

Industrial Organization

Course title – Intitulé du cours	Industrial Organization
Level / Semester – Niveau /semestre	Spring 2024
School – Composante	Ecole d'Economie de Toulouse
Teacher – Enseignant responsable	Isis Durrmeyer, Bruno Jullien and Patrick Rey
Other teacher(s) – Autre(s) enseignant(s)	
Other teacher(s) – Autre(s) enseignant(s)	
Other teacher(s) – Autre(s) enseignant(s)	
Other teacher(s) – Autre(s) enseignant(s)	
Other teacher(s) – Autre(s) enseignant(s)	
Lecture Hours – Volume Horaire CM	30
TA Hours – Volume horaire TD	0
TP Hours – Volume horaire TP	0
Course Language – Langue du cours	English
TA and/or TP Language – Langue des TD et/ou TP	English

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Course Objectives:

This is a course in the Graduate Industrial Organization sequence. We aim to give a solid grounding in understanding the structure of markets, and the strategic behavior of firms and their consumers. This course has three parts:

(i) Vertical relations (Patrick Rey).

(ii) Two-sided markets (Bruno Jullien).

(iii) Empirical methods and research topics in industrial organization at the frontier of the empirical IO research (Isis Durrmeyer).

Prerequisites :

(i) Basic game theory.

- (ii) Linear and non-linear econometrics methods.

Practical information about the sessions:

- (i) Three weeks for the first part, two weeks for the second one and five weeks for the third one.
- (ii) Some sessions will include 30 minutes discussions about research papers: formal presentation by students in group, followed by a general discussion.
- (iii) Some coding examples will be shown in Matlab language.

Grading system:

- (i) Parts one and two: final exam.
- (ii) One problem sets and one in-class presentation or written exam.

Bibliography/references:

Part I. Vertical relations (Patrick Rey, 3 weeks)

Introduction: vertical restraints, vertical integration and antitrust issues

Vertical coordination

Double marginalization

- Telser, Lester (1960), "Why Should Manufacturer Want Fair Trade," *Journal of Law and Economics*, 3: 86-105.
- Rey, Patrick, and Jean Tirole (1986), "The Logic of Vertical Restraints," *American Economic Review*, 76: 921-939.

Nonprice dimensions

- Mathewson, Frank, and Ralph Winter (1984), "An Economic Theory of Vertical Restraints," *RAND Journal of Economics*, 15: 27-38.
- Comanor, William, and H.E. Frech III (1985), "The Competitive Effects of Vertical Agreements," *American Economic Review*, 75: 539-546.
- Caillaud, Bernard, and Patrick Rey (1987), "A Note on Vertical Restraints with the Provision of Distribution Services," Working Paper INSEE and MIT.

Downstream agents

- Bernheim, B. Douglas, and Michael D. Whinston (1985), "Common Marketing Agency as a Device for Facilitating Collusion," *RAND Journal of Economics*, 16: 269-281.
- Bernheim, B. Douglas, and Michael D. Whinston (1986), "Common Agency," *Econometrica*, 54: 923-942.
- Bernheim, B. Douglas, and Michael D. Whinston (1998), "Exclusive Dealing," *Journal of Political Economy*, 106: 64-103.

Upstream agents

- Hart, Oliver, and Jean Tirole (1990), "Vertical Integration and Market Foreclosure," *Brookings Papers on Economic Activity: Microeconomics*, 205-285.
- O'Brien, Daniel P., and Greg Shaffer (1992), "Vertical Control with Bilateral Contracts," *RAND Journal of Economics*, 23(3): 299-308.
- McAfee, R. Preston, and Marius Schwartz (1994), "Opportunism in Multilateral Vertical Contracting: Nondiscrimination, Exclusivity, and Uniformity," *American Economic Review*, 84(1): 210-230.
- Rey, Patrick, and Thibaud Vergé (2005), "Bilateral Control with Vertical Contracts," *RAND Journal of Economics*, 35(4): 728-746.
- Marx, Leslie, and Greg Shaffer (2007), "Upfront Payments and Exclusion in Downstream Markets," *RAND Journal of Economics*, 38: 823-43.
- Rey, Patrick, Jeanine Miklós-Thal and Thibaud Vergé (2011), "Buyer Power and Intra-brand Coordination," *Journal of the European Economic Association*, 9(4): 721-741.
- Rey, Patrick, and Michael D. Whinston (2013), "Does Retailer Power Lead to Exclusion?," *RAND Journal of Economics*, 44(1): 75-81.

Rivalry among vertical structures

Strategic delegation

- Bonanno, Giacomo and John Vickers (1988), "Vertical Separation," *Journal of Industrial Economics*, 36: 257-265.
- Rey, Patrick, and Joseph E. Stiglitz (1995), "The Role of Exclusive Territories in Producers' Competition," *RAND Journal of Economics*, 26: 431-451.
- Caillaud, Bernard, Bruno Jullien and Pierre Picard (1995), "Competing Vertical Structures: Precommitment and Renegotiation," *Econometrica*, 63: 621-646.
- Caillaud, Bernard, and Patrick Rey (1995), "Strategic Aspects of Vertical Delegation," *European Economic Review*, 39: 421-431.
- Slade, Margaret E. (1998), "Beer and the Tie: Did Divestiture of Brewer-owned Public Houses Lead to Higher Prices?," *The Economic Journal*, 108: 565-602.

Facilitating practices

- Jullien, Bruno, and Patrick Rey (2007), "Resale Price Maintenance and Collusion," *RAND Journal of Economics*, 38(4): 983-1001.

Interlocking relationships

- Rey, Patrick, and Thibaud Vergé (2010), "Resale Price Maintenance and Interlocking Relationships," *Journal of Industrial Economics*, 58(4): 928-961.
- Collard-Wexler, Allan, Gautam Gowrisankaran and Robin Lee (2018), "'Nash-in-Nash" Bargaining: A Microfoundation for Applied Work," *Journal of Political Economy*, forthcoming.
- Crawford, Gregory, Robin Lee, Michael D. Whinston and Ali Yurukoglu (2018), "The Welfare Effects of Vertical Integration in Multichannel Television Markets," *Econometrica*, 86(3): 891–954.
- Ho, Kate, and Robin S. Lee (2016), "Equilibrium Provider Networks: Bargaining and Exclusion in Health Care Markets," *American Economic Review*, forthcoming.
- Ho, Kate, and Robin S. Lee (2017), "Insurer Competition in Health Care Markets," *Econometrica*, 85(2): 379-417.
- Ghili, Soheil (2016), "Network Formation and Bargaining in Vertical Markets: The Case of Narrow Networks in Health Insurance," mimeo.
- Rey, Patrick, and Volker Nocke (2018), "Exclusive Dealing and Vertical Integration in Interlocking Relationships," *Journal of Economic Theory*, forthcoming.
- Rey, Patrick, and Thibaud Vergé (2016), "Secret contracting in multilateral relations," TSE Working Paper, n. 16-744.

Exclusionary practices

Naked exclusion

- Aghion, Philippe and Patrick Bolton (1987), "Contracts as a Barrier to Entry," *American Economic Review*, 77: 388-401.
- Rasmusen, Eric B., J. Mark Ramseyer and John S. Wiley (1991), "Naked Exclusion," *American Economic Review*, 81: 1137-1145.
- Segal, Ilya, and Michael D. Whinston (2000), "Naked Exclusion: Comment," *American Economic Review*, 90(1): 296-309.
- Fumagalli, Chiara, and Massimo Motta (2006), "Exclusive dealing and entry, when buyers compete," *American Economic Review*, 96(3): 785-795.
- Julian Wright (2005), "Exclusive Dealing and Entry, when Buyers Compete: Comment," *American Economic Review*, 99(3): 1070-81.
- Simpson, John, and Abraham L. Wickelgren (2007), "Naked Exclusion, Efficient Breach, and Downstream Competition," *American Economic Review*, 97: 1305-1320.
- Wright, Julian (2008), "Naked exclusion and the anticompetitive accommodation of entry," *Economics Letters*, 98(1): 107-112.
- Abito, Jose Miguel, and Julian Wright (2008), "Exclusive Dealing with Imperfect Downstream Competition," *International Journal of Industrial Organization*, 26: 227-246.

- Rey, Patrick, and William S. Comanor (2000), "Vertical Restraints and the Market Power of Large Distributors," *Review of Industrial Organization*, 17(2): 135-153.

Vertical integration and foreclosure

- Ordoover, Janusz, Garth Saloner and Steven C. Salop (1990), "Equilibrium Market Foreclosure," *American Economic Review*, 80: 127-142.
- Hart, Oliver, and Jean Tirole (1990), "Vertical Integration and Market Foreclosure," *Brookings Papers on Economic Activity: Microeconomics*, 205-285.
- Rey, Patrick, and Volker Nocke (2018), "Exclusive Dealing and Vertical Integration in Interlocking Relationships", *Journal of Economic Theory*, forthcoming.
- Bolton, Patrick and Michael Whinston (1993), "Incomplete Contracts, Vertical Integration, and Supply Assurance," *Review of Economic Studies*, 60: 121-148.
- Chipty, Tasneen (2001), "Vertical Integration, Market Foreclosure, and Consumer Welfare in the Cable Television Industry," *American Economic Review*, 91(3): 428-453.
- Allain, Marie-Laure, Claire Chambolle and Patrick Rey (2016), "Vertical Integration as a Source of Hold-up," *The Review of Economic Studies*, 83(1): 1-25.

Part II: Network effects two-sided markets (Bruno Jullien, 2 weeks)

Network competition

- Katz, Michael, and Carl Shapiro (1985), "Network Externalities, Competition and Compatibility," *American Economic Review*.
- Farrell, Joseph, and Garth Saloner (1985), "Standardization, Compatibility and Innovation," *Rand Journal of Economics*, 16: 70-83.
- Farrell, Joseph, and Michael Katz (2000), "Innovation, Rent Extraction, and Integration in Systems Markets," *Journal of Industrial Economics*, 48(4): 413-432.
- Crémer, Jacques, Patrick Rey and Jean Tirole. (2000) "Connectivity in the Commercial Network" *Journal of Industrial Economics*, 48(4): 433-72

Economics of platforms and two-sided markets

- Armstrong, Mark (2006), "Competition in Two-Sided Markets," *Rand Journal of Economics*, 37(3): 668-691.
- Caillaud, Bernard, and Bruno Jullien (2001), "Competing Cybermediaries," *European Economic Review (Papers & Proceedings)*, 45: 797-808.
- Caillaud, Bernard, and Bruno Jullien (2003), "Chicken and Egg: Competition among Intermediation Service Providers," *Rand Journal of Economics*, 309-328
- Hagiu, Andrei. "Pricing and commitment by two-sided platforms." *The RAND Journal of Economics* 37.3 (2006): 720-737.
- Jullien, Bruno, and Alessandro Pavan. "Information management and pricing in platform markets." *The Review of Economic Studies* 86.4 (2019): 1666-1703.

- Jullien, Bruno, Alessandro Pavan, and Marc Rysman. "Two-sided markets, pricing, and network effects." *Handbook of Industrial Organization*. Vol. 4. No. 1. Elsevier, 2021. 485-592.
- Liu, C., Teh, T. H., Wright, J., & Zhou, J. (2022). Multihoming and oligopolistic platform competition. *Available at SSRN 3948799*.
- Rochet, Jean-Charles and Jean Tirole (2002). "Cooperation among Competitors: Some Economics of Payment Card Associations", *RAND Journal of Economics*, 33: 549-570.
- Rochet, Jean-Charles, and Jean Tirole (2003), "Platform Competition in Two-Sided Markets," *Journal of the European Economic Association* 1: 990–1029.
- Rochet, Jean-Charles, and Jean Tirole. (2006), "Two-sided Markets: A Progress Report," *Rand Journal of Economics*, 37: 645-667.
- Rochet, Jean-Charles and Jean Tirole (2011). "Must-Take Cards: Merchant Discounts and Avoided Costs", *Journal of the European Economic Association*, 9(3): 462-495.
- Weyl, Glen (2010), "A price theory of two-sided markets," *American Economic Review*, 100(4), 1642-1672

Part III: Empirical (Isis Durrmeyer, 5 weeks)

Detailed reading list provided in class.

Outline:

1. Demand and Supply Models of Product Differentiation
2. Measuring Market Power, Welfare and Merger Analysis
3. Industry regulation
4. New Models of price determination