



**Master Colloquium on
Game Theory and Industrial Organization
Winter Term 2023/24**

The Colloquium on “Game Theory and Industrial Organization” is aimed at all students currently attending the lecture E 450b on “Game Theory and Industrial Organization”. Main topics will be “Tacit Collusion and Price Wars”, “Strategic Competition”, “Spatial Location and Product Positioning”, “Manager Compensation”, and “Competition under Asymmetric Information”. Major firms employ game theory experts to make strategic business decisions. Due to the high practical relevance of auction games, “Auctions” will be an additional topic in the colloquium with presentations by students, complemented by insights from practice in a preceding guest lecture.

Registration: You have to register online via ILIAS. The application is open from Monday, October 23, 10 am until Thursday, October 26, 10 am. The places are limited to 32 participants. The colloquium is mandatory for Management and Economics students. The remaining places are allocated on a first-come-first-served system.

Organizational Meeting: There will be a mandatory kick-off meeting on Friday, October 27, at 10.15 am. In this meeting, we will clarify the course of the colloquium and demonstrate how to give a rousing and stirring presentation.

Presentation: Presentations are limited to 15 minutes so that some time is left for discussion. The aim of the presentation should be that fellow students understand the core message of the model. Your task is fulfilled in the best possible way, if you succeed in inspiring other students for the topic. The presentation should be very focused, possible extensions should be postponed to the critical discussion at the end.

Criteria for passing the colloquium are (i) self-dependence in preparing the presentation, (ii) clarity and persuasiveness of the presentation, and (iii) taking an active part in the colloquium.

Preparation: In order to give an orientation about the key message of the model, there will be a preparatory talk with your supervisor, usually one week in advance to the presentation. Get in contact with your supervisor to make an appointment. The discussion of the key points of your presentation is necessary, since we might narrow down your topic: the considered model can be simplified, modified or applied, depending on the degree of difficulty. Therefore, it is important that you have skimmed the relevant paper before the talk.

Participants are asked to send their slides in pdf format the day before presentation by 10 am at the latest to manfred.stadler@uni-tuebingen.de and lukas.stickel@uni-tuebingen.de.

Topics and References:

Topic 1: Auctions (November 17, 2023; Supervisor: M. Stadler)

1. Standard Auctions

Wolfstetter, E. (1999), Topics in Microeconomics. Industrial Organization, Auctions, and Incentives, Chapter 8.2.

2. All-Pay Auctions

Wolfstetter, E. (1999), Topics in Microeconomics. Industrial Organization, Auctions, and Incentives, Chapter 8.2.

3. Auctions with Participation Fees

Wolfstetter, E. (1999), Topics in Microeconomics. Industrial Organization, Auctions, and Incentives, Chapter 8.2.

4. Optimal Auctions with Minimum Bids

Wolfstetter, E. (1999), Topics in Microeconomics. Industrial Organization, Auctions, and Incentives, Chapter 8.5.

Topic 2: Tacit Collusion and Price Wars (November 24; 2023; Supervisor: M. Stadler)

5. Collusion in Heterogeneous Duopoly Markets

Majerius, D.W. (1988), Price vs. Quantity Competition in Oligopoly Supergames. *Economics Letters* 27, 293-297.

6. Collusion in Homogeneous Oligopoly Markets

Majerius, D.W. (1988), Price vs. Quantity Competition in Oligopoly Supergames. *Economics Letters* 27, 293-297.

7. Collusion and Price Wars over Business Cycles

Stadler, M. (2015), Game Theory and Industrial Organization. Dynamic Models of Price Competition. In: H.J. Ramser, M. Stadler (eds.), *Entwicklung und Perspektiven der Wirtschaftswissenschaft*. Tübingen: Mohr Siebeck, pp. 287-313.

8. Collusion with Optimal Punishment

Delbono, F. and Lambertini, L. (2016), On Globally Optimal Punishments in the Repeated Cournot Game. University of Bologna Working Paper No. 1091.

Topic 3: Strategic Competition (December 8, 2023; Supervisor: M. Stadler)

9. Informative Advertising and Marketing

Boyer, M. and Moreaux, M. (1999), Strategic Underinvestment in Informative Advertising: The Cases of Substitutes and Complements. *Canadian Journal of Economics* 32, 654-672.

10. Network Externalities and Compatibility Decisions

Stadler, M., Tobler-Trexler, C.T., and Unsorg, M. (2022), The Perpetual Trouble with Network Products. Why IT Firms Choose Partial Compatibility. *Networks and Spatial Economics* 22, 903-913.

11. Demand Uncertainty and Strategic Use of Debt

Haan, M.A. and Toolsema, L.A. (2008), The Strategic Use of Debt Reconsidered. *International Journal of Industrial Organization* 26, 616-624.

12. Future Markets and Forward Trading

Allaz, B. and Vila, J.-L. (1993), Cournot Competition, Forward Markets and Efficiency. *Journal of Economic Theory* 59, 1-16.

Topic 4: Spatial Location (January 12, 2024; Supervisor: L. Stickel)

13. Location with Linear Transportation Costs

D'Aspremont, C., Gabszewicz, J.J., and Thisse, J.-F. (1979), On Hotelling's Stability in Competition. *Econometrica* 47, 1145-1150.

14. Location with Convex Transportation Cost

Economides, N. (1986), Minimal and Maximal Product Differentiation in Hotelling's Duopoly. *Economics Letters* 21, 67-71.

15. Location with Asymmetric Consumer Concentration

Anderson, S.P., Goeree, J.K., and Ramer, R. (1997), Location, Location, Location. *Journal of Economic Theory* 77, 102-127.

16. Location in a Square City

Tabuchi, T. (1994), Two-Stage Two-Dimensional Spatial Competition between Two Firms. *Regional Science and Urban Economics* 24, 207-227.

Topic 5: Product Positioning (January 19, 2024; Supervisor: L. Stickel)

17. Product Positioning under Uncertainty about Consumer Tastes

Casado-Izaga, F.J. (2000), Location Decisions: The Role of Uncertainty about Consumer Tastes. *Journal of Economics* 71, 31-46.

18. Multi-Store Competition and Product Variety

Peng, S.-K. and Tabuchi, T. (2007), Spatial Competition in Variety and Number of Stores. *Journal of Economics & Management Strategy* 16, 227-250

with correction in:

Peng, S.-K. and Tabuchi, T. (2007), Erratum: Spatial Competition in Variety and Number of Stores. *Journal of Economics & Management Strategy* 16, 537.

19. Quality Competition

Choi, C. and Shin, H. (1992), A Comment on a Model of Vertical Product Differentiation. *Journal of Industrial Economics* 40, 229-232

20. Quality and Variety Competition

Neven, D. and Thisse, J.-F. (1990), On Quality and Variety Competition. In: J.J. Gabszewics et al. (eds.) *Economic Decision Making: Games, Econometrics and Optimization*. Amsterdam, pp. 175-199.

Topic 6: Manager Compensation (January 26, 2024; Supervisor: L. Stickel)

21. Manager Compensation with Sales Evaluation

Vickers, J. (1985), Delegation and Theory of the Firm. *Economic Journal* 95 (Supplement), 138-147.

22. Manager Compensation in Oligopoly

Fershtman, C. and Judd, K.L. (1987), Equilibrium Incentives in Oligopoly. *American Economic Review* 37, 927-940.

23. Manager Compensation with Random Unit Costs

Fershtman, C. and Judd, K.L. (1987), Equilibrium Incentives in Oligopoly. *American Economic Review* 37, 927-940.

24. Manager Compensation in the Case of Common Holdings

Neus, W. and Stadler, M. (2018), Common Holdings and Strategic Manager Compensation. The Case of an Asymmetric Triopoly. *Managerial and Decision Economics* 39, 814-820.

Topic 7: Further Compensation Schemes (February 2, 2024; Supervisor: L. Stickel)

25. Manager Compensation with Market Share Evaluation

Jansen, T., van Lier, A., and van Witteloostuijn, A. (2007), A Note on Strategic Delegation: The Market Share Case. *International Journal of Industrial Organization* 25, 531-539

with correction in:

Kopel, M. and Lambertini, L. (2013), On Price Competition with Market Share Delegation Contracts. *Managerial and Decision Economics* 34, 40-43.

26. Manager Compensation with Relative Performance Evaluation

Miller, N. and Pazgal, A. (2002), Relative Performance as a Strategic Commitment Mechanism. *Managerial and Decision Economics* 23, 51-68.

27. Manager Compensation Based on Cost Reduction

Raith, M. (2003), Competition, Risk, and Managerial Incentives. *American Economic Review* 93, 1425 - 1436.

28. Bargaining over Managerial Contracts

Van Witteloostuijn, A., Jansen, T. and van Lier, A. (2007), Bargaining over Managerial Contracts in Delegation Games: Managerial Power, Contract Disclosure and Cartel Behavior. *Managerial and Decision Economics* 28, 897-904.

Topic 8: Competition with Asymmetric Information (February 9, 2024; Supervisor: M. Stadler)

29. Honest Firm Behavior and Repeated Price Competition

Stadler, M. (2015), Game Theory and Industrial Organization. Dynamic Models of Price Competition. In: H.J. Ramser et al. (eds.), *Entwicklung und Perspektiven der Wirtschaftswissenschaft*. Tübingen, Mohr Siebeck, pp. 283-309.

30. Burning Money and Signaling of Information

Ziv, A. (1993), Information Sharing in Oligopoly: The Truth-Telling Problem. *Rand Journal of Economics* 24, 455-465.

31. Leadership, Uncertain Cost Information, and Observation Noise

Maggi, G. (1999), The Value of Commitment with Imperfect Observability and Private Information. *Rand Journal of Economics* 30, 555-574.

32. Limit Pricing and Entry Deterrence

Milgrom, P. and Roberts, J. (1982), Limit Pricing and Entry Under Incomplete Information. *Econometrica* 50, 443-460 (or Tirole, J. (1988), Chapter 9.4).