

University of Michigan Business School

IB888: Winter-B 2005

INTERNATIONAL CARTELS IN A GLOBAL MARKET

Professors Margaret C. Levenstein & Valerie Y. Suslow

Tuesdays, 9:00a.m. – 12:00p.m., P2011

CONTACT INFORMATION:

Prof. Margaret Levenstein  
Office: D3201  
Phone: 615-6352  
MaggieL@umich.edu

Prof. Valerie Suslow  
Office: D4207  
Phone: 763-4510  
suslow@umich.edu

COURSE DESCRIPTION:

This course explores collusion among firms, with an emphasis on international cartels. We will begin with the fundamental economics of cartels, drawing upon classic articles from the industrial organization literature. Our focus then turns to empirical research on cartel characteristics, and the determinants of cartel duration and stability. We will survey both cross-section and case study research. The focus will be on both understanding and critiquing the empirical methodologies.

PREREQUISITE:

Graduate microeconomics.

COURSE MATERIALS:

Recommended Texts:

Jean Tirole, *The Theory of Industrial Organization*, Cambridge, MA: MIT Press, 1997.

F.M. Scherer and David Ross, *Industrial Market Structure and Economic Performance*, Houghton Mifflin, 3<sup>rd</sup> ed, 1990.

David Besanko, David Dranove, Mark Shanley, and Scott Schaefer, *Economics of Strategy*, 3<sup>rd</sup> edition, John Wiley and Sons, Inc. 2004. (abbreviated below as BDS)

COURSE REQUIREMENTS AND EVALUATION:

Problem Sets (2).....	0%	(graded for feedback only)
Proposal for Research Paper .....	20%	(due April 12)
Presentations (2).....	30%	(15% each)
Final Exam.....	50%	(date to be announced)

## Assignments

Problem Sets: There will be two problem sets. You should work on them individually first, and then get together with others in the class to discuss the questions and compare answers. You must each turn in your own individual write-up. Problem sets will be corrected for feedback, but not graded.

Proposal for Research Paper: Each student will write a 4-5 page proposal of a research project related to the course. There should be three components to your proposal:

- (1) Statement of the research question and its contribution to the field (either original research or an extension of existing research).
- (2) Brief review of the relevant literature.
- (3) Description of the theoretical and/or empirical modeling approach, along with research hypotheses.

Proposal ideas must be approved in advance. We encourage you to set up a meeting with us as soon as possible to discuss your proposal. This assignment will be graded based on originality, feasibility of the proposed research project, and exposition (including spelling and grammar). The proposal must be typed using 12 font, and 1.5 line spacing (this limits you to approximately 1500 words of text).

Presentations: For the first two presentations teams of two students will be assigned to present a paper. (We will alternate the teams for each presentation.) Presentations will be thirty minutes maximum in length, followed by discussion led by the team presenting. For the third presentation, each student will individually present their research proposal as a work-in-progress (twenty minutes presentation, followed by ten minutes for discussion). These research proposal presentations will occur on April 5, with the goal of giving feedback on the research ideas, so that the research proposal can be refined before it is turned in on April 12.

These presentations will be done in the same style as a seminar, where the rest of the class can ask questions at any point (rather than saving questions until the end). This will help you practice the skill of timing the amount of material to present and how to present it, allowing time for questions from the audience. You must turn in either your PowerPoint slides or a typed outline of your presentation before class. Grades will be based on content, organization, and response to questions. The first presentation will not be graded, so that students can become familiar with the format.

## TENTATIVE SCHEDULE OF TOPICS WITH READINGS

### **Session#1 Preliminaries (March 11)**

#### *Required Reading*

Pindyck & Rubinfeld, "Oligopoly," pp. 441-456

#### *Student Presentation (not graded)*

Scherer & Ross, Chapter 6 ("Conditions Facilitating Oligopolistic Coordination") and Chapter 7 ("Conditions Limiting Oligopolistic Coordination")

#### *Further Reading*

BDS, "Oligopoly," pp. 218-228

Shapiro, Carl, "Theories of Oligopoly Behavior," in *Handbook of Industrial Organization*, Vol. I, Chapter 6

### **Session#2 Game Theory Dynamics (March 15)**

#### *Required Reading*

Tirole, Chapter 6 ("Dynamic Price Competition and Tacit Collusion")

Porter, Robert, "On the Incidence and Duration of Price Wars," *Journal of Industrial Economics*, 32:4 (1985), pp. 415-26.

Stigler, George, "A Theory of Oligopoly," *Journal of Political Economy*, 72 (February 1964), pp. 44-61.

#### *Further Reading*

BDS, Chapter 8 ("The Dynamics of Pricing Rivalry")

Abreu, Dilip, David Pearce and Ennio Stachetti, "Optimal Cartel Equilibria with Imperfect Monitoring," *Journal of Economic Theory*, 39:1 (1985), pp. 251-69.

Bagwell, Kyle and Robert Staiger, "Collusion over the Business Cycle," *RAND Journal of Economics*, 28:1 (Spring 1997), pp. 82-106.

Bernheim, B. Douglas and Michael Whinston, "Multimarket Contact and Collusive Behavior," *RAND Journal of Economics*, 21:1 (Spring 1990), pp. 1-26.

Brock, William and Jose Scheinkman, "Price Setting Supergames with Capacity Constraints," *Review of Economic Studies*, 52 (1985), pp. 371-82.

Green, Edward and Robert Porter, "Noncooperative Collusion under Imperfect Price Information," *Econometrica*, 52:1 (January 1984), pp. 87-100.

Haltiwanger, John and Joseph Harrington, "The Impact of Cyclical Demand Movements on Collusive Behavior," *RAND Journal of Economics*, 22 (Spring 1991), pp. 89-106.

Porter, Robert, "Optimal Cartel Trigger Price Strategies," *Journal of Economic Theory*, 29 (1983), pp. 313-38.

Rotemberg, Julio and Garth Saloner, "A Supergame-Theoretic Model of Price Wars during Booms," *American Economic Review*, 76 (June 1986), pp. 390-407.

Staiger, Robert and Frank Wolak, "Collusive Pricing with Capacity Constraints in the Presence of Demand Uncertainty," *RAND Journal of Economics*, 23 (Summer 1992), pp. 203-20.

### **Session#3 Cartel Stability (March 22)**

#### Required Reading

Levenstein, Margaret and Valerie Suslow, "Then and Now: Determinants of Duration of 20<sup>th</sup> Century International Cartels," mimeo 2004.

Levenstein, Margaret and Valerie Suslow, "What Determines Cartel Success?" mimeo 2005.

#### Further Reading

Baker, Jonathan, "Identifying Cartel Policing Under Uncertainty: The U.S. Steel Industry, 1933-1939," *Journal of Law and Economics*, 32 (October 1989), pp. S47-S76.

Bresnahan, Timothy, "Competition and Collusion in the American Automobile Market: The 1955 Price War," *Journal of Industrial Economics*, 35:4 (June 1987), pp. 457-82.

Dick, Andrew, "When Are Cartels Stable Contracts?" *Journal of Law and Economics*, 39:1 (1996), pp. 241-83.

Ellison, Glenn, "Theories of Cartel Stability and the Joint Executive Committee," *RAND Journal of Economics*, 25:1 (Spring 1994), pp. 37-57.

Fraas, Arthur and Douglas Greer, "Market Structure and Price Collusion: An Empirical Analysis," *Journal of Industrial Economics*, 26:1 (1977), pp. 21-44.

Hay, George and Daniel Kelley, "An Empirical Survey of Price-Fixing Conspiracies," *Journal of Law and Economics*, 17:1 (April 1974), pp. 13-38.

Jacquemin, Alexis, Tsuruhiko Nambo and Isabelle Dewez, "A Dynamic Analysis of Export Cartels: The Japanese Case," *Economic Journal*, 91:363 (1981), pp. 685-96.

Levenstein, Margaret, "Price Wars and the Stability of Collusion: A Study of the Pre-World War I Bromine Industry," *Journal of Industrial Economics*, 45:2 (June 1997), pp. 117-138.

Marquez, Jamie, "Life Expectancy of International Cartels: An Empirical Analysis," *Review of Industrial Organization*, 9:3 (1994), pp. 331-41.

Porter, Robert, "A Study of Cartel Stability: The Joint Economic Committee, 1880-1886," *Bell Journal of Economics*, 14 (Autumn 1983), pp. 301-314.

Porter, Robert and J. Douglas Zona, "Detection of Bid Rigging in Procurement Auctions," *Journal of Political Economy*, 101:3 (June 1993), pp. 518-38.

Posner, Richard, "A Statistical Study of Antitrust Enforcement," *Journal of Law and Economics*, 13:2 (1970), pp. 365-419.

Suslow, Valerie, "Cartel Contract Duration: Empirical Evidence from International Cartels," mimeo (2001).

### **Session#4 Beyond the Triangle: Cartel Organization and Non-price Effects of Cartels (March 29)**

Required Reading

Levenstein, Margaret and Valerie Suslow, "What Determines Cartel Success?," mimeo 2005.

Student Presentations

Steen, Frode and Lars Sjørgard, "Semicollusion in the Norwegian Cement Market," *European Economic Review*, 43:9 (1999), pp. 1775-96.

Symeonidis, George, "Price Competition, Non-Price Competition and Market Structure: Theory and Evidence from the UK," *Economica*, 67:267 (2000), pp. 437-56.

Further Reading

Baker, Wayne E. and Robert R. Faulkner. 1993. "The Social Organization of Conspiracy: Illegal Networks in the Heavy Electrical Equipment Industry," *American Sociological Rev.* 58, pp. 837-60.

Borenstein, Severin, "Rapid Price Communication and Coordination: The Airline Tariff Publishing Case (1994)," in Kwoka and White, *The Antitrust Revolution* 4th ed. (2004).

Genesove, David and Wallace Mullin, "Rules, Communication and Collusion: Narrative Evidence from the Sugar Institute Case," *American Economic Review*, 91:3 (June 2001), pp. 379-98.

Polodny, Joel M. and Fiona M. Scott Morton. 1999. "Social Status, Entry and Predation: The Case of British Shipping Cartels 1879-1929," *J. Ind. Econ.* 47:1, pp. 41-67.

Scott Morton, Fiona, "Entry and Predation: British Shipping Cartels 1879-1929," *Journal of Economics and Management Strategy*, 6:1 (Winter 1997), pp. 679-724.

Williamson, Oliver E. 1975. *Markets and Hierarchies: Analysis and Antitrust Implications*. NY: Free Press, pp. 224-247.

**Session#5      Research Proposal Presentations (April 5)**

*Student Presentations*

Presentation of research proposals as work-in-progress

**Session#6      Private International Cartels and Developing Countries (April 12)**

*Required Reading*

Levenstein, Margaret and Valerie Suslow, "Contemporary International Cartels and Developing Countries: Economic Effects and Implications for Competition Policy," *Antitrust Law Journal*, 71:3 (2004), pp.801-52.

*To be announced (selection of papers from conference "Promoting Competition in Developing Economies," March 3-5, Buenos Aires, Argentina)*

*Further Reading*

Bhattacharjea, Aditya, "Export Cartels—A Developing Countries Perspective," *Journal of World Trade*, 38:2 (2004), pp. 331-59.

Singh, A. 2002. "Competition and Competition Policy in Emerging Markets: International and Developmental Dimensions," disc. pap. United Nations Conference on Trade and Development: G-24 Discussion Series, Geneva, Switzerland.