

Course Outline

‘Industrial Economics’ (EC3313) – 2005/06 Autumn & Spring

Course Code and Title

Industrial Economics (EC3313)

Lecturer

Johan Lagerlof

Aims

EC3313 is a full-year third year undergraduate course in industrial economics. Its aim is to familiarise students with a broad range of the methods and models applied by economists in the analysis of firms and industries. A broader goal is that students who take the course will, by working extensively with theoretical models, acquire analytical skills that are transferable to other kinds of intellectual problems.

Prerequisites

Students should have a grounding in microeconomics and mathematics, including calculus. A large part of the course will consist of analyses of formal economic models. Therefore, it is important that students who intend to take this course, and who feel that they might have forgotten things from their previous mathematics studies, rehearse the material from Quantitative Methods I and II.

Learning Outcomes

Upon completion of the course students should:

- Understand basic models of the behaviour of firms and industrial organisation and how they can be applied to policy issues.
- Be able to manipulate these models and be able to solve analytically problems relating to industrial economics.
- Be able to apply the models to important policy areas while being aware of the limitations of the theory.
- Be familiar with the history of competition policy and some central European competition law.

Course Delivery

The course will be delivered through a one-hour lecture and a one-hour seminar each week. Specific learning outcomes and prescribed reading are provided for each week of the course. Seminars will provide an opportunity for further investigation and manipulation of models, and to solve assigned mathematical problems.

The instructor is available for consultation (either by you individually, or in small groups) during advertised office hours or by appointment.

There is a course website at <http://www.johanlagerlof.org/page15>.

On the course website, you can (among other things) find a link to a *discussion forum*. If you have a question about the course that might be of interest also to your course mates, then, instead of sending the lecturer an email, you should post the question there. The lecturer will answer questions posted in the forum as quickly as he can.

Assessment

- 3-hour unseen examination, which contributes 100% of the final mark and is taken during the Exam Term (May/June). The exam will test your knowledge and understanding of the material covered in the course; your ability to manipulate diagrammatic and algebraic versions of the models you have learned; your ability to apply models to ‘real’ economic situations; your ability to critically appraise models and their application.
- Formative assessment will consist of two take-home essays and two in-class tests taken during the year. The dates for these are laid out in the current Student Handbook. You will be provided with standardised feedback on these pieces of work.

Reading

The main course text is:

Pepall, L., D.J. Richards and G. Norman, *Industrial Organization: Contemporary Theory & Practice*, Thomson, 2005, third edition.

You are strongly encouraged to buy your own copy of this book as you will be studying from it every week. You are expected to study all parts of the chapters assigned in the weekly readings, though advice will be given in lectures on the ‘key’ bits.

The other texts we will use are:

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

J. Church and R. Ware, *Industrial Organization: A Strategic Approach*, McGraw-Hill, 2000.

We will read one chapter from each of these books. A copy of the chapters will be provided by the lecturer; hence, there is no need to purchase these books.

Tirole, J., 2005, “The Analysis of Tying cases: A Primer”, *Competition Policy International*, Spring 2005, pp. 1-25.

This article is available free of charge from the web (see course homepage). A copy of the article will also be provided by the lecturer.

A. Dixit and V. Norman, “Advertising and Welfare”, *The Bell Journal of Economics*, Vol. 9, No. 1 (Spring, 1978), 1-17.

L. Benham, “The Effect of Advertising on the Price of Eyeglasses”, *Journal of Law and Economics*, Vol. 15, No. 2 (Oct., 1972), 337-352.

These articles are available through JSTOR (see RHUL library website).

Weekly Timetable

Lectures 1-2: Overview of course; competition policy: history, welfare measures, competition law (Motta, Ch. 1).

In addition to learning the material covered in the reading and lecture, by the end of these weeks you should:

1. Have an overview of the structure and content of the course.
2. Be familiar with the history of competition policy, with possible objectives of competition policy, and with some central European competition law.

Lecture 3: Monopoly (Pepall et al., Ch. 2, except 2.2).

In addition to learning the material covered in the reading and lecture, by the end of this week you should:

1. Be able to characterise a monopolist's optimal price.
2. Understand why and how a monopoly gives rise to a “dead-weight loss”.
3. Know about “rent-seeking behaviour” and “X-inefficiency”.

Lectures 4-5: Static games and Cournot competition (Pepall et al., Ch. 9).

In addition to learning the material covered in the reading and lecture, by the end of these weeks you should:

1. Be able to characterise Cournot equilibrium.
2. Understand the welfare implications of Cournot competition.

Lecture 6: Bertrand competition (Pepall et al., Ch. 10, except 10.3).

In addition to learning the material covered in the reading and lecture, by the end of this week you should:

1. Be able to characterise Bertrand equilibrium.
2. Understand the welfare implications of Bertrand competition.
3. Understand the concepts of *strategic complements* and *strategic substitutes* and their importance for game-theoretic analysis.

Lecture 7: Dynamic Games and First and Second Movers (Pepall et al., Ch 11)

In addition to learning the material covered in the reading and lecture, by the end of this week you should:

1. Understand the concepts of *backward induction* and *subgame perfect equilibrium*.
2. Understand and be able to solve the Stackelberg model.

Lectures 8-9: Collusion (Pepall et al., Ch 14-15)

In addition to learning the material covered in the reading and lecture, by the end of these weeks you should:

1. Be familiar with the concept of a “super game” or a “repeated game” and be able to solve for an equilibrium of such a game.
2. Understand the requirements for self-enforcing collusion in repeated games.

Lecture 10: Review.

Lectures 11-12: Product differentiation (address approaches) (Pepall et al., Chs. 7 and 10.3; Church and Ware, Ch 11).

In addition to learning the material covered in the reading and lecture, by the end of these weeks you should:

1. Be familiar with and able to solve (different versions of) Hotelling's model of a "linear city".

Lecture 13: Limit pricing and entry deterrence (Pepall et al., Ch. 12).

In addition to learning the material covered in the reading and lecture, by the end of this week you should:

1. Understand some mechanisms that may be used to create entry barriers strategically.

Lecture 14-15: Bundling: theory and policy issues (Pepall et al., Ch 8; Tirole)

In addition to learning the material covered in the reading and lecture, by the end of these weeks you should:

1. Be able to explain intuitively the rationale for commodity bundling.
2. Be able to solve models of monopoly firms who produce complementary products.

Lecture 16: Advertising (Pepall et al., Chs 20-21; Dixit-Norman; Benham).

In addition to learning the material covered in the reading and lecture, by the end of this week you should:

1. Be able to characterise levels of persuasive advertising and the welfare implications of that advertising.
2. Understand the role of advertising as a strategic instrument.

Lecture 17: Research and development (Pepall et al., Ch 22).

In addition to learning the material covered in the reading and lecture, by the end of this week you should:

1. Be familiar with the classification of process innovations (difference between drastic and non-drastic innovation).
2. Be familiar with the notion of a patent 'race', equilibrium in patent races, and social implications

Lecture 18-19: Mergers (Pepall et al., Chs 16-17)

In addition to learning the material covered in the reading and lecture, by the end of these weeks you should:

1. Understand the meaning and implications of mergers in a variety of circumstances.

Lecture 20: Review.