ECON 673

Information, Game Theory and Market Design

Professor: Sergei Koulayev, PhD
Note: the class of 12/23 (Mon) is CANCELED. A substitute class will be held on 12/12 (Thu) at the same time/place.
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Grader: TBA

Course description

The class will examine current economic thinking behind competition ("antitrust") law enforcement. The emphasis will be on learning to use economic theories to analyze real-world antitrust cases.

Pre-requisites

An introductory microeconomics course, basic calculus.

Textbooks

- (CP) Dennis Carlton and Jeffrey Perloff, Modern Industrial Organization, 4th ed. (Addison-Wesley, 2005)
- (KW) John Kwoka and Lawrence White, eds., The Antitrust Revolution: Economics, Competition, and Policy, 5th ed. (Oxford, 2009). Earlier editions contain different cases and can be used for group presentations.
- Case documents can be found at:

Course structure

There is a bi-weekly homework that is due at the end of the class, a written midterm, and a group project instead of final exam. Homework is submitted independently, although you are welcome to get help from other students.

Prepare to read a lot for this class. The reading material offered below is preliminary. I will give you the actual reading assignment at the end of every class, and also by email. Except for the first class, the reading assignment needs to be completed before the class. This is necessary both for your own understanding and being able to contribute meaningfully to the class discussion. There is often optional reading that is best done after the class, to get a deeper perspective on issues.

Grade structure: 30% - presentation (group project), 30% - participation in the class, 20% - midterm, 20% - homework.
Note that class participation is a substantial component of the final grade. This is because of the nature of the course: unlike in mathematics, there are almost never correct answers, there are only answers that are better or worse argued. Therefore class participation (discussion) is a necessary way to learn the material.

**Group project**

During the final class, groups of students (2-3 people) will present a case of their choosing. I will assign groups myself (randomly). The presentation contains three main parts:

a) Summary of main facts

b) Argumentation from both sides (plaintiff and defendant), regarding the anti-competitive effects. Use of economic theory is necessary. Additional points for the difficulty (controversial nature) of the case.

c) Outline of the court opinion.

Other students are encouraged to ask questions, which is a major way to earn points towards the participation grade.

**2 December: Necessary bits of game theory**

- Normal form games, strategy dominance
- The concept of Nash equilibrium
- Game: Pit Market, Prisoner’s dilemma, Battle of sexes
- Reading:
  - (Optional) "Ten Little Treasures of Game Theory, and Ten Intuitive Contradictions" (Goeree, Holt), which reviews standard categories of games and reports anomalous results for each. Can be downloaded here: [http://people.virginia.edu/~cah2k/treasure.pdf](http://people.virginia.edu/~cah2k/treasure.pdf)

**9 December: Game theory and industrial organization**

- A refresher on microeconomics:
  - Firm’s cost structure: marginal costs, fixed costs, sunk costs, opportunity costs.
  - Consumer demand. Elasticity of demand.
  - Profit maximization as firm’s objective in industrial organization. Analytic and graphical solutions. Relation to revenue maximization.
  - Consumer surplus, firm’s profit and total welfare. Deadweight loss.
- Models of horizontal competition: Perfect competition, Monopoly, Cournot.
- Game: Cost curves; Monopoly, Cournot
- Reading:
  - Your micro sequence lecture notes. You can also consult relevant chapters from CP.

**12 December (Thursday, substitute for 12/23): Introduction to Antitrust Policy, its History and Goals**

- The antitrust paradox.
- A brief history of antitrust policy in the United States.
- Overview of current legislation and enforcement agencies.
- Reading:
  - CP, pp. 631-642
16 December: Market Power and It’s Sources. Market Definition.
- Sources of market power. Residual demand and price elasticity. Cellophane fallacy.
- Measuring market power. HHI and its drawbacks.
- Market definition. Hypothetical monopolist test. SSNIP.
- Reading:
  - CP, pp. 642-48 and 657-661
  - KW, pp. 8-29 and cases 4 and 7
  - US DOJ Horizontal Merger Guidelines, Ch. 4 “Market Definition”,

23 December – NO CLASS

30 December: Monopoly and Mergers II: Coordinated and Unilateral Effects, Efficiencies
- Efficiency claims. Pass-through rate. Deriving pass-through in a Cournot model.
- Cases:
  - FTC vs. Staples
  - Heinz and Beech-Nut merger
  - Airline mergers
  - Restructuring of electric power sector in the United States
- Reading:
  - KW, cases 2 and 3
  - John Kwoka and Michael Pollitt, Do mergers improve efficiency? Evidence from restructuring the US electric power sector, IIO, vol 28 issue 6
    American Economic Review 58 (1968), pp. 18-36

6 January - MIDTERM

13 January: Horizontal agreements: Collusion and Joint Ventures
- Cases:
  - Cement, Vitamin cartels
- Addyston Pipe
- BMI vs. CBS
- American Needle vs. NFL

- Reading:
  - CP, chapter 5 and pp. 648-57
  - KW, pp. 202-09, and cases 11 and 12
  - United States v. Addyston Pipe & Steel Company et al., 85 Fed. 271 (6th Cir. 1898).
  - (Optional) “The Informant” – a movie with Matt Damon

20 January: Unlawful Monopolization and Abuse of Dominant Position. Anticompetitive Tying and Bundling

  - Predatory pricing.
  - Economics of tying and bundling.
  - Cases:
    - United Shoe
    - Standard Oil
    - Jefferson Parish
    - US vs. Microsoft case
    - Kodak case

  - Reading:
    - U.S. v. Microsoft Corporation, Civil Action 94-1564 (Dist. Court D.C.) (Internet Explorer case)


  - Analytical results from an upstream-downstream Cournot model
  - Cases:
    - Standard Oil
    - NewsCorp – DirecTV merger

  - Reading:
    - CP, pp. 661-80
o KW, pp. 209-16 and 352-362, and cases 8, 10, 14, and 20

3 February: Antitrust Policy in Networks
- Cases:
  o Visa/Mastercard case in the United States and Canada
- Reading: TBA

10 February: Criticisms of modern antitrust policy. Review.
- Antitrust policy in the United States in 21st century: current challenges and trends
- Review of previous material, Q/A session
- Reading: TBA

17 February – GROUP PRESENTATIONS

Academic Integrity
The University of Maryland, College Park has a nationally recognized Code of Academic Integrity, administered by the Student Honor Council. This Code sets standards applicable to all undergraduate and graduate students, and you are responsible for upholding these standards as you complete assignments and take exams in this course. Please make yourself aware of the consequences of cheating, fabrication, facilitation, and plagiarism. For more information see www.studenthonorcouncil.umd.edu

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