

MEC 592: Competitive Industry Analysis
Professor Gautam Gowrisankaran
John M. Olin School of Business
Washington University in St. Louis
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Contact information

E-mail: gowrisankaran@wustl.edu

Instructor's web site: <http://www.olin.wustl.edu/faculty/gowrisankaran>

Web site for course material: <http://blackboard.olin.wustl.edu/>

Phone: (314) 935-6382, Fax: (314) 935-6359

Office: Simon Hall 277

Office hours: Mondays 4:00pm – 5:45pm

Teaching assistant: Yuanfang Lin, linyu@wustl.edu

Administrative assistant: Katie Morrow, Simon Hall 242, morrow@olin.wustl.edu

Administrative matters

Class format: We will spend roughly 60% of class time on case discussions and 40% on lectures. The cases form the backbone of the class, wherein we will analyze firm and industry decisions through a class discussion of particular firms and situations. The goal of the lectures is to explain economic concepts and to summarize the discussions of particular cases. Questions during the lectures are expected.

Meeting times: The class meets 12 times, not counting the midterm or final. There is no meeting on Oct. 25 (due to the midterm) or on Nov. 22 (due to Thanksgiving).

Grading:

Case memos: 15%

Extended memo: 15%

Class discussion: 15%

Midterm exam: 25% Oct. 25, 6:15pm – 7:45pm

Final exam: 30% Dec. 20, 6:15pm – 8:15pm

Groups: Sometime soon after the first class, you should form groups of no more than 5 people for the case memos and extended memo.

Case memos: For each case, your group will be responsible for the preparation of a brief memo on the case. The memo should be no more than two pages, and will be due at the beginning of class on the first day that we discuss the case. The memo may be on any aspect of the case, either a question I have posed in the syllabus, or any other issue you found interesting while analyzing the case. Grading will be based on familiarity with the case, originality, and clarity and depth of

thought. **There is a case memo due at the beginning of the first class. This case memo should be done on an individual basis.**

Extended memo: At some point during the term, your group should prepare a memo of approximately 4 pages which in some way deepens your understanding of a case or other material we have discussed. Grading will be based on the quality of argument, writing, research and originality. Your extended memo can be based on a case that we covered in class, but does not need to be; if it is based on a case that we covered in class, you should begin to prepare it **AFTER** the class discussion. One natural starting point for the extended memo is if at some point during the course, your group thinks that our discussion of a case was confused, or missed or underplayed a key point. Alternatively, your group may be curious as to how events have played out in the period after the case took place. Or, your group may wish to explore an interesting analogy between a case that we studied in class and another industry with which your group is familiar.

Midterm exam: The midterm is based on the theoretical tools and case insights from the first half of the course. I will circulate a sample midterm exam with some extra quantitative problems three weeks before the exam. The best preparation for the exams is to review the ideas from the cases and lectures, and solve the sample midterm exam. You will be responsible for understanding the ideas that arise from the cases, but you will **NOT** be responsible for memorizing specific facts from the cases. The exam will be closed book, but you may bring in a single one-sided sheet of notes with any formulas, definitions, etc. which you think useful. The sheet may be handwritten, or word processed at a font no smaller than 10 points. Do **NOT** photo-reduce the handouts!

Final exam: The final exam will be similar to the midterm. The exam will emphasize the material of the second half of the course, but will also include material based on the first half. You may bring in two sheets of notes for this exam. I will circulate a sample final exam three weeks before this exam.

Class discussion: For each case, you are expected to read the case notes before class. You should come to class very familiar with the facts as laid out in the case and prepared to discuss the discussion questions that I have posed about each case. Class discussion is an integral part of the learning experience for this class. **To ensure class participation, I will write a randomly generated set of names on the board at the start of each class where we discuss a case. To receive participation credit, you must participate in the discussion at least once during that class if your name is on the board. Each person's name will appear on the board at least twice during the semester.**

Class attendance: Attendance and participation in class are necessary. However, I understand the competing pressures on students' schedules. You may miss one class without explanation or permission. If you miss class, you **MUST** send an e-mail to me **BEFORE** class. Missed classes beyond this must be cleared **IN ADVANCE** with me. If you have not had time to prepare, you may also choose not to participate in one class without explanation or permission. Again, you **MUST** send an e-mail to me **BEFORE** class in this case, so that I can ensure that you are not on the randomly generated list of scheduled participants.

Laptops: I will not allow laptops to be used in class, as they are too easy a distraction from the discussion, and are generally not as good as a pen for taking notes on PowerPoint slides. If a student has a particular need to use a laptop, I will be willing to consider this on a case-by-case basis.

Name plates: Please bring your name plates to every class. I will circulate a seating chart during the second class, so find somewhere you like.

Course description

Course materials:

1) Required textbook: *The Economics of Strategy 3rd ed.* (New York: Wiley, 2003) by David Besanko, David Dranove, Mark Shanley and Scott Schaefer. (Hereafter BDSS.)

2) Supplementary textbooks (on reserve in Kopolow Business Library):

Commitment (New York: Free Press, 1991) by Pankaj Ghemawat.

Competitive Strategy (New York: Free Press, 1980) by Michael Porter.

These books, both classics in the field, develop an intellectually coherent framework to understand firm strategy. They are useful for additional background reading on the general concepts of the course, but have a more distant relation than BDSS to the lecture material.

3) Course packet: This contains the syllabus, cases and articles that we will discuss in class.

4) Handouts: I will hand out additional case notes, lecture notes and problem sets during class.

5) Blackboard: This is the course web site and the replacement to Prometheus. This site will be used to post the handouts that I distribute in class.

Introduction:

Competitive strategy can be approached from a variety of viewpoints. This course will approach the topic using an economics framework. In the last 30 years, the use of formal economic tools, in particular game theory, has revolutionized our understanding of firm decisions and industry dynamics, allowing new insights into a variety of a key questions.

We develop four key themes throughout the course.

1) Market structure and competition

Why are some industries profitable and some not? How do strategic commitments affect market equilibrium? What is the effect of product positioning on market competition? Why do the firms in some industries coexist, while in other industries, destructive price wars are the norm? How does this depend on the underlying characteristics of the industry? We will use the tools of economics and game theory to see how conditions such as market concentration, cost and

capacity asymmetries among existing competitors, characteristics of sales transactions, and volatility of demand conditions are likely to influence how firms compete. We will study the way in which expectations about future behavior of competing firms enter into decisions by firms today.

2) Commitment and the value of flexibility

Strategic decisions are typically hard to reverse once made. Precisely because of this inflexibility, strategic decisions can have commitment power: they can affect the expectations, and hence behavior, of competitors in ways that can benefit the committed firm. But, in a changing environment, commitments also reduce a firm's flexibility and thus are risky. We will think about what determines the power of commitment in affecting the strategic environment, and provide a framework for thinking about the value of flexibility. Through this, we will be able to better understand the right tradeoffs between commitment and flexibility.

3) Entry and exit

How can an incumbent firm influence the entry process? As an outsider, when should we enter a new market? What distinguishes a credible threat from a bluff? How does a firm decide on the appropriate response when faced with the possibility of entry? Should it fight, or attempt to achieve a sustainable position in a shared market? How does this depend on the characteristics of the entering firm and the industry? When is it time to exit a declining industry?

4) Technological change and network externalities

When is it time to replace one generation of a product by the next? On one hand, new products can cannibalize the sales of existing products. On the other hand, delays in introduction risk allowing a competing firm to establish a viable position in the market. Intel has typically been the first to introduce products making its own products obsolete while other companies, such as IBM and Nintendo have at various points made a conscious decision to allow a competitor to be the first to market with the next generation of a product. How do the problems facing these firms differ, and how can a firm facing this problem analyze the tradeoffs involved in deciding on the best course of action? How and when should a firm license technology? When Intel first developed the 8086, it licensed the technology to both IBM and AMD. What were the benefits and risks to Intel of doing this? Many new products, ranging from web browsers to fax machines to internet auction sites, are characterized by network externalities, where the value from owning the product depends on how many other people own the product. In this case, the firm which controls the technological standard is often in a position to reap great advantage. What are the forces influencing competition between firms in the presence of network externalities? Do network externalities imply that Netscape could have used its early dominance to forestall entry by Microsoft in the market for web browsers?

Course schedule

1) Sep. 13: The Nintendo case (Week 1)

General themes: Value creation and value capture. Network externalities. Managing the product life cycle. The replacement and efficiency effects.

Readings:

- a) HBS (Harvard Business School) Cases 9-795-102, 9-795-103 *Power Play (A) and (B)*.
- b) BDSS Chapter 10: Industry Analysis.
- c) BDSS Chapter 13: The Origins of Competitive Advantage: Innovation, Evolution, and the Environment.

Discussion questions:

- a) Why did Atari fail in the video game market?
- b) How did Nintendo overcome these problems and create a valuable market?
- c) What are the various competitive threats that Nintendo's NES faced in 1989, prior to the entry of Sega? How did Nintendo cope with these threats? Be prepared to discuss these in the context of the Five Forces.
- d) Why did Nintendo delay introducing a 16-bit machine in the U.S. as long as it did? Do you agree with this decision?

2) Sep. 20: Lecture: What is strategy anyway? (Week 2 beginning)

General theme: Overview of broad concepts in the field.

Readings:

- a) BDSS Chapter 12: Sustaining Competitive Advantage.
- b) Porter, M. (1996). "What is strategy?" *Harvard Business Review* 74: 61-78.
- c) (Optional) Porter, Introduction, Chapters 1, 2.
- d) (Optional) Ghemawat, Chapters 2 - 6.

3) Sep. 20: Lecture: Review of economics (Week 2 end, Week 3 beginning)

General theme: Market structure and the classic models of oligopoly.

Readings:

- a) BDSS, Primer: Economic Concepts for Strategy.
- b) BDSS, Chapter 6: Competitors and Competition.

4) Sep. 27: Lecture: Strategic commitment (Week 3 end)

General themes: Tough and soft commitments. Value of commitments with respect to competitors.

Readings:

- a) BDSS, Chapter 7: Strategic Commitment.

5) Oct. 4: The Staples – Office Depot case (Week 4 beginning)

General themes: Impact of mergers on industry costs, profits and structure. Competition in retail industries. Geographic product differentiation. Strategic commitments implicit in a merger.

Readings:

- a) Readings about Office Depot / Staples.

Discussion questions:

- a) What arguments suggest that prices would have been higher (or conversely lower) with the merger?
- b) What do you think about the cost reduction arguments?
- c) Is the merger a soft commitment or a tough commitment?
- d) If the merger had gone ahead, what would you expect the long run effect to have been on the number of stores that OfficeMax opens? How about the merged Office Depot – Staples?

6) Oct. 4: Lecture: Antitrust law and competitive strategy (Week 4 end)

General theme: Legality of different competitive strategies.

Readings: None.

7) Oct. 11: The GE versus Westinghouse case (Week 5)

General theme: Dynamics of oligopoly pricing.

Readings:

- a) HBS Cases 9-380-128 – 9-380-130 *GE Versus Westinghouse in Large Turbine Generators (A), (B) and (C)*. [(B) and (C) will be handed out in class.]
- b) BDSS Chapter 8: The Dynamics of Pricing Rivalry.
- c) (Optional) Porter, Chapters 4, 5, and 7.

Discussion questions:

- a) Why is there so much overcapacity in the industry?
- b) Why did Allis-Chalmers have such a hard time in this industry?
- c) Is this an industry with low or high marginal costs?
- d) Why does demand in the industry look so cyclic? Does this mean that this is a hard industry in which to make money?
- e) What should GE's goal be in 1963, after Allis-Chalmers has exited?

8) Oct. 18: Gillette's launch of Sensor case (Week 6)

General themes: Product introduction. Product positioning. Competition in differentiated products markets.

Readings:

- a) HBS Case 9-792-028 *Gillette's Launch of Sensor*.
- b) BDSS Chapter 11: Strategic Positioning for Competitive Advantage.

Discussion questions:

- a) Should Gillette roll out the Sensor on a rapid schedule, or should it follow a more gradual approach?
- b) Do you agree with Gillette's decision to position the Sensor as a cartridge versus as a disposable? What are the long-run implications of this decision?
- c) Does Gillette have a sustainable advantage? If so, what is it?
- d) What do you think about the financial forecasts? (Caution: the numbers in this case are a little screwy.)
- e) What are the incentives of Gillette's managers?

This class will end early and be followed by an optional review session for the midterm exam.

Oct. 25: Midterm Exam

9) Nov. 1: Lecture: Pricing in dynamic oligopoly markets (Week 7 beginning)

General themes: Price wars. Judo strategy. Applying dynamic game theory to oligopoly pricing. Is prisoner's dilemma the right model?

Readings: None.

10) Nov. 1: Netscape versus Internet Explorer (Week 7 end)

General themes: Information economics. Network externalities. Judo strategy again.

Readings:

- a) HBS Case 9-798-094 *The Brower Wars, 1994-1998*.

Discussion questions:

- a) Web browsers are a "new economy" good. What distinguishes new economy markets from other markets?
- b) What do you think of Netscape's pricing strategy before Internet Explorer's entry? Should Netscape have subsidized consumers, developers or neither?
- c) What strategies could Netscape have used to fight back against Internet Explorer's increasing dominance?

11) Nov. 8: Lecture: The value of flexibility (Week 8)

General themes: The economics of investment decisions. Sunk costs and uncertainty.

Readings:

- a) Dixit, A. and R. Pindyck (1995). "The options approach to capital investment." *Harvard Business Review* 73: 105-115.
- b) Copeland, T. and P. Keenan (1998). "How much is flexibility worth?" *McKinsey Quarterly* 2: 38-49.
- c) (Optional) Ghemawat, Chapter 6.

12) Nov. 15: The credit card industry case (Week 9)

General themes: Information economics. Adverse selection. Monopolistic competition.

Readings:

- a) John M. Olin School of Business Case: *The Credit Card Industry in the United States*.

Discussion questions:

- a) How does the credit card industry create value?
- b) Why are interest rates on credit cards so high despite what seems like a great deal of competition?
- c) What would be the long term effect on industry structure if banks learn to target credit risks much more precisely, along the lines of Capital One?
- d) What is the effect of loyalty (e.g. frequent flyer) programs on competition among credit card issuers and the partnering brands (e.g. airlines)?

13) Nov. 29: The Polaroid versus Kodak case (Week 10)

General theme: Entry into new markets.

Readings:

- a) HBS Case 9-376-266: *Polaroid-Kodak*. [HBS Case 9-378-173: *Polaroid-Kodak Cases (B1) – (B10)* will be handed out in class.]
- b) HBS Case 9-378-165: *Polaroid-Kodak Addendum*.
- c) BDSS Chapter 9: Entry and Exit.
- d) (Optional) Porter, Chapters 4, 16, and 5 (if not already read).

Discussion questions:

- a) What do you think are Kodak's goals in potentially entering the instant photography market?
- b) Is there anything that Polaroid could have done in the late 1960's/early 1970's to prevent or modify Kodak's decision to enter?
- c) Once it is clear the Kodak is entering, what strategy should Polaroid take?
- d) How does the fact that Kodak is a supplier to Polaroid affect Polaroid's and Kodak's incentives?
- e) How would you expect competition between the two firms to play out?

14) Dec. 6: The Holland Sweetener Company versus NutraSweet case (Week 11)

General themes: Entry into new markets. Market signaling. Value creation and value capture.

Readings:

- a) HBS Cases 9-794-079 – 9-794-085: *Bitter Competition: The Holland Sweetener Company versus NutraSweet (A) – (G)*. [(B) – (G) will be handed out in class.]

Discussion questions:

- a) How important is Holland Sweetener's cost advantage that is conveyed by its new process?
- b) How should Holland Sweetener expect NutraSweet to respond to its entry into Europe and Canada?
- c) What actions has Holland Sweetener taken, or should it take, to affect NutraSweet's behavior?
- d) What value does Holland Sweetener bring to the game? How should Holland Sweetener attempt to capture this value?

15) Dec. 13: Lecture: Introduction to auctions and competitive bidding (Week 12)

General themes: How to bid in an auctions. How to design auctions to create and capture value. Different auction mechanisms: first- and second-price sealed-bid auctions, English auctions, etc. Different auction settings: common and private value auctions.

Readings: None.

Dec. 20: Final Exam

Version: July 22, 2004