



Firms and Markets (Summer 2008)

Simon W. Bowmaker

Course Description

The goal of this course is to give you some insight into how markets work. The first part of the course starts with the study of decision making by consumers and firms and concludes with a fundamental result in economics: a set of conditions under which markets function efficiently. In the second part of the course, we focus on situations when, for one reason or another, markets don't work efficiently. We will emphasize the importance of strategic behavior, as modeled by game theory.

Microeconomics (as the topic of this course is frequently referred to) is an important component of an MBA program. First, microeconomics focuses on specific dimensions of optimal firm decision making, such as pricing and entry and exit. Second, the formal economics perspective on business plays an important role in other areas of MBA study, such as finance or marketing. Finally, by studying public policy towards market failures, microeconomics highlights important factors conditioning firm strategy.

Some of the key concepts we will introduce include economic incentives, marginal analysis, opportunity cost (which costs matter), market efficiency (what does it mean for a market to work), strategic behavior (how to predict and respond to your rivals' decisions), and asymmetric information (what happens when others know something you do not). Our experience with students in prior years is that much of this is intuitive. But much is not, and our hope is that the combination of theoretical structure and practical examples will be useful in the years to come. It will not make you a success on its own, but it might give you an edge a few times when it matters.

My Background

I am from north-east England (born 1971 in Sunderland) and joined New York University Stern School of Business as a Visiting Lecturer in Economics in September 2007. As well as *Global Economy*, I am teaching *Firms and Markets* on the School's M.B.A. program and *Microeconomics* and *Economics of Behavior and Misbehavior* on the undergraduate program.

My main research interests are the economics of the family (in particular, the economic aspects of entry into marriage), drug policy and crime. These topics featured in a book I recently devised and edited, *Economics Uncut: A Complete Guide to Life, Death and Misadventure*, published by Edward Elgar Publishing.

Before joining NYU Stern, I taught for several years at the University of Edinburgh in Scotland and held Visiting Lectureships at several U.S. universities, including Florida State University, State University of New York at Buffalo, University of Colorado at Denver and Georgia Tech. I also taught economics at Queensland University of Technology in Australia. Prior to pursuing an academic career, I worked as U.K. Economist on the trading floor of HSBC Markets in London, and held economist positions at the British Government Economic Service and at Cambridge Econometrics, an economic forecasting and consultancy firm.

I received my M.A. in Economics from the University of Aberdeen and my M.Phil. in Economics from the University of Cambridge. My Ph.D. in Economics (expected 2008) is from the University of St Andrews.

Prerequisites

You are expected to be comfortable with basic algebra and calculus, including systems of equations, logarithms and NPV calculations, and derivatives.

Course Materials

- Lecture notes. They review the theory relevant to most classes. In a few pages, they outline and explain the conceptual issues for the day, define terms, give examples, and (where it makes sense) work through numerical problems. They are intended to complement the lectures rather than substitute for them
- Textbook. There is no required textbook for this course. However, if you want to have a reference text, I recommend Michael Baye's *Managerial Economics and Business Strategy* (McGraw-Hill, 6th edition), which is available in the bookstore. There is also a study guide to accompany the text. Most students indicate that they find this book helpful. I also want to draw your attention to *Managerial Economics* by Samuelson and Marks (Wiley, 4th edition). This is a good auxiliary text for the course – it is a little more advanced in some parts, but is a little more comprehensive and is sensible on how to take concepts to data.

- Slides. The slides are a forecast of where the class will head, but if the discussion moves in another interesting direction we will generally let it run its own course. Also, I will amend the slides from time-to-time to keep the course up-to-date with current research and events. I will use blackboard to post the most up-to-date slides. I will also endeavour to post copies of all the board-work I do in class.

Deliverables and Grades

The various “deliverables” in the course are designed to develop different skills:

- Class participation. It is important to integrate what you learn and be able to express it effectively. Moreover, there is a great deal of collective insight and experience in the class and we all benefit from sharing it.
Your grade will be based on such measures as the quality of your contributions, attendance, punctuality, and your overall citizenship in class.
- Group presentations. You are expected to be part of a group that makes a presentation in the latter half of the course. Details are found later in the brick.
- Mid-term exam. Generally three or four problems, similar to the practice mid-term exams that I will distribute in due course.
- Final exam. Generally four or five problems, similar to the practice exam that I will distribute toward the end of the class.

Your grade for the course will be based on your contributions to all of these deliverables, weighted as follows:

Class participation	12%
Group presentation	18%
Midterm	30%
Final exam	40% or 70%

The mid-term is redemptive, in the sense that it only counts if it increases your grade. This means that if you do better in the final than the mid-term, then the mid-term will not count. The reason for doing this is that this course will move fast and I am sensitive to cater to students who need a little time to get their head around what economics is about. Ultimately I care about what you know at the end of the course: this grading scheme is consistent with that concern.

Final grades will follow the School’s guideline for core courses: no more than 35% of the class will receive A or A-. This guideline was instituted in response to student concerns that different sections of a course might be graded by different standards.

Problem Sets

There are individual problem sets found in the course brick. They emphasize quantitative applications of the principles and tools developed in class. Most of the problems are quantitative; some require a qualitative answer (the latter typically refer to mini-cases that my colleagues and I have written over the years) and for these there may be no definitive right or wrong, it is understanding the issues that is key.

I strongly recommend that you practise these problem sets. For one thing, they are excellent preparation for the exams.

Exams and re-grading

Requests for a make-up exam must be made in writing (email) at the earliest instance. You are responsible for checking the midterm exam dates and avoid any conflict with other commitments. During an in-class exam, you are not allowed to consult class notes, books, or any other material. However, you may consult one page of notes (a standard-size sheet of paper written on one side). Questions about grading must be made in writing and no more than a week after the exams are returned.

Honor Code

The Stern community believes that honesty and integrity are necessary for rewarding academic and professional experiences. These qualities form the basis for the strong trust among members of the academic community (students, faculty, and administrators) that is essential for excellence in education. The Honor Code requires that each student act with integrity in all academic activities and endeavor to hold his or her peers to the same standard.

In this course, you may discuss assignments with anyone, but any written work submitted for a grade should be your own. On in-class exams, you may bring in and consult one piece of paper with anything on it you like, but your answers should be entirely your own work.

Help

There are times when a little help can get you past an obstacle. If you are stuck, send me an email (sbowmake@stern.nyu.edu) or stop by the faculty office at Westchester (Room 1035) an hour before class where you will find me.

Firms and Markets: Outline and Calendar (Summer 2008)

Session 1: Tuesdays and Thursdays 05/20-06/26

MODULE 1: MARKET FORCES

1. Class 1 : May 20

Demand. Sensitivity of demand to prices and income, elasticities, substitutes and complements, estimating demand.

2. Class 2 : May 22

Costs and Supply. Opportunity (marginal) costs, sunk cost and other cost concepts. The supply curve in competition.

3. Class 3 : May 27

Competitive markets. Equilibrium, Perfect competition, profits in competitive markets, sources of profitability, curves and shifts.

4. Class 4 : May 29

Monopoly pricing Monopoly pricing, Surplus, properties of industries, sources of market power, social costs of monopoly, competition policy.

MODULE 2: ADVANCED REVENUE SCHEMES

5. Class 5 : June 3

Price discrimination 1. Differential pricing schemes, segmenting markets, avoiding arbitrage. Self-selection schemes.

Price discrimination 2. Self-selection schemes.

MODULE 3: IMPERFECT MARKETS

6. Class 6 : June 5

Strategy and games. Strategies and payoffs, normal and extensive-form games (tables and trees), best responses, Nash equilibrium, Prisoner's dilemma, win/win and win/lose games.

7. Class 7 : June 10

Midterm examination (in class). Same format as the practice exam (3 problems, largely quantitative). You may consult one page of notes (a standard-size piece of paper with anything on it you like) and a calculator.

Auctions. Types of auctions; the winner's curse in common-value auctions; auctions and alternative selling mechanisms.

8. Class 8 : June 12

Hazards of price competition. Price setting in "commodity" markets: the "Bertrand trap" and how to avoid it.

Asymmetric information. What happens when the seller knows more than the buyer? When the manager knows more than the owner?

9. Class 9 : June 17

Competition and cooperation. Cooperative situations and how to produce them, trigger strategies, factors that make cooperation easier.

Product differentiation and positioning. The characteristics approach to consumer demand; product differentiation and price competition; strategic positioning games; differentiation strategies.

Group presentations

10. Class 10 : June 19

Entry and exit. Commitment and credibility, capacity expansion, product proliferation, long-term contracts. Predatory pricing and other exclusionary practices.

Group presentations

11. Class 11 : June 24

Externalities, networks and standards. What's new about the new economy?
Expectations and critical mass. Excess inertia and excess momentum. Path dependence.
Strategic compatibility decisions. Public policy.

12. Class 12 : June 26

Final examination

Where in Baye are the Topics that We Cover in Class?

This is a guide to the textbook. It is designed to help you find the bits in Baye that are relevant for the topics covered in class. When you read Baye, use the lectures as a guide to what is important: in some bits Baye goes into more detail than I think is useful.

- Demand
Pages: 35-46, 73-95
- Costs
Pages: 47-52, 178-192
- Competitive Markets
Pages: 52-66, 265-278
- Monopoly
Pages: 236-259, 278-294, 397-401
- Advanced Pricing
Pages: 402-427

As you can see the organization of Baye is somewhat different from how we run through things in class. After topic 5 things diverge a little more.

- Auctions
Pages 456-468
- Strategy and Games
Pages 352-364
- Hazards of Price Competition
Pages 315-344
- Asymmetric Information
Pages 450-456
- Competition and Cooperation
Pages 330-332, 339-341, 365-378
- Product Differentiation and Positioning
Baye is not helpful
- Entry and Exit
Pages 475-496
- Networks and Standards
Pages 496-502

Where in Samuelson & Marks are the Topics that We Cover in Class?

This guide is designed to help you find the bits in S&M that are relevant for the topics covered in class. When you read S&M, use the lectures as a guide to what is important: Be aware that S&M is a little more advanced than Baye. Its great advantage is that it has sensible coverage about how to take the concepts we cover in class to data.

- Math Preliminaries
Pages: 66-71
- Demand
Pages: 80-96 (127-133 is advanced, but relevant to aspects of asset pricing theory in finance) (139-173 is a good introduction to estimating demand)
- Costs
Pages: 261-301
- Competitive Markets
Pages: 321-350
- Monopoly
Pages: 96- 117, 360-371, 492-499
- Advanced Pricing
Pages: 419-423

The organization of S&M is somewhat different from how we run through things in class. After topic 5 things diverge a little more.

- Auctions
Pages: 718-747
- Strategy and Games
Pages: 434-461 (484-489 is advanced, a technical aspect of formal game theory)
- Hazards of Price Competition
Pages: 408-415
- Asymmetric Information
Pages: 512-515, 632-645, 653-658, (675-679 is advanced) (591-610 is helpful background)
- Competition and Cooperation
Pages: 371-375, 461-465
- Product Differentiation and Positioning
Pages: -
- Entry and Exit
Pages: -
- Externalities, Networks and Standards
Pages: 499-512