

**Rudolf Kerschbamer**

# **Imperfectly Competitive Markets**

Module in the Master Program Applied Economics  
WS 11/12

## **General Remarks**

The course Imperfectly Competitive Markets consists of a weekly 3-hours lecture (LV-Nr.: 432166) as well as a 1-hour proseminar (LV-Nr.: 432167). The 3-hours lecture is given by Rudolf Kerschbamer, the 1-hour proseminar by Tanja Hörtnagl.

## **Requirements**

Completion of the Master courses Microeconomics and Game Theory as well as the willingness to deal with formal models are required.

## **Target Group**

Second year Master students.

## **Course Credits within the Curriculum**

This course is a field course for the Master Program Applied Economics.

## **Time and Place**

The lecture will take place weekly on Mondays from 11:00-14:00 in SR 9, starting **October 10, 2011**. The proseminar will take place weekly on Tuesdays from 11:00-12:00 in SR 4, starting **October 18, 2011**.

**The preliminary meeting for the whole course is on Monday, October 10, 11:00 am in SR 9.**

### Lecture and Exam Dates:

Mo 03.10. 11.00 - 14.00	SR 9	Lecture 0
Mo 10.10. 11.00 - 14.00	SR 9	Lecture 1
Mo 17.10. 11.00 - 14.00	SR 9	Lecture 2
Mo 24.10. 11.00 - 14.00	SR 9	Lecture 3
Mo 31.10. 11.00 - 14.00	SR 9	Lecture 4
Mo 07.11. 11.00 - 14.00	SR 9	Lecture 5
Mo 14.11. 11.00 - 14.00	SR 9	Lecture 6
Mo 21.11. 11.00 - 14.00	SR 9	1st Exam
Mo 28.11. 11.00 - 14.00	SR 9	Lecture 7
Mo 05.12. 11.00 - 14.00	SR 9	Lecture 8
Mo 12.12. 11.00 - 14.00	SR 9	Lecture 9
Mo 09.01. 11.00 - 14.00	SR 9	Lecture 10
Mo 16.01. 11.00 - 14.00	SR 9	Lecture 11
Mo 30.01. 11.00 - 14.00	SR 9	2nd Exam

### Proseminar Dates:

Di 18.10. 11.00 - 12.00	SR 4	PS to L. 1
Di 25.10. 11.00 - 12.00	SR 4	PS to L. 2
Di 08.11. 11.00 - 12.00	SR 4	PS to L. 3, 4
Di 15.11. 11.00 - 12.00	SR 4	PS to L. 4, 5
Mo 21.11. 11.00 - 14.00	SR 9	1st Exam
Di 22.11. 11.00 - 12.00	SR 4	PS to L. 6
Di 29.11. 11.00 - 12.00	SR 4	PS to L. 6
Di 06.12. 11.00 - 12.00	SR 4	PS to L. 7
Di 13.12. 11.00 - 12.00	SR 4	PS to L. 8
Di 10.01. 11.00 - 12.00	SR 4	PS to L. 9
Di 17.01. 11.00 - 12.00	SR 4	PS to L. 10
Di 24.01. 11.00 - 12.00	SR 4	PS to L. 11
Mo 30.01. 11.00 - 14.00	SR 9	2nd Exam

# Outline of Contents

## Part I: Basic Concepts

### 1. Basics: Quasilinear Preferences and Product Differentiation (Lecture 1)

#### 1.1 Quasilinear Preferences

#### 1.2 Heterogeneous Goods

- Representative Consumer Models
  - Model of Dixit (1979)
- Vertical Product Differentiation
  - Model of Shaked and Suttons (1982) [ $v(q, \theta) = q\theta$ ]
- Horizontal Product Differentiation
  - Hotelling (1929)'s Model ["Linear City"]
  - Model of D'Aspremont et al. (1979) ["(Linear City)<sup>2</sup>"]
  - Salop (1979)'s Model ["Circular City"]

## Part II: Monopoly

### 2. Dominant but Non-Discriminating Firms (Lecture 2)

- Textbook Monopoly
- Social Loss of Monopoly
- Multiproduct Monopoly
- Multistage Monopoly (Double Marginalization)

### 3. The Price Discriminating Monopoly (2 Lectures: Lectures 3-4)

- First Degree Price Discrimination
  - with consumer specific Two-Part Tariffs
  - with consumer specific Price-Quantity Packages
- Second Degree Price Discrimination
  - with a Single Two-Part Tariff
  - with a Menu of Two-Part Tariffs
  - Optimal Second-Degree Price Discrimination
- Third Degree Price Discrimination
- Bundling

### 4. Intertemporal Price Discrimination (Lecture 5)

- Profit Reducing Intertemporal Preis Discrimination (Coase Conjecture)
- Profit Increasing Intertemporal Price Discrimination

## **Part III: Oligopolistic Competition**

### **5. Oligopolistic Competition (3 Lectures: Lectures 6-8)**

- Homogeneous Goods and the Four Market Games
  - Cournot Competition
  - Bertrand Competition
  - Stackelberg-Cournot Competition
  - Stackelberg-Bertrand Competition
- Increasing the Number of Competitors
- The Effects of Barriers to Entry
- The Effects of Capacity Constraints
- The Role of Product Differentiation
- Type of Competition and Market Outcomes
- (Product Differentiation) x (Type of Competition)
  - Market Demand/Inverse Demand
  - Cournot Competition
  - Bertrand Competition
  - Stackelberg-Cournot Competition
  - Stackelberg-Bertrand Competition

## **Part IV: Impeded Competition**

### **6. Cartel Formation (Lecture 9)**

- What does a Cartel Maximize?
- The Cartel Instability Problem
- Selten's 'Four are Few and Six are Many'
  - Market Game
  - Cartel Bargaining
  - Cartel Participation
- The All-Inclusive Cartel
- Partial Cartels
- Discussion
- Epilogue 1: Are Cartel Lows Good for Business?
- Epilogue 2: Is the Cartel Story for the Fishes?

## **7. Collusion (2 Lectures: Lectures 10-11)**

- Collusive Agreements and Retaliations
- Discount Factor/Present Value
- Nash Reversion
- A Simple Framework
- The Economics of Collusion
- Relevant Factors for Sustainability of Collusion
  - Type of Competition
  - Number of Competitors
  - Barriers to Entry
  - Frequency of Interaction / Market Transparency
  - Degree of Asymmetry Between Competitors
  - Prospect of Innovation
  - Demand Dynamics
  - Demand Fluctuations
  - Observability of Demand
- Discussion

## **8. Mergers (2 Lectures: Lectures 12-13)**

- Horizontal Mergers
  - Horizontal Mergers and Market Power
  - Horizontal Mergers and Efficiency Gains
  - Horizontal Mergers and Structural Effects
- Vertical Mergers
  - Vertical Mergers and Pro-competitive Effects
  - Vertical Mergers and Anti-competitive Effects

## **9. Predation and Limit Pricing (if time left)**

- exit inducement
- entry deterrence

## References:

There is no textbook that exactly fits the contents of the course. A useful textbook is

Motta, M., *Competition Policy: Theory and Practice*, Cambridge University Press, Cambridge 2004

Parts of the course are also based on:

Mas-Colell, A., M. Whinston and J. Green, *Microeconomic Theory*, Oxford University Press, New York and Oxford 1995

## Course Requirements

*Regular attendance in class:* Regular attendance and participation in class is expected. If you cannot attend for any reason, please inform us per e-mail. Please don't provide any reasons, just inform us that you cannot attend.

*Problem sets:* To help you to gain ease in applying the concepts you are exposed to in the course, there will be weekly problem sets. Please work on the problems in small groups (comprising no more than four students each)

*Participation in two written exams:* The two exams include material from both parts of the course. You find the exam dates and places on one of the earlier pages

**Please note the above dates now, and keep them free from any other obligations. We can offer alternative exam dates only in exceptional circumstances.**

## Grading Scheme for this Course:

Will be announced in one of the first meetings.

## Registration

Registration by computer. **Attendance in the first meeting** (October 10) is nevertheless **required!**