

Graduate School of Design and Kennedy School of Government, Harvard University  
Fall 2002

**GSD 5203 / KSG API-105**  
**MARKETS AND MARKET FAILURE WITH CASES**

**HOURS**

Mondays and Wednesdays, 11:40-1, Gund 111  
Review sections: Fridays, 11:40-1, place tba

**INSTRUCTORS**

Instructor: José A. Gomez-Ibáñez

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Offices: Gund 312 (faculty assistant Jessica McFarland, 617-495-2521) and

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Office hours: most Tuesdays, 2-4, Taubman 316; and Wednesdays 4-6, Gund 312

Teaching Fellow: Jennifer Schuetz

Office hours tba

Course Assistants: Alexandra Delany and Richard Saltrick

Office hours tba.

**PURPOSES**

This course provides an introduction to how markets operate and the circumstances under which they may perform poorly. The first half of the course covers the prediction of market behavior including supply, demand, and market prices; the strategies of consumers and firms; and the effects of various kinds of government intervention such as price or quantity controls and taxes. The second half covers the assessment of market performance and the problems caused by monopoly, externalities, public goods, and asymmetric information.

The course covers the same topics as API-101 at the Kennedy School but it differs in three respects. First, it is taught using case discussions as well as lectures. A case is assigned every Wednesday for the first nine weeks and almost every class for the last three weeks. Second, it emphasizes applications to urban planning, although not exclusively. Finally, it is taught on the GSD calendar and requires a January final exam.

MPP/UP students can use this course to fulfill their API-101 requirement; other MPP students can do so with the permission of the instructor. Students can not take both API-105 and API-101 for credit.

**PREREQUISITES**

This course assumes no prior exposure to economics and is open to any graduate student. In the unlikely event of space limitations, preference in enrollment is given to students at the GSD and KSG who are taking the course to fulfill a degree requirement.

**REQUIREMENTS**

Students are expected to come to class and to prepare and participate in case discussions. In addition, there is a short problem set due Monday every week, an in-class mid-term exam on Wednesday, October 30, and a final exam on Monday, January 13.

The final grades will be based on the quality of contributions to class discussion (30 percent), the mid-term (20 percent), and the final (50 percent). Problem sets will be graded on an advisory basis but will not count toward the final grade unless the student fails to turn in assignments.

## **READINGS**

The text assigned is N. Gregory Mankiw, *Principles of Microeconomics*, second edition. It is for sale at the Coop, and there are many used copies in circulation. (If you find a cheap used version of Mankiw's *Principles of Economics* that will do too since it contains the chapters for microeconomics as well as macroeconomics). Mankiw is a very basic text and students should feel free to substitute another text if they prefer.

In addition, there will be a case packet for sale at the Harvard Printing and Publications Services (HPPS) distribution site at the Law School (basement of Pound Hall). Note that this course has been substantially revised this year and four of the cases will not be completed in time to be copied in the case packet. Copies of those cases will be handed out a class or two before they are to be discussed.

**CLASS SCHEDULE**

Note that this course follows the GSD rather than the KSG schedule. The primary differences are that GSD classes start on September 17 rather than September 11 and that there is a final exam on January 13. Classes are also held on Columbus Day (Oct. 14) and Veteran's Day (November 11)

(0) Mon., Sept. 9 Optional information session at the KSG, place tba

**I. MARKETS****A. Supply, Demand, and Market Equilibrium**

- (1) Wed., Sept 18 Supply, demand, and market equilibrium  
 (2) Mon., Sept. 23 Consumer's and producer's surpluses, elasticities  
 (3) Wed., Sept. 25 Predicting prices: *Filmore Ranch* case  
 (4) Mon., Sept. 30 Government intervention: price controls, subsidies, and taxes  
 (5) Wed., Oct. 2 Zoning: *Portland's Urban Growth Boundary* case

**B. The Consumer**

- (6) Mon., Oct. 7 Income and substitution effects  
 (7) Wed., Oct. 9 Assisting the poor: *Shelter Assistance in Nouakchott* case

**C. The Firm**

- (8) Mon., Oct. 14 The choice of technology  
 (9) Wed., Oct. 16 The structure of costs: *Rural Electrification in Nicaragua* case  
 (10) Mon., Oct. 21 The choice of quantity and price  
 (11) Wed., Oct. 23 Pricing and competitive strategy: *Sullivan, Gray, Rait* case

**D. Competitive Markets**

- (12) Mon., Oct. 28 Perfect competition, long run equilibrium, and the supply curve  
 (13) Wed., Oct. 30 Mid term exam

**II. MARKET FAILURE****A. Efficiency and Competitive Markets**

- (14) Mon., Nov. 4 Pareto optimality and the maximization of surpluses  
 (15) Wed., Nov. 6 The elements of a market: *California Water Pricing* case

**B. Monopoly and Oligopoly**

- (16) Mon., Nov. 11 Monopoly and its remedies  
 (17) Wed., Nov. 13 Assessing market power: *Paragould City Cable* case  
 (18) Mon., Nov. 18 Oligopoly and game theory  
 (19) Wed., Nov. 20 Antitrust: *Microsoft on Trial* case

**C. Information, Externalities, and Public Goods**

- (20) Mon., Nov. 25 Information asymmetries: *Building the Baltic Hotel* case  
 (21) Wed., Nov. 27 Externalities and their remedies  
 (22) Mon., Dec. 2 How much to clean up: *Arsenic in Drinking Water* case  
 (23) Wed., Dec. 4 Public goods: *Post Office Square Park* case  
 (24) Mon., Dec. 9 Congestion: *London Congestion Pricing* case  
 (25) Wed., Dec. 11 Regional planning: *Vancouver's Livable Region Plan* case

(26) Mon., Jan. 13: Final exam, 9 am to 12 noon

**READING AND CASE ASSIGNMENTS**

Note that the four cases marked with a “\*” have not been completed in time to include in the case package for sale at the HPPS. They will be distributed separately.

**I. MARKETS****A. Supply, Demand, and Market Equilibrium**

(1) Wed., Sept 18 Supply, demand, and market equilibrium

Read: Mankiw, chapters 1-4

(2) Mon., Sept. 23 Consumer’s and producer’s surpluses, elasticities

Read: Mankiw, chapters 5 and 7

(3) Wed., Sept. 25 Predicting prices: *Filmore Ranch* case

Read: *Filmore Ranch*, HBS case no. 9-183-114

Assignment: Come to class prepared to explain whether Stephen Jacobs should buy the avocado ranch. In preparing your answer please consider:

1. What is the minimum avocado price that Jacobs would have to receive to make buying the ranch worthwhile?

Note: Assume that in a typical bearing year Jacobs must earn at least \$1847.81 in revenue from avocado sales. (Of the \$1847.81, \$800 per acre is to cover his annual operating costs and \$1047.81 per acre is needed to provide a 12 percent real return on the capital he invests in buying the land, planting the trees, and cultivating them for five years before they bear fruit.)

2. Is Jacobs likely to get his price?
3. What factors are likely to affect the supply of avocados in the long and the short run?
4. What factors will affect demand in the long and the short run?
5. How price elastic is the demand for avocados?

Note: To avoid confusion, do any calculations in 1974-75 dollars. To convert past dollars to 1974-75 dollars, use the consumer price index on page 4 of the case. As an example, a 1951 dollar would be worth  $147.7/72.1$  in 1974-75 dollars.

(4) Mon., Sept. 30 Government intervention: price controls, subsidies, and taxes

Read: Mankiw, chapters 6 and 8

(5) Wed., Oct. 2 Zoning: *Portland’s Urban Growth Boundary* case

Read: \**Portland’s Urban Growth Boundary* draft case

Assignment: To be distributed before class

**B. The Consumer**

(6) Mon., Oct. 7 Marginal utility, Income and substitution effects

Read: Mankiw, ch. 21

(7) Wed., Oct. 9 Assisting the poor: *Shelter Assistance in Nouakchott* case

Read: \**Shelter Assistance in Nouakchott* case

Assignment: To be distributed before class

**C. The Firm**

(8) Mon., Oct. 14    Costs and the choice of technology

Read: Mankiw, ch. 13.

(9) Wed., Oct. 16    The structure of costs: *Rural Electrification in Nicaragua* case

Read: \**Rural Electrification in Nicaragua* draft case

Assignment: To be distributed before class

(10) Mon., Oct. 21    The choice of quantity and price

Read: Mankiw, ch. 14, pp. 291-303 and ch. 15, pp. 315-327.

(11) Wed., Oct. 23    Pricing and competitive strategy: *Sullivan, Gray, Rait* case

Read: *Sullivan, Gray, Rait*, GSD case.

Assignment: Come to class prepared to explain price as you would to quote Max Reptan for the Gahanna job if you were Gary Gray or Mike Whaley. In formulating your position please consider:

1. How did Gary Gray and Mike Whaley justify their original \$56,000 bid? On what basis are they now considering dropping the bid to \$41,000?
2. What role should costs play in their calculation? What is the relevant cost?
3. What other considerations besides costs are important in formulating the bid?

**D. Competitive Markets**

(12) Mon., Oct. 28    Perfect competition, long run equilibrium, and the supply curve

Read: Mankiw, ch. 14, pp. 304-311

(13) Wed., Oct. 30    Mid term exam

**II. MARKET FAILURE****A. Efficiency and Competitive Markets**

(14) Mon., Nov. 4    Pareto optimality and the maximization of surpluses

Read: review Mankiw, ch. 7-8, read Mankiw, ch. 9 and 12

(15) Wed., Nov. 6    The elements of a market: *California Water Pricing* case

Read: *California Water Pricing*, KSG case no. 710.0

Assignment: Come to class prepared to explain whether you support the proposed reforms in the California water market. In formulating your position, please consider:

1. How does the current water supply and distribution system in California differ from a competitive market?
2. What would happen if water authorities charged MC for water instead of present prices? What crops would experience the greatest increases in costs? Increases in prices? Declines in demand? What facts in the case might help you determine this?
3. Would the results be any different if farmers were allowed to resell the low-cost water they are now allocated?

4. How should society decide how to allocate water between agricultural and urban uses? How should it decide how much overall water consumption should be?

### **B. Monopoly and Oligopoly**

(16) Mon., Nov. 11 Monopoly and its remedies

Read: Mankiw, ch. 15, pp. 327-344

(17) Wed., Nov. 13 Assessing market power: *Paragould City Cable* case

Read: *Paragould City Cable*, HBS case no. 9-794-030

Assignment: Come to class prepared to explain whether or not you think that the City of Paragould was wise to establish City Cable or not. In preparing your answer please consider:

1. Who are the winners and losers from public-private competition in Paragould's cable TV market? What is the dollar value of their gains and losses?
2. Is the provision of cable television service in Paragould a natural monopoly? What evidence do you have for believing so? Would your answer be the same for cable television in Boston, Massachusetts?
3. What approaches other than direct competition might Paragould have employed to improve cable television service in Paragould? What are the advantages and disadvantages of each?
4. If the City were to regulate PCI, what information would it need?

(18) Mon., Nov. 18 Oligopoly and game theory

Read: Mankiw, chs. 16-17

(19) Wed., Nov. 20 Antitrust: *Microsoft on Trial* case

Read: *Microsoft on Trial*, KSG case no. CR14-99-1552.0

Assignment: Come to class prepared to discuss the following questions.

1. Is Microsoft a monopoly (or, more accurately, does Microsoft have market power)? What evidence do you have to support this proposition?
2. Is Microsoft's behavior predatory or not? How do you distinguish predatory behavior from an aggressive competitive response?
3. Assuming that Microsoft is a monopoly, what remedy would you recommend?

### **C. Information, Externalities, and Public Goods**

(20) Mon., Nov. 25 Information asymmetries: *Building the Baltic Hotel* case

Read: *Building the Baltic Hotel*, KSG case no. C16-89-928.0

Assignment: Come to class prepared to explain whether you would have agreed to waive the components of the Uniform Building Code (UBC) violated by the Baltic Hotel if you had been the head of the San Diego building department.

1. What are the different provisions of the UBC that the Baltic violates?
2. What are the rationale for the different provisions? Do you find the rationale convincing?
3. In cases where there is a willing buyer (the SRO residents) and a willing seller (the SRO builders), what rationale could the government legitimately have for intervening and preventing the sale?

(21) Wed., Nov. 27 Externalities and their remedies

Read: Mankiw, ch. 10 and 11.

(22) Mon., Dec. 2 How much to clean up: *Arsenic in Drinking Water* case

Read: *Arsenic in Drinking Water*, draft case

Assignment: Come to class prepared to recommend standard that Administrator Whitman should set for arsenic in drinking water. In formulating your recommendation, please consider:

1. What principles would you use in setting the rule?
2. What are the major costs and benefits of the proposed rules? How uncertain are they?
3. How should non-quantifiable benefits be incorporated into EPA's analysis?
4. What should EPA do about small drinking water systems?

(23) Wed., Dec. 4 Public goods: *Post Office Square Park* case

Read: *Post Office Square Park*, KSG case no. C16-93-1231.0

Review: Mankiw, ch 11.

Assignment: Come to class prepared to explain whether or not you think that proposed park should be built, and if so, how it should be financed. In formulating your recommendation, please consider:

1. Is it really true, as the Friends and the BRA claim, that there is not cost to the public sector of the park? (Note the 1983 Scheme is different from the 1986 Scheme).
2. What difficulties do you anticipate that Leventhal will have in trying to raise the \$29 million in equity now needed to finance the project?
3. Suppose Leventhal and the Friends can't raise the needed equity, and the city must come up with additional funds. What would the city need to know to decide whether its support was worthwhile? How hard would it be to gather this information?

(24) Mon., Dec. 9 Congestion: *London Congestion Pricing* case

Read: *\*London Congestion Pricing*, draft case

Assignment: To be distributed before class

(25) Wed., Dec. 11 Metropolitan planning: *Vancouver's Livable Region Plan* case

Read: *Vancouver's Livable Region Plan*, KSG case no. CR1-96-1361

Assignment: Come to class prepared to explain whether you would support Vancouver's regional plan if you were a concerned citizen of the region. In formulating your answer, please consider:

1. To what extent are you sympathetic with the plan's goal?
2. What are the benefits and costs of the plan?
3. Do you think the plan is practical or realistic?

(26) Mon., Jan. 13: Final exam, 9 am to 12 noon