

15C026

3 ECTS

## Competition in Regulated Markets

(The Economics of Network Industries)

### Overview and Objectives

During the last two decades, network industries – notably, the energy and the telecommunications sectors - have experienced important regulatory changes. Drawing on economic analysis, we will study specific regulatory experiences, and will discuss the business and public policy issues that they have raised. Topics include the determinants of industry structure, investment and entry in these industries and the issues related to antitrust and market design, among others. Students will learn to apply the most recent theories to analyze the performance of these sectors. The course is divided in two parts: one is devoted to the analysis of the electricity industry (taught by Prof. Natalia Fabra) and the other one is devoted to the analysis of the telecom industry (taught by Prof. Iñigo Herguera).

### Course Outline

#### Part I: Electricity

- An Overview of the Electricity Industry
- Economic theory and competition issues in the electricity industry
  - Theoretical analyses of competition
  - Market design issues
  - Investment
  - Forward contracting
  - Identification and diagnosis of market power
- Environmental issues

#### Suggested readings:

- Borenstein, S. (2000) "Understanding Competitive Pricing and Market Power in Wholesale Electricity Markets," *Electricity Journal*.
- Fabra, N., von der Fehr and Harbord (2006) "Designing Electricity Auctions," *Rand Journal of Economic*, Vol 37 (1).
- Federico, G, Vives, X. and Fabra, N. (2009) "Competition and Regulation in the Spanish Gas and Electricity Markets", IESE SP-SP.
- Griffin, J. and Puller, S. (2005) "A Primer on Electricity and the Economics of Deregulation" *Electricity Deregulation: Choices and Challenges*, Griffin and Puller, eds. Chicago: University of Chicago Press.

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- Newbery, D. et al. “A Review of the Monitoring of Market Power” Working Papers 0502, MIT,

Center for Energy and Environmental Policy Research.

### Part II: Telecoms

- Networks and services: fixed and mobile technologies, standards and innovation
- European regulatory framework: When to regulate? What services regulate? How to regulate (remedies)? The process of regulating in the EU and its evolution. Differences between anti trust and regulation (ex ante)
- One –way access: bottleneck and foreclosure incentives, cost concepts used for regulation, ECPR, margin squeeze. Regulation with asymmetric information. Regulation of fixed termination and broadband wholesale services in the EU. IP- interconnection.
- Two- way access: call termination externality and incentives to collude. Regulation of mobile interconnection in the EU, evolution and effects. Roaming in the EU.
- Investment: next generation access networks (fibre, LTE/4G), deployment and regulation in the EU.
- Recent trends in the market: concentration (mergers), bundling and convergence and over- the – top providers

### Suggested reading:

- Baron, D. and Myerson, R. (1982), “Regulating a monopolist with unknown costs”, *Econometrica*, 50 (4), July 1982, pp. 911- 930.
- Laffont, J. and Tirole, J. (2001), *Competition in telecommunications*, MIT Press
- Nardotto, M., Valletti, T., and Verboven, F. (2012), “Unbundling the incumbent: evidence for UK broadband”, Discussion Paper Series, CEPR, No.9194, 2012.
- Carlton D., (2005). “Barriers to entry”, Working Paper 11645. National Bureau of Economic Research.
- Marcus, S. and Elixmann, D.(2008), “The future of IP interconnection”, WIK.
- European Commission “Guidelines on market analysis”, 2002/C 165/03.
- Peitz, M, Schweitzer, H and Valletti, T, (2014), “Market definition, market power and regulatory interaction in electronic communications markets”, CERRE.
- Rey., P and Tirole, J., “ A primer on foreclosure”, in Handbook of Industrial Organization III, edited by Armstrong, M and Porter, R.

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### Required Activities and Evaluation

TBA