.reisinger -at- lrz.uni-muenchen.de
Office Hour: Tuesday, 2:00 - 3:00 p.m.

G. von Graevenitz, Ph.D.
Kaulbachstr. 45, Room 204
e-mail: graevenitz -at lmu.de
Office Hour: Tuesday, 10:00-12:00, to be sure of a slot please make appointment with Frau Wilcox (tel.: 2239)

Lectures - where and when
Monday between 10 : 00 – 12 : 00 a.m. and
Thursday between 8 : 00 – 10 : 00 a.m. in room 026, Ludwigstr. 28, RG.


**Aims:**

The aim of this course is to present advanced topics in Industrial Organisation, with both theoretical and empirical research questions. Participants should have a good knowledge of microeconomics and basic knowledge of game theory. A basic knowledge of econometrics would also be an advantage.

Students should be willing to participate actively in lectures and classes, to read the original literature, and to regularly solve problem sets.

The course is directed to doctoral students and M.A. students. Advanced undergraduate students are welcome to participate and can earn 4 credit points.

The course will be taught in English. There will be a written examination (2 hours) at the end of the class.

The relevant material for this course as well as references will be made available throughout the course. Please refer to the course website.

**Topics covered**

1. **Price versus quantity competition** (Reisinger)

   In this topic I will focus on the tension between price and quantity competition in a static framework and present a possible solution to it. This lecture is based on the paper by Maggi (1996).

2. **Vertical integration and vertical restraints** (Reisinger)

   I discuss vertical mergers and their competitive effects. Starting point is a simplified version of the Hart and Tirole (1990) model, in which there is one upstream and two downstream firms. We then move to the paper by Ordover et al. (1990) with two upstream and two downstream firms. With vertical integration an upstream firm can raise the costs of the non-merged downstream firm and thus increases the profit of its newly merged entity.

3. **Auctions** (Schnitzer)

   In this lecture we introduce some basic concepts of auctions and auction design. We derive equilibrium bidding functions and study the revenue equivalence theorem for a simple example.

4. **Product differentiation and vertical oligopolies** (Schnitzer)

   In this lecture we introduce models of product differentiation and spatial competition to lay the ground for analyzing a general model of vertical oligopolies.

5. **Two-sided markets and competition** (Reisinger)

   The focus in this topic lies on the specific problems of two-sided markets. These are primarily the distinction between single-homing and multi-homing of the two sides and if there exist transaction externalities and/or membership externalities. I discuss these problems along the model introduced by Armstrong (2005).
6. **Innovation and market structure** (Schnitzer)

In this section we study the dynamic efficiency of markets. We first focus on the question how market structure affects innovation. Then we ask how innovation affects market structure (persistence of monopoly discussion). Finally, we ask how spillovers and network effects influence innovation decisions.

7. **Innovation - Patent races** (Harhoff/von Graevenitz)

In this lecture we begin by discussing Cockburn and Henderson (1994) who seek to test the predictions of empirical models of patent races. We briefly discuss count data models and then analyse the findings of this study. The findings of this study are largely negative.

We then move on to study more recent work by Hall and Ziedonis (2001); Ziedonis (2004). Here there is more support for racing behaviour between firms.

This literature combines both descriptive and model based exploration of research questions. It provides a useful introduction to empirical work because it emphasises careful use and exploration of the data.

8. **Patent Opposition - introduction to STATA (LAB)** (Wagner)

This is the first of three sessions which will take place in the computer laboratory. The aim of this session is to provide you with an introduction to the use of limited dependent variable models and to the use of STATA to estimate such models. We use data from Harhoff and Reitzig (2004) to investigate determinants of opposition to patents.

9. **Trademark Opposition - Sample selection models (LAB)** (von Graevenitz)

In this second session we will introduce you to the estimation of sample selection models using STATA. In this case we use data from a current project on trademarks to investigate opposition to trademark applications.

10. **Introduction to Survival Analysis** (Wagner)

This lecture is intended to provide an introduction to the analysis of survival data. The focus of the lecture is on models for single-spell survival time data with no left censoring or left truncation. Basic concepts like survivor and hazard function are introduced and different approaches of modeling survival data are presented. Moreover, estimation strategies are briefly discussed. The topics covered in this introduction are completely covered in the script by Jenkins (2005), see:

http://www.iser.essex.ac.uk/teaching/degree/stephenj/ec968/pdfs/ec968lnotesv6.pdf

11. **Estimating Survival Models in STATA (LAB)** (Wagner)

This lab session builds upon the theoretical concepts introduced in the previous lecture. The main focus of this session is to get a hands-on experience in estimating duration models in STATA. An exemplary data set based on Harhoff and Wagner (2005) will be provided and basic steps of their analysis will be repeated. An excellent resource for using STATA in the context of survival analysis can be found on the webpage of Jenkins, see: http://www.iser.essex.ac.uk/teaching/degree/stephenj/ec968/.
12. **Entry and market power** (Harhoff/von Graevenitz)

   In this lecture the focus is on empirical tests of simple game theoretic oligopoly models. The main paper we discuss is Bresnahan and Reiss (1990).

13. **The New Empirical Industrial Organization** (Harhoff/von Graevenitz) This lecture introduces you to the New Empirical Industrial Organization. On the basis of Genesove and Mullin (1998) we will discuss the estimation of static oligopoly models and the attempt to measure the degree of market power in specific industries.

14. **Natural oligopolies/The bounds approach** (Harhoff/von Graevenitz) In this lecture we cover the bounds approach developed by John Sutton (Sutton, 2003). The bounds approach is based on very general assumptions and provides predictions for market structure in industries affected by endogenous sunk costs.

15. **Investigating the bounds approach empirically** (Harhoff/von Graevenitz)

   We will cover two papers that test the implications of the bounds approach empirically. Berry and Waldfogel (2003) test the bounds approach using data on restaurants across urban areas in the United States. Furthermore we discuss Marin and Siotis (2002) who use data on the chemicals industry worldwide to test the approach.

16. **Structural modelling (BLP)** (Harhoff/von Graevenitz)

   In this part of the course we focus on structural modelling. We will study the seminal paper of Berry (1994) and derive some central results from this paper. Building on this we study Berry and Waldfogel (1999). The theoretical background to this paper will also be briefly discussed.

17. **Review session** At the end of the course a review session will take place. This is intended to prepare you for the exam.

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**Readings**

There is no single textbook which covers the whole course. However all of the following cover some aspects.


   This is an undergraduate textbook that neatly summarizes fairly complex arguments. May be useful as a background text to fill in details and provide an overview.

   Furthermore there is a web-site which provides additional material: http://luiscabral.org.

2. **Church and Ware (2000)**

   This is also a new book which contains some very good sections relevant to the course. The book provides an accessible review of theory and some empirical work.

3. **Clarke (1985)**
There is also a set of essays which was published not too long ago  
Cable (1994)  
Those who are more theoretically inclined may like to have a look at  
Tirole (1988)  
Finally there is a new book by Belleflamme and Peitz (2009) which we will make available for you on condition that you do not pass it on!!

Specific Readings:

1. Price versus quantity competition (Reisinger)  
   As mentioned before the relevant paper is Maggi (1996).

2. Vertical integration and vertical restraints (Reisinger)  
   A very useful and enlightening overview on vertical integration and foreclosure in general is Rey and Tirole (2003). The basic papers are Hart and Tirole (1990) and Ordover et al. (1990).

3. Auctions (Schnitzer)  
   The following texts are useful: Klemperer (2004), which covers auction theory and its recent applications to European telecommunications auctions; Gibbons (1992), which is an introductory text to game theory; Fudenberg and Tirole (1990), which is a more advanced text to game theory.

4. Product differentiation and vertical oligopolies (Schnitzer)  
   The following texts are useful:  
   • Hotelling (1929)  
   • Salop (1979)  
   • Reisinger and Schnitzer (2008)

5. Two-sided markets and competition (Reisinger)  
   The basic paper in this topic is Armstrong (2005).

6. Innovation and market structure (Schnitzer)  
   The following texts will be used in the lecture:  
   • Tirole (1988)  
   • Fudenberg et al. (1983)  
   • d’Aspremont and Jacquemin (1988)  
   • Harris and Vickers (1987)  
   • Arrow (1962)
References


