

ESMT Berlin

MANAGEMENT SCIENCE II

BDPEMS Spring 2018

Part II: Topics in Industrial Organization

Instructor: Özlem Bedre-Defolie
ozlem.bedre@esmt.org

Associate Professor of Economics

ESMT Berlin
Schlossplatz 1, Room 1.36
+49 (30) 21231 1531
Office hours: by appointment

Purpose of the course

This course aims to provide students with strong understanding of contracts between vertically related firms (Business to Business contracting), the strategic use of vertical contracts for vertical control and vertical foreclosure, use of tying and bundling strategies as tools of horizontal foreclosure, entry deterrence, competition for exclusivities and two-sided markets.

Course format

We will go through seminal theories of industrial organization in the listed topics mainly focusing on intuition, basic economic trade-offs, modelling approaches, applications and limitations. In order to fully grasp the material from the class discussions, you need to come to the class prepared that involves reading assigned (required) readings for each session and thinking critically about the paper. Reading critically theoretical research work means trying to address following questions:

- What is the research question? Why is it interesting? (how does it help you to understand the real world?)
- What is the main finding (insight, message) of the paper? What are the implications of the results? Are they relevant for applications?
- What are the key mechanisms at work in the context of the paper?
- What are the main ingredients of the theoretical model (players, timing, actions/strategies, payoffs, information assumptions, equilibrium notion)?
- Which assumptions are critical for the result? Are they realistic?
- How robust are the findings? Would they be valid if particular assumptions were relaxed?

For the session where we discuss one paper, you are expected to read carefully the paper and be prepared to present the answers to the above questions for that paper (without slides) in the class.

Prerequisites

A basic knowledge of static oligopoly theory (i.e., Cournot, Bertrand, and Stackelberg models) and a basic knowledge of game theory (e.g., simultaneous and sequential move games, standard solution concepts). A good way to get up to speed on these topics would be to consult the relevant chapters in one of the standard graduate IO textbooks. Two of my favorites are Jean Tirole (1988) and Xavier Vives (1999).

The textbooks for this course are:

Tirole (1988), *The Theory of Industrial Organization*, MIT Press.

Xavier Vives (1999), *Oligopoly Pricing: Old Ideas and New Tools*, MIT Press.

Motta (2004), *Competition Policy: Theory and Practice*.

Evaluation

Grading is based on three components:

- 1) Class participation (10%): You are expected to read the required readings and come to the class ready to discuss them.
- 2) Referee report OR research proposal (50%): An important aspect of doing research and a successful academic career is the ability to evaluate work (both your own work and also others'). Each student is expected to write one referee report individually on a recent research paper OR write a short proposal on the research he/she plans to develop in the thesis. The instructors will provide a list of research papers on the topics of the course from which students could choose one paper to prepare a referee report. The format and expectations about the research proposal will be communicated in the class. **Referee reports and research proposals are due by August 18th, 2018.**
- 3) Presentation (40%): Each student is expected to present his/her critical assessment of the paper (for which he/she writes a referee report) in the class for 15 minutes. Alternatively, he/she could present his/her research proposal for 15 minutes. **Presentations will take place during the last two sessions of the course.**

Course Sessions

Sessions 1&2
Thursday, June 7, 2018
09:00-12:00

Vertical Restraints and Coordination

- Required reading: Rey and Verge (2007)
- Optional reading: Textbooks: Motta (2004, Chapter 6), Tirole (1988, Chapter 4)
 Empirical Literature: Lafontaine and Slade (2008)

Session 1 topic Intra-brand Coordination

- Optional reading: Rey and Tirole (1986)

Session 2 topic Inter-brand Coordination

- Optional reading: Rey and Stiglitz (1995), Jullien and Rey (2007)

Sessions 3&4
Thursday, June 14, 2018
09:00-12:00

Session 3 Vertical Foreclosure

- Required reading: Rey and Tirole (2007, Vertical Foreclosure), Segal and Whinston (1999)
- Optional reading: Hart and Tirole (1990), O'Brien and Shaffer (1992), McAfee and Schwartz (1994).

Session 4 Downstream bargaining power

- Required reading: Marx and Shaffer (2007)
- Optional reading: Rey, Thal-Miklos and Verge (2011), Rey and Verge (2010)

Sessions 5&6
Thursday, June 21, 2018
09:00-12:00

Horizontal Foreclosure

- Required reading: Rey and Tirole (2007, Horizontal Foreclosure), Whinston (1990), Nalebuff (2004)
- Optional reading: Matutes and Regibeau (1988), Nalebuff (2000), Choi and Stefanadis (2001), Carlton and Waldman (2002)

Sessions 7&8
Thursday, June 28, 2018
09:00-12:00

Session 7 topic **Discussion of Armstrong and Vickers (2010)**

Required reading: Armstrong and Vickers (2010)

Session 8 topic **Entry Barriers I**

Required reading: Aghion and Bolton (1987)

Optional reading: Spier and Whinston (1995), Ide et al. (2016), Bedre-Defolie and Biglaiser (2017)

Sessions 9&10
Thursday, July 5, 2018
09:00-12:00

Entry Barriers II and Competing for Exclusivity

Required reading: Rasmussen, Ramseyer and Wiley (1991), Segal and Whinston (2000), Bernheim and Whinston (1998).

Optional reading: Fumagalli, C. and M. Motta (2006), Simpson, J. and A. Wickelgren (2007), Calzolari, G. and V. Denicolo (2013, 2015)

Sessions 11&12
Thursday, July 12, 2018
09:00-12:00

Two-sided Markets

Required reading: Armstrong (2006), Rochet and Tirole (2006),

Optional reading: Rochet and Tirole (2003), Bedre-Defolie and Calvano (2013), Edelman and Wright (2015)

Session 13&14
Thursday, July 19, 2018
09:00-12:00

Presentations and Discussion

Reading List

1. Vertical Restraints and Coordination

a. Vertical restraints and intra-brand coordination

- Mathewson and Winter (1984), “An Economic Theory of Vertical Restraints”, *RAND Journal of Economics*, Vol. 15, pp. 27-38.
- Rey and Tirole (1986), “The Logic of Vertical Restraints”, *American Economic Review*, Vol. 76, pp. 921-939.
- Rey and Verge (2007), “Economics of Vertical Restraints”, *Handbook of Antitrust Economics*, pp. 353-390.
- Lafontaine and Slade (2008), “Exclusive Contracts and Vertical Restraints: Evidence and Public Policy” *Handbook of Antitrust Economics*, pp. 391-414.

b. Vertical restraints and inter-brand coordination

- Bernheim and Whinston (1985), “Common Marketing Agency as a device for Facilitating Collusion”, *RAND Journal of Economics*, Vol. 16, pp. 269-281.
- Bernheim and Whinston (1986), “Common Agency,” *Econometrica*, Vol. 54, pp.923-942.
- Rey and Stiglitz (1994), “The Role of Exclusive Territories in Producers’ Competition”, *RAND Journal of Economics*, Vol. 26, pp. 431-451.
- Jullien and Rey (2007), “Retail Price Maintenance and Collusion”, *RAND Journal of Economics*, Vol. 38, pp. 983-1001.
- Jullien and Rey (2012), “Resale Price Maintenance and Interlocking Relationships,” *Journal of Industrial Economics*, Vol. 58(4), pp. 928-961.

2. Vertical Foreclosure

- Hart and Tirole (1990), “Vertical Integration and Market Foreclosure”, *Brooking Papers on Economic Activity (Microeconomics)*, pp. 205-285.
- O’Brien and Shaffer (1992), “Vertical Control with Bilateral Contracts”, *RAND Journal of Economics*, Vol. 23, pp. 431-451.
- McAfee and Schwartz (1994), “Opportunism in Multilateral Vertical Contracting: Nondiscrimination, exclusivity and uniformity”, *American Economic Review*, Vol. 84, pp. 210-230.
- Segal (1999), “Contracting with Externalities”, *The Quarterly Journal of Economics*, Vol. 114, pp. 337-388.
- Rey and Tirole (2007), “A Primer on Foreclosure”, *Handbook of Industrial Organization*, Vol. 3. pp. 2145-2220.
- Marx and Shaffer (2007), “Upfront Payments and Exclusion in Downstream Markets”, *RAND Journal of Economics*, Vol. 38, pp. 823-843.
- Miklos-Thal, Rey, and Verge (2011), “Buyer Power and Intra-brand Coordination”, *Journal of European Economic Association*, Vol. 9, pp. 721-741.

3. Horizontal Foreclosure: Tying and Bundling

- Matutes and Regibeau (1988), “Mix and Match: Product Compatibility without Network Externalities,” *The RAND Journal of Economics*, Vol. 19(2), 219-234.
- Whinston (1990), “Tying, Foreclosure and Exclusion,” *American Economic Review*, Vol. 80, 837-860.
- Nalebuff (2000), “Competing Against Bundles,” *Incentives, Organization, and Public Economics*, 323-336.
- Choi and Stefanadis (2001), “Tying, Investment and Dynamic Leverage Theory,” *The RAND Journal of Economics*, Vol. 32, 52-71.
- Carlton and Waldman (2002), “Strategic Use of Tying to Preserve and Create Market Power in Evolving Industries,” *The RAND Journal of Economics*, Vol. 33(2), 194-220.
- Nalebuff (2004), “Bundling as an Entry Barrier,” *The Quarterly Journal of Economics*, 119(1), 159-187.
- Armstrong and Vickers (2010), “Competitive Non-linear Pricing and Bundling,” *Review of Economic Studies*, 77(1), 30-60.

4. Entry Barriers

- Aghion and Bolton (1987), “Contracts as Barriers to Entry”, *American Economic Review*, Vol. 77, pp. 388-401.
- Rasmussen, Ramseyer and Wiley (1991), “Naked Exclusion”, *American Economic Review*, Vol. 81, pp. 1137-1145.
- Segal and Whinston (2000), “Naked Exclusion: Comment”, *American Economic Review*, Vol. 90, pp. 296-309.
- Fumagalli, C. and M. Motta (2006), “Exclusive Dealing and Entry, When Buyers Compete, *American Economic Review*, 96: 785-795.
- Simpson, J. and A. Wickelgren (2007), “Naked Exclusion, Efficient Breach, and Downstream Competition,” *American Economic Review*, 97: 1305-1320.
- Chen, Z. and G. Shaffer (2014), “Naked Exclusion and Minimum-Share Requirements,” *Rand Journal of Economics*, 45: 64-91.
- Ide, E., Montero, J.P., and N. Figueroa, (2016), “Discounts as a Barrier to Entry,” *American Economic Review*, 106: 1849-1877.
- Miklos-Thal, J. and G. Shaffer (2016), Naked Exclusion with Private Offers, *American Economic Journal: Microeconomics*, 8: 174-194.
- Bedre-Defolie and Biglaiser, “Contracts as Barriers to Entry in Markets with Non-pivotal Buyers”, forthcoming at *American Economic Review*.

5. Competing for Exclusivity

- O’Brien, D.P. and G. Shaffer (1997), “Nonlinear Contracts, Exclusive Dealing and Equilibrium Market Foreclosure,” *Journal of Economics & Management Strategy*, 6: 755-785.
- Bernheim, D. and M. Whinston (1998), “Exclusive Dealing,” *Journal of Political Economy*, 106: 64-103.
- Calzolari, G. and V. Denicolo (2013), “Competition with Exclusive Contracts and Market-Share Discounts,” *American Economic Review*, 103: 2384-2411.

- Calzolari, G. and V. Denicolo (2015), “Exclusive Contracts and Market Dominance, *American Economic Review*, 105: 3321-3351.

6. Two-Sided Markets

- Rochet and Tirole (2002), “Cooperation among Competitors: Some Economics of Payment Associations,” *RAND Journal of Economics*, Vol. 33(4), 549-570.
- Caillaud and Jullien (2003), “Chicken and Egg: Competition among Intermediation Service Providers,” *RAND Journal of Economics*, Vol. 34(2), 309-328.
- Armstrong (2006), “Competition in Two-sided Markets,” *RAND Journal of Economics*, Vol. 37(3), 668-691.
- Rochet and Tirole (2006), “Two-sided Markets: A Progress Report,” *RAND Journal of Economics*, Vol. 37(3), 645-667.
- Weyl (2011), “A Price Theory of Multi-sided Platforms,” *American Economic Review*, Vol. 100(4), 1642-1672.
- Hagiu and Julien (2011), “Why do Intermediaries Divert Search,” *Rand Journal of Economics*, Vol, 47(2), 332-367.
- Bedre-Defolie and Calvano (2013), “Pricing Payment Cards”, *American Economic Association: Microeconomics*, Vol. 5, pp. 206 - 231.
- Edelman and Wright (2015), “Price Coherence and Excessive Intermediation”, *Quarterly Journal of Economics*, Vol. 130 (3), pp. 1283 - 1328.