

# GAME THEORY: SYLLABUS

Instructor: Xiang Sun

Wuhan University, Economics and Management School  
Academic Year 2022–2023, Semester 2

**Chinese title:** 博弈论.

**Prerequisite:** Calculus, Probability, Advanced Microeconomics, Game Theory.

**Course description:** In this course, we mainly talk about the Horizontal Mergers.

**Modular credit:** 2 modular credits.

**Modular number:**

**Time:** Week 2–15, Tuesday 18:30–20:30.

**Venue:** 206 for onsite teaching

**Module website:** <https://www.xiangsun.org/teaching>, for announcements and material downloading.

**Instructor:** 孙祥

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  - Before asking questions, please briefly read 提问的智慧.
  - Before sending e-mails, please read Topic 7 in WISE 学生礼仪指南.
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**Office hours:** By e-mail appointment.

**Teaching assistants:** Not applicable.

### Main references: Horizontal Mergers:

1. Farrell, J., Shapiro, C., 1990. Horizontal Mergers: An Equilibrium Analysis. American Economic Review, 80: 107–126.
2. Nocke, V., Whinston, M.D., 2010. Dynamic Merger Review. Journal of Political Economy, 118(6): 1201–1251.
3. Nocke, Volker, and Michael D. Whinston. 2013. Merger Policy with Merger Choice. American Economic Review, 103 (2): 1006–33.
4. Nocke, Volker, and Nicolas Schutz. 2018. An Aggregative Games Approach to Merger Analysis in Multiproduct-Firm Oligopoly. Rand Journal of Economics, forthcoming.
5. Volker Nocke and Michael D. Whinston, 2022. Concentration Thresholds for Horizontal Mergers. American Economic Review, 112(6): 1915–1948.
6. Breinlich, Holger, Volker Nocke, and Nicolas Schutz. 2020. Merger Policy in a Quantitative Model of International Trade. Economic Journal, 130 (626): 393–421.
7. Jaffe, Sonia and E. Glen Weyl, 2013. The first-order approach to merger analysis. American Economic Journal: Microeconomics.
8. Gilbert, R.J., Katz, M.L., 2022. Dynamic merger policy and pre-merger product choice by an entrant. International Journal of Industrial Organization, 81, 102812.
9. Motta, M., Tarantino, E., 2021. The effect of horizontal mergers, when firms compete in prices and investments. International Journal of Industrial Organization, 78, 102774.
10. Johnson, J.P., Rhodes, A., 2021. Multiproduct mergers and quality competition. RAND Journal of Economics, 52(3): 633–661.
11. Joao Correia-da-Silva, Bruno Jullien, Yassine Lefouili, Joana Pinho, 2019. Horizontal mergers between multisided platforms: Insights from Cournot competition. Journal of Economics & Management Strategy, 28(1), 109–124.
12. Chen, Z., Choe, C., Cong, J., Matsushima, N., 2022. Data-driven mergers and personalization. RAND Journal of Economics, 53(1): 3–31.
13. Moraga-González J L, Motchenkova E, Nevrekar S. Mergers and innovation portfolios. The RAND Journal of Economics, 2022, 53(4): 641–677.
14. Bourreau, Marc, Bruno Jullien, and Yassine Lefouili (2021), Mergers and Demand-Enhancing Innovation, TSE working paper

### Grading:

- Presentation: 30%
- Performance: 30%
- Writing sample: 40%

### About the presentation

- Each student is required to present one paper from the main references.
- Understand ALL the details of the paper and its online appendix/supplemental material.
- Prepare for a 1.5-hour talk, including questions from the audience.
- A good number of slides is 30.
- Most of your presentation should be devoted to providing a clear overview of
  - what the paper is about
  - what its main results are
  - what the contribution to the literature is
- Towards the end of your talk, you should also provide a critical assessment of the paper's contribution.

- Typical structure:
  - Introduction
  - The model
  - Main results (如果有多个结论, 请首先用思维导图的方式呈现所有结果以及相互之间的联系, 然后按主线讲解)
  - Comparison with other papers (务必讲述与之前文献的不同点, 包括表面的差别, 更包括直觉上、底层逻辑上的区别和联系)
  - Critical assessment
- Don't go too wild with math on your slides. Your talk should be accessible to everybody in the audience. That being said, you can expect me to ask technical questions, such as "How is this proven?" (需要完全理解证明/计算过程, 尤其是其中的直觉; 对于较长的论证过程, 尝试将其分解成数个步骤, 描述每个步骤; 对于晦涩的证明, 想各种办法来帮助听众理解)

**What is a critical assessment?** Here are some questions you could ask yourself when drafting up your critical assessment:

- What research question is the paper trying to address? Is it interesting? Is the paper well motivated?
- Relative to the existing academic literature, what do we learn from the paper?
- Are the results surprising/interesting? Why do we need a model to obtain those results?
- Is the model reasonable? Are its assumptions believable? (Relaxing assumptions you dislike is a good way of coming up with extensions.)
- Is the analysis correct? (Some papers have mistakes.)
- Does the model generate testable predictions? (Most models give rise to predictions. Predictions are testable if they can be related to things that would be observable to a putative econometrician.)
- Does the model provide novel explanations for real-world phenomena? Are those explanations plausible? Are they more plausible than earlier explanations provided in the existing literature?

**About the performance** Each time a student gives a presentation, the rest of the students are required to complete the following tasks while listening to the presentation.

- Before the presentation, roughly read the paper and have an idea what is going on.
- During the presentation, actively challenge the presenter.
- After the presentation, write a summary independently, including the model, main results, intuitions, and contributions/critical assessments.

**About the writing sample**

- Use Chinese.
- Use L<sup>A</sup>T<sub>E</sub>X to generate your writing sample. Formatting: 12pt font, 1.5 line spacing, 2.5cm margins all around.
- At most 20 pages long, including everything.

**Tentative time table:**

Week	Lecture	Date	Topics	Presenter
1	1	Feb. 27	Introduction	
2	2	Mar. 5		李浩然
3	3	Mar. 12		苏阳
4	4	Mar. 19		汤子齐
5	5	Mar. 26		汪勇
6	6	Apr. 2		张宁昕
7	7	Apr. 9		王旭超
8	8	Apr. 16		武博睿
9	9	Apr. 23		毕卓茹
10	10	Apr. 30		李江宁
11	11	May 7		伍梦圆
12	12	May 14		郎世平
13	13	May 21		夏哲轩
16		Jun. 11	Writing sample submission	