

## Industrial Organization

**Department:** Fudan International Summer Session

<b>Course Code</b>	ECON170015		
<b>Course Title</b>	Industrial Organization		
<b>Credit</b>	2	<b>Credit Hours</b>	36 credit hours + 3 tutorial hours (one credit hour is 45 minutes)
<b>Course Nature</b>	<input type="checkbox"/> Specific General Education Courses <input type="checkbox"/> Core Courses <input checked="" type="checkbox"/> General Education Elective Courses <input type="checkbox"/> Basic Courses in General Discipline <input type="checkbox"/> Professional Compulsory Courses <input type="checkbox"/> Professional Elective Courses <input type="checkbox"/> Others		
<b>Course Objectives</b>	This course provides you an understanding of the relationship between market structure, economic efficiency and social welfare.		
<b>Course Description</b>	We will start to examine the efficiency effects under competitive or monopoly cases. Then, we will examine the efficiency implications of business practices used by dominant firms, including bundling, pricing, capacity expansion and product introduction. In the second part of the course, we discuss collusion, horizontal mergers and vertical merger.		
<b>Course Requirements:</b>			
Prerequisites: Knowledge of intermediate microeconomic and calculus are expected.			
<b>Teaching Methods:</b>			
Lecture, presentation, group discussion			
<b>Instructor's Academic Background:</b>			
<p>Prof. Chun-Yu Ho earned his PhD in economics from Boston University and his MPhil in economics and BSc in economics and finance from Hong Kong University of Science and Technology. Before joining SUNY, he was a faculty member at the Georgia Institute of Technology and Shanghai Jiao Tong University. He also held visiting positions at Bank of Finland (Institute for Economies in Transition), Hong Kong Institute of Monetary Research and the Chinese University of Hong Kong. His research interests include empirical industrial organization, economic development, and applied econometrics. He published papers in various peer-reviewed journals including International Economic Review, Journal of Econometrics, International Journal of Industrial Organization and Journal of Money, Credit and Banking.</p> <p>Email: <a href="mailto:cho@albany.edu">cho@albany.edu</a></p>			
<b>Course Schedule</b>			
This outline may change as the semester proceeds.			

Class	Content	Textbook	Case	Practice
1	Competition, Monopoly & Welfare	VHS 3		1
2	Antitrust & Microsoft	VHS 9	1	
3	Microsoft	VHS 8		
4	Two-Sided Platform	VHS 9	2	
5	Predatory Pricing	VHS 8	3	2
6	All Unit Discount + Capacity Expansion	VHS 5	4	2
7	Collusion	VHS 4	5	3
8	Horizontal Merger	VHS 6	6	
9	Vertical Merger	VHS 7	7	4
10	Presentation			
11	Revision			
12	Exam			

### **Week 1. Competition, Monopoly and Antitrust**

#### ***Competition and its implications on welfare and technical progress.***

Text: VHS Chapter 3

Reading: Slackers or pace-setters? *Economist*; 5/22/2004, Vol. 371 Issue 8376, p72.

Discussion questions:

1. Why do scale economies provide a case for Monopoly
2. How does competition affect innovation?
3. Does a continued monopoly harm the economy? Discuss it from the perspective of entry barrier.
4. What are the laws responding to market power?

### **Week 1. Market Definition, Market Power**

#### ***Methods for defining market and measuring market power.***

#### ***Sources of entry barrier.***

Case: US v. Microsoft (2001) – Week 2

Text: VHS Chapter 8-9

Reading: The Big, the Bad, and the Beautiful. *Strategy+Business*, Winter 2003, Issue 33.

Economies of scale made steel. *Economist*; 11/12/2011, Vol. 401 Issue 8759, p72

Discussion questions:

1. What are the ways to measure market power?
2. What are the determinants of market power if a dominant firm faces many small firms?
3. What are the sources of welfare loss from market power?
4. Discuss the role of scale economies in market structure. How do Walmart, Amazon and Maersk pursue scale economies? What are their sources of scale economies?
5. How does network externality affect market structure? What is the Court's view of network externality in the antitrust case of Microsoft?

### **Week 2. Two-Sided Platform**

Text: VHS Chapter 9

Discussion questions:

1. How does the pricing of one side of consumers affect the demand of the other side of consumers?
2. What is the measure used to measure the market power of a firm in this cases?
3. How do we define market in this case?

### **Week 2.. Exclusionary Practices**

***Predatory and limit pricing (1 week), capacity investment and bundled discount (1 week)***

Case: Spirit Airlines v. Northwest (2005) – Week 5

DuPont (1980), LePage's v. 3M (2003) – Week 6

FTC v. Kellogg (1981) if time permitted for discussing product proliferation

Text: VHS Chapter 5

Discussion questions:

1. What are businesses practices judged to violate the Section 2?
2. What is the three-step procedure to show a firm is performing predatory pricing?
3. How does capacity expansion and bundle discount deter entry?

### **Week 3. Collusion**

***Infinite repeated game as a theory for price fixing.***

***Market features and business practices that facilitate price fixing.***

***Policy tools, including investigation, fines and leniency program.***

***Section 1 of Sherman Act 1890***

Case: LCD Conspiracy (2014)

Text: VHS Chapter 4

Explicit collusion: Trenton Potteries (1927), Socony-Vacuum Oil (1940), BMI (1979)

Tacit collusion: Interstate Circuit (1939), Theatre Enterprises (1954), The Airline Tariff Publishing Case (1994)

Reading: Flying in formation. Economist; 8/4/2007, Vol. 384 Issue 8540, p48-49.

Well-dressed thieves. Economist; 2/23/2008, Vol. 386 Issue 8568, p94

Discussion questions:

1. How does trigger strategy be employed to sustain price fixing?
2. What are industry and market environments (in terms of demand, industry and firm) facilitating price fixing?
3. How does investigation, fines and leniency program affect the incentive to collude?
4. What is the approach used to prosecute explicit price fixing, per se rule or rule of reason?
5. How are evidences needed to prosecute tacit collusion? What is a “plus factor”?

### **Week 3. Horizontal Merger**

***Market definition, unilateral effect, coordination effect, market power and efficiency trade-off.***

Case: Staples-Office Depot (1997) – Week 11

Text: VHS Chapter 6

Reading: Low definition. Economist; 2/27/2010, Vol. 394 Issue 8671, p84

Discussion questions:

1. How does market definition affect evaluation of horizontal merger?
2. What is the market power and efficiency trade-off?
3. What is the difference between unilateral effect and coordination effect?
4. How does HHI be used in Horizontal Merger Guidelines?

### **Week 3. Vertical Merger**

#### ***Double marginalization, foreclosure.***

Case: Google-ITA (2011) – Week 12

Text: VHS Chapter 7

Discussion questions:

1. How does vertical merger solve the problem of double marginalization?
2. How does vertical merger foreclose non-merging firms?

### **Case Studies**

Write a half-page answer for each review question.

#### **Case Study 1: Microsoft**

Rubinfeld, Daniel (2009). "Maintenance of monopoly: US v. Microsoft", in Kwoka, J. and L. White (eds.), *Antitrust Revolution: Economics, Competition and Policy*, 5th edition, Oxford University Press, Case 20, pp. 530-557.

1. What were the market definitions provided by the FTC and the dependents?
2. What were the evidences provided by the FTC on market power of possessed by Microsoft?
3. How did the "applications barrier to entry" help Microsoft monopolize the market for operating systems? How does it relate to network effect?
4. What are Microsoft's possible motives for wanting to minimize Netscape's (and by extension other "middleware" such as JAVA's) market share?
5. Why did Microsoft impose licensing restriction on OEM and bundle IE with its OS?

#### **Case Study 2: Spirit Airlines v. Northwest**

Kenneth Elzinga and David Mills (2009) "Predatory Pricing in the Airline Industry: Spirit Airlines v. Northwest (2005)", in Kwoka, J. and L. White (eds.), *The Antitrust Revolution: Economics, Competition and Policy*, 5th edition, Oxford University Press, Case 8, pp. 219-247.

1. What is Northwest response to Spirit's entry in the market (Detroit to Philadelphia)?
2. What is Spirit execution from market?
3. What are Spirit Sue claims?
4. What is Northwest response to Spirit's Sue?
5. What is government decision?

#### **Case Study 3: DuPont**

Dobson, Douglas, C., Shephard, William G. and Stoner, Robert D. (1994) Strategic Capacity Preemption: DuPont (1980). in Kwoka, J. and L. White (eds.), *Antitrust Revolution: The Role*

of *Economics*, 2nd edition, Oxford University Press, pp. 157-88

1. How did the market power of DuPont change in history?
2. Explain DuPont's strategy.
3. What are the evidences FTC provided to prove DuPont would gain monopoly power?
4. How did DuPont respond to the monopoly argument?
5. What was the result? What do you learn from this case?

#### **Case Study 4: LePage's v. 3M**

Gary L. Roberts (2009). "The Use of Bundled Rebates by a Dominant Firm: LePage's v. 3M (2003)", in Kwoka, J. and L. White (eds.), *Antitrust Revolution: Economics, Competition and Policy*, 5th edition, Oxford University Press, Case 10, pp. 276-.

1. What did LePage do in private label market? Why did 3M has the motive to exclude it from the market?
2. What are the LePage arguments on market definition and market power of 3M?
3. Discuss the 3M's bundled rebate program
4. How does the 3M's bundled rebate program disadvantage LePage?
5. A multi-product firm sells toothpaste at \$5 with cost at \$3, and sells detergent at \$4 with cost at \$2. If retailer order 1000 units for each of them, it will enjoy 30% off discount. Suggest how this bundle rebate program foreclose a firm selling toothpaste with cost at \$3.

#### **Case Study 5: LCD Conspiracy**

Leffler, Keith and Santeseban, Cristian. (2017). The LDC Conspiracy: The Sherman Act, Beyond a Reasonable Doubt, and Issues of Extraterritoriality (2014) in John Kwoka and Lawrence White (eds), *Antitrust Revolution: Economics, Competition and Policy*, 7th edition, Oxford University Press, Case 14, pp. 312-330.

1. What were the firms in the cartel? Why did the Sherman Act apply to their conduct?
2. How did the cartel operate in terms of the variable they collude on, the collusion mechanism, and the follow-up monitoring?
3. What were the market features facilitate collusion in this case?
4. How did the DOJ collect major evidence in this case? How did the corporate leniency program help the investigation?
5. How did the overcharge computed? How did the concept of beyond reasonable doubt affect the computation of overcharge?

#### **Case Study 6: Staples and Office Depot**

Dalkir, S. and Warren-Boulton, F., 2004. Prices, Market Definition, and the Effects of Merger: Staples-Office Depot (1997). *Antitrust Revolution: Economics, Competition, and Policy*, 4th edition. Oxford University Press, New York, Case 2, pp. 52-72.

1. What were the market definitions provided by the FTC and the dependents?
2. What were the evidences provided to support the proposed market definition?
3. What were the evidences showing the competition between Staples and Office Depot?
4. How did the FTC infer the merger would be anti-competitive?
5. What are the entry barriers to this market?

**Case Study 7: Google and ITA**

Topper, Michael D., Stanley Watt, and Jingming “Marshall” Yan. 2014. “Google-ITA: Creating a New Flight Search Competitor (2011)” in John Kwoka and Lawrence White (eds), *Antitrust Revolution: Economics, Competition, and Policy*, 6rd edition, Oxford University Press, Case 12, pp. 385-412

1. How did this merger change the market structure of P&S system and flight search services?
2. What were the arguments of DOJ to block this merger?
3. What were the competitive alternative P&S systems available to Google’s competitor in flight search services?
4. What is the benefit and cost of Google to vertically foreclose, i.e. refuse licensing ITA’s software to, its competitors in flight search services?

What is the rationale behind requiring Google to honor and renew existing license for ITA’s current QPX software and certain updates?

**The design of class discussion or exercise, practice, experience and so on:**

**Reading**

The required readings are cases, which are supplemented by the chapters in VHS and other additional readings. I will announce the additional required reading throughout the semester.

**Grading & Evaluation:**

Attendance: 10%

Your score = 10 - Number of classes missed. Your attendance is valid if you come no later than 10 minutes after the class begins and you leave no earlier than 10 minutes before the class end

Case study: 7x5%

Submit written report for review questions and participate in in-class discussion.

Presentation (in PPT format): 15%

Class 4-1: Present the content of an antitrust case and discuss its relationship with the class material.

Antitrust cases for presentations are listed in the Reading section.

Examination: 40%

Exams are cumulative. Practices do not count towards your grades but only serve as preparations for examinations. Exams will require a calculator. While scientific and/or financial calculators are both acceptable, calculators embedded in cell phones are not.

**IMPORTANT** There will be no make - up exam.

**Teaching Materials & References:**

Antitrust Revolution. By John E. Kwoka and Lawrence J. White [KW]

Economics of Regulation and Antitrust, 5th Edition by Viscusi, Harrington and Sappington, 2018 [VHS]