

SOUTH ASIAN UNIVERSITY

Faculty of Economics

Industrial Organization

Semester III (Monsoon Semester)

Objective: The course aims at providing an overview of industrial organization (IO) theory, with special emphasis on competition policy of the South Asian countries. Students are expected to have some prior training in advanced microeconomics and game theory. The unique feature of the course will be integration of theoretical concepts with practical applications in competition policy, with special emphasis on South Asian countries.

Course Details:

We study IO by integrating anti-trust analysis with traditional theory and empirics. Hence, government policy regarding competition in markets is studied alongside the nature of laissez-faire competition in markets. To a large extent, IO begins when perfect competition ends. If markets were perfectly competitive, much of what you learn here would not be relevant. This updated syllabus builds on the earlier syllabus in IO to keep up with changing research themes in the discipline. The methods that are necessary for analysis include game theory, decision theory and econometrics. Students will be introduced to standard databases on firms and industries relevant for India and some other countries during the course.

The grading scheme for this course has 40 per cent weightage for the mid-semester exams and 50 per cent for the end-semester term paper. Students are also graded on class-room presentations throughout the semester (10 per cent). Doctoral students opting for the course will have additional readings and will be assessed on a tougher scale than master's students.

Each of the topics given below shall contain three elements: theory, analysis of related antitrust cases as well as empirical treatment of the issue.

Topics:

1) History of Industrial Organization

This module discusses the development of the subject matter of IO from a historical perspective. We shall cover case studies of Japan (MITI-sponsored legal cartels), Germany (car industry), USA (railroads) and steel and textiles for India

2) Theory of the firm and Natural Monopoly

This module discusses issues about definition of firm, its size and performance as well as the issue of natural monopoly and related regulation.

3) Durable Goods and Bilateral Monopoly

This module discusses in detail issues of durable goods as well as bilateral monopoly and related anti-trust cases (after-markets).

- 4) Economic and Anti-trust Toolbox: Economic Theory, Empirical Methods and Understanding Competition Law
 - a. Economic Theory and Empirical Methods

This part of the module discusses the economic tools that are to be used throughout the course. Some of these tools are game theory (particularly Nash Bargaining), econometric tools like logistic regression and the basics of Machine Learning (ML) in anti-trust analysis.

- b. Theory of Anti-trust (introduction to Competition Law)

This module introduces students to the legal aspect of anti-trust legislation across jurisdictions, in particular, abuse of dominance (market definition), ex ante vs ex post legislation, conflicts with sectoral regulation.

- 5) Entry, Exit and Accommodation (limit and predatory pricing)

This module goes into details of issues with market contestability, starting with problems of entry, exit and entry accommodation. Some elements of price competition, such as limit pricing shall be introduced. Anti-trust cases related to predatory pricing shall be discussed here.

- 6) Collusion and cartels

This module discusses in detail legal and illegal cartels, strategies of cartelization, cartel-induced overcharges and related regulation.

- 7) Industry 4.0: Economics of Digital Platforms, New Role of Data and the Consumer

This module deals with recent developments in Industrial Organization. With the ongoing Schumpeterian upheaval of technological change due to big data, artificial intelligence and machine learning, and the advent of new intermediaries in the form of digital platforms, the new structures of production have been referred to as either Industry 4.0 or post-Fordist production. In this module, we discuss economics of platform pricing; issues of big data, personal data and technological integration in platform ecosystems; new issues of antitrust, such as: algorithmic collusion, self-preferencing and platform MFNs, anti-steering provisions, bundling and tying, deep discounting, exclusive tie-ups, issues of online advertising. The changing nature of countervailing buying power of the consumer in Industry 4.0 shall be discussed in detail. A discussion of the upcoming Digital Competition Act shall be a part of this module.

Core texts:

- Jean Tirole (1988) The Theory of Industrial Organization, Indian version available from Prentice-Hall India Pvt Ltd
- Massimo Motta (2004) Competition Policy: Theory and Practice, Cambridge University Press

- Oz Shy (1996) *Industrial Organization: Theory and Applications*, The MIT Press

Some additional readings are as follows:

Additional Topic-wise References (Additional readings will be provided for each topic as well as these readings)

1. Imperfect competition: From monopolistic markets to oligopoly theory

a. Dixit, A. (1982), *Recent Developments in Oligopoly Theory*, *The American Economic Review*, 72(2), *Papers and Proceedings of the Ninety-Fourth Annual Meeting of the American Economic Association*, 12-17

b. Modigliani, F. (1958), *New Developments on the Oligopoly Front*, *Journal of Political Economy*, 66, 215-322.
 Product Quality and Advertising a. Milgrom, P. and J. Roberts (1986), *Price and Advertising Signals of Product Quality*, *Journal of Political Economy*, 94 (4), 796-821

b. Johnsen, T. (1976), *Advertising, Market Equilibrium and Information*, PhD Dissertation, Carnegie Mellon University

2. Entry, Accommodation and Exit

a. Jaskold Gabszewicz, J. and J.-F. Thisse (1980), *Entry (and Exit) in a Differentiated Industry*, *Journal of Economic Theory*, 22, 327-338

b. Kadiyali, V. (1996), *Entry, its Deterrence and its accommodation: a study of the U.S. photographic film industry*, *RAND Journal of Economics*, 27 (3), 452-478

c. Fudenberg, D. and J. Tirole (1984), *The Fat-Cat Effect, The Puppy Dog Ploy and the Lean and Hungry Look*, *American Economic Review*, 74 (2), 361-366

3. Collusion and cartels

a. Cooper, T. E. (1986), *Most-favored-customer pricing and tacit collusion*, 17 (3), *RAND Journal of Economics*, 377-388

b. Werden, G. J. (2004), *Economic evidence on the existence of collusion: Reconciling anti-trust law with oligopoly theory*, *Antitrust Law Journal*, 719-800

c. Porter, R. H. (2004), *Detecting Collusion*, CSIO Working Paper No. 0051

d. Green, E. J. & R. H. Porter (1984), *Noncooperative Collusion under Imperfect Price Information*, *Econometrica*, 52 (1), 87-100

e. McCutcheon, B. (1997). *Do meetings in smoke-filled rooms facilitate collusion?*. *Journal of Political Economy*, 105(2), 330-350

4. Abuse of dominant power, limit pricing, predatory pricing

- a. Milgrom, P. & J. Roberts (1982), *Limit Pricing and Entry Under Imperfect Information: An Equilibrium Analysis*, *Econometrica*, 50 (2), 443-459
- b. Rey, P. & D. Salant (2008), *Abuse of Dominance and the Licensing of Intellectual Property*, *Toulouse School of Economics Working Paper*
- c. Rosenthal, R. W. (1981), *Games of Perfect Information, Predatory Pricing and the Chain Store Paradox*, *Journal of Economic Theory*, 25651-662, 92-100

5. Network externalities and antitrust

- a. Economides, N. (1996), *The Economics of Networks*, *International Journal of Industrial Economics*, 14 (2), 673-699
- b. Economides, N. & L. J. White (1994), *Networks and Compatibility: Implications for antitrust*, *European Economic Review*, 38, 651-662

6. Industry 4.0, Economics of Digital Platforms, Role of Data and New Role of the Consumer

- a. Bruche, G. (2022). *Digital Platform Strategy: A Theory Primer with Selected Conceptual Add-ons*, BPS Working Paper, No. 1, Berlin School of Economics and Law (HWR Berlin), Berlin Professional School (BPS), Berlin
- b. Cicero, S. (2023), *Pricing in Platforms and Marketplaces in Liozu*, Stephan, M. and Hinterhuber, Andreas edited *Digital Pricing Strategy: Capturing Value from Digital Innovations*, Routledge
- c. Surie, A. (2020). *On-demand platforms and pricing: how platforms can impact the informal urban economy, evidence from Bengaluru, India*. *Work Organisation, Labour & Globalisation*, 14(1), 83-100
- d. Rochet, J. C., & Tirole, J. (2004). *Two-sided markets: An overview*. *Institut d'Economie Industrielle working paper*, 1-44
- e. Evans, D. S., & Schmalensee, R. (2016). *The new economics of multi-sided platforms: A guide to the vocabulary*. Available at SSRN 2793021.
- f. Pantelis, K., & Aija, L. (2013, October). *Understanding the value of (big) data*. In 2013 IEEE International Conference on Big Data (pp. 38-42). IEEE.
- g. Gouri, G. (2023). *Economics of Emergent Markets Platform Markets, Data Markets and Market for Ideas*. In: *A Commissioner's Primer to Economics of Competition Law in India*. Palgrave Macmillan, Singapore. https://doi.org/10.1007/978-981-19-9476-0_3
- h. OECD Handbook on Competition Policy in the Digital Age (2022) available at [Competition policy in the digital age - OECD](#)
- i. Bhattacharjea, A. (2018). *Predatory pricing in platform competition: Economic theory and Indian cases*. *Multi-Dimensional Approaches Towards New Technology: Insights on Innovation, Patents and Competition*, 211-230.