

# Industrial Economics and Competition Policy

8289

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080218 EU Competition policy

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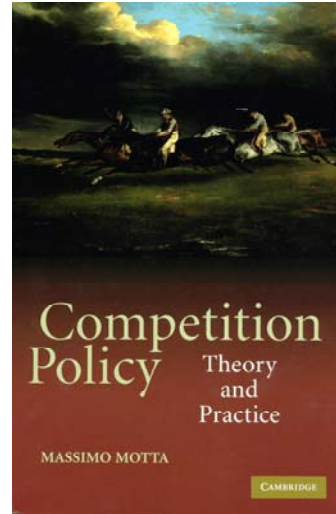
## 8289 - INDUSTRIAL ECONOMICS AND COMPETITION POLICY

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**Always check on the Intranet for possible changes in office hours.**
- Degree Programmes: GM-LS - MM-LS - OSI-LS - AFC-LS - CLAPI-LS - CLEFIN-LS - CLELI-LS - CLEACC-LS - DES-LS - CLEMIT-LS - CLG-LS. For all: 6 credits - II sem. - AI.
- For further and updated information consult the IEP website or contact S.I.D. - Servizio Informazioni Didattica - Institute of Economics - via Gobbi, 5, Library Building - Room 313.
- The examination will be in written form. Students may take the examination either in two parts - a 1<sup>st</sup> partial examination and a 2<sup>nd</sup> partial examination - or as one general examination at the end of the course.
- Examination dates are on the Intranet

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The course is mainly based on:

Massimo Motta,  
*Competition Policy*,  
Cambridge U.P., 2004



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## References

- Massimo Motta Competition Policy Cambridge University Press, 2004.
- D. G. Goyder EC Competition Law Oxford EC Law Library, 2003.
- Ritter, L., W.D. Braun & F. Rawlinson EU Competition Law, Kluwer, Deventer, 2005.
- Bishop, S. & M. Walker, The Economics of EU Competition Law, Sweet & Maxwell, London, 2006.
- Bulletin Board (Bacheca) IEP for materials.

EU legislation: [http://europa.eu.int/comm/competition/index\\_it.htm](http://europa.eu.int/comm/competition/index_it.htm)

EU documents: <http://europa.eu.int/comm/enterprise/library/index.htm>

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## Competition Policy: Introduction

- What is Competition Policy
- Brief history of competition laws
- Objectives of competition policy
- Relationship with other public policy objectives

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## Competition policy

- *How do we define competition policy?*
  - “The set of policies and laws which ensure that competition in the marketplace is not restricted in such a way as to reduce economic welfare”.
- *Why do we need a competition policy?*
  - Market failure are also in markets without natural monopoly features. Even if entry is possible, dominant positions might persist, due to:
    - sunk costs industries
    - lock-in effects and switching costs
    - network effects
  - Un-monitored, firms may resort to actions that increase their profits, but harm society, such as:
    - Collusion
    - Mergers which lessen competition
    - Predatory behaviour
    - Exclusionary behaviour

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## Competition policy

- EU competition policy includes three main fields
  - Antitrust
  - Control of concentrations
  - State Aid
- Common elements are
  - The jurisdictional framework
  - Objectives and economic foundations

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## Adam Smith

Adam Smith in "The Wealth of Nations" wrote:  
"People of the same trade seldom meet together, even for merriment and diversion, but the conversation ends in a conspiracy against the public, or in some contrivance to raise prices. It is impossible indeed to prevent such meetings, by any law which either could be executed, or would be consistent with liberty and justice. "

*An Inquiry into the Nature and Causes of the Wealth of Nations*, (1776), Chapter 10.

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## Competition policy and Regulation

- Competition policy applies to sectors/markets where structural conditions are compatible with normal functioning of competition rules (i.e. where they can apply, independently of what happens in reality).
- Regulation applies to special sectors/markets whose structure is such that one would not expect competitive forces to operate without problems. Regulation would usually concern:
  - markets where fixed costs are so high that no more than one/few firm/s would operate profitably (natural monopolies/oligopolies).
  - industries in a transition phase between monopoly and liberalisation.
  - industries where asymmetry of information is structural (environment, safety, health).
- Competition policy intervenes *ex-post*, is based on oligopoly theory, its involvement is transitory. Regulation intervenes *ex-ante*, is based on principal-agent literature, its involvement is continuous.

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## Competition policy and Regulation

- Both justified by market failures, but they differ.
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## Competition policy and Regulation: fuzzier demarcation lines

Despite these differences, the distinction between competition and regulation is less clearcut:

- Merger control: preventive authorization system
- Merger remedies (Structural vs. behavioral remedies)
- Exploitative abuses (EU: article 82; not US)
- Also: overlapping competence in several areas

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## History of competition laws: the US

End of XIX Century in the US:

- Revolution in transportation and communication, which lead to a single US market
- Technological innovations, stock market, new managerial methods
  - → economies of scale and scope to be reaped: firms' size increases (also through mergers)
- Market instability, due to macroeconomic crises and price wars (and also by phenomena above)
  - → incentives to form cartels and trusts
  - → negative effects on farmers and small firms

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## History of competition laws: the US

- 1890: Sherman Act
  - Section 1: Conspiracies
  - Section 2: Monopolisation
- 1914: Clayton Act (mergers, price discrimination) and Federal Trade Commission Act

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## History of competition laws: the US

- 1897: first Supreme Court decisions against trusts
- 1911: Standard Oil broken into 34 firms
- Per se prohibition of price agreements (initially, little distinction between horizontal and vertical agreements)
- 1933: Appalachian Coals v. US, an exception
- 1950-60s: (too) active enforcement
- 1970s: efficiency criteria begin to play a role
- 1980s: (Reagan): laissez-faire...

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## History of competition laws: Germany

- End XIX Century: cartels (enforceable contracts) as a means to avoid cut-throat competition
- 1923: Cartel law as reaction to hyperinflation
- 1930: Great Depression: compulsory cartel participation in sensitive sectors
- Nazi regime: cartels to prepare the war apparatus
- After '45: Programme to break economic concentration (stopped with Cold War)
- 1957: Competition Law (*ratio*: protection of freedom of contract), Bundeskartellamt. Merger control in 1973.

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## History of competition laws: the EU

- Paris Treaty, ECSC, 1951: no trade barriers, no discrimination
- Rationale: equal access to resources; principles of free markets
- Predecessor of current EU Competition Law:
  - Art. 65: prohibits agreements that distort trade
  - Art 66: prohibits abuse of dominant position
  - Art. 66: concentrations

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## History of competition laws: the EU

- Treaty of Rome, 1957: articles 81, 82 (and 83-89). Merger Regulation.
- Which objectives of Competition Law in the EU?
  - Competition as an intermediate objective (towards the primary objective: to help economic progress and welfare of European citizens)
  - European Integration (elimination of national discriminations in the economic system, internal market fairness)

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## History of competition laws: Italy

- From IRI onwards, strong presence of the State in the economy.
- The marxist and catholic strands in the political spectrum were very strong, small room left for the liberal ideology.
- Law 287/90 - enacted in 1990, quite late for european standards – replicates the structure of the EU Treaty and sets up the Autorità Garante della Concorrenza e del Mercato

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## Objectives of Competition Policy

1. Economic efficiency
2. European (economic) integration
3. Other political and social objectives

Competition policy is acknowledged by the Treaty as an instrument to achieve an “*harmonious balanced and sustainable development*” (Art.2).

In economic terms this implies pursuing allocative and productive efficiency.

Economic objectives are supplemented by other political and social objectives, within a framework commonly defined as “social market economy”.

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## Objectives of Competition Policy

- The first objective of competition policy is the maintenance of competitive markets. Competition policy serves as an instrument to encourage industrial efficiency, the optimal allocation of resources, technical progress and the flexibility to adjust to a changing environment. In order for the Community to be competitive on worldwide markets, it needs a competitive home market. Thus, the Community's competition policy has always taken a very strong line against price-fixing, market-sharing cartels, abuses of dominant positions, and anticompetitive mergers. It has also prohibited unjustified State-granted monopoly rights and State aid measures which do not ensure the long-term viability of firms but distort competition by keeping them artificially in business.
- The second is the single market objective. An internal market is an essential condition for the development of an efficient and competitive industry. As the Community has progressively broken down government-erected trade barriers between Member States, companies operating in what they had regarded as ‘their’ national markets were, and are for the first time, exposed to competitors able to compete on a level playing field. There are two possible reactions to this: either to seek to compete on merit, looking to expand into other territories and benefit from the opportunities offered by a single market, or to erect private barriers to trade — to retrench and act defensively — in the hope of preventing market penetration. The Commission has used its competition policy as an active tool to prevent this, prohibiting, and fining heavily the parties to two main types of agreement: distribution and licensing agreements that prevent parallel trade between Member States, and agreements between competitors to keep out of one another's ‘territories’ [1].

[1] See *XXIX Report on Competition Policy*, Brussels, 2000, Commission of the European Communities. [http://europa.eu.int/comm/competition/annual\\_reports/1999/en.pdf](http://europa.eu.int/comm/competition/annual_reports/1999/en.pdf) See also Motta, page 15.

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## Economic efficiency: welfare

- Total welfare is the sum of producers surplus (in turn equal to the summation of the profits of each producer) plus the consumer surplus (equal to the summation of the differences between the price paid by consumers and the price that they would have been ready to pay).
- Price changes modify not only the relative size of the two components, but also the overall size of total welfare.
- Total welfare is at its minimum when the price is at perfect monopoly level, and it is at its maximum when the price is at perfect competition level.
- Income distribution arguments are not included in these positive principles.

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## Market power, competition and welfare

- Definition of market power: the ability of a firm to profitably raise price above marginal costs.
1. Allocative efficiency.
  2. Productive efficiency.
  3. Dynamic efficiency.
  4. Public policies, and incentives to innovate.

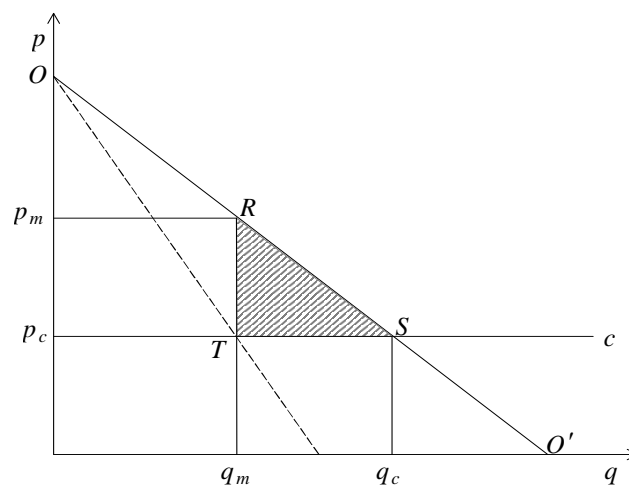
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## 1. Allocative efficiency

- The higher market power, the higher the deadweight loss
  - See Figure 1.
  - An additional loss of monopoly: *rent-seeking activities* (see Figure 2)
- A matter of degree, not of existence: each firm has a slight market power, and competition authorities will not challenge firms with some limited market power.

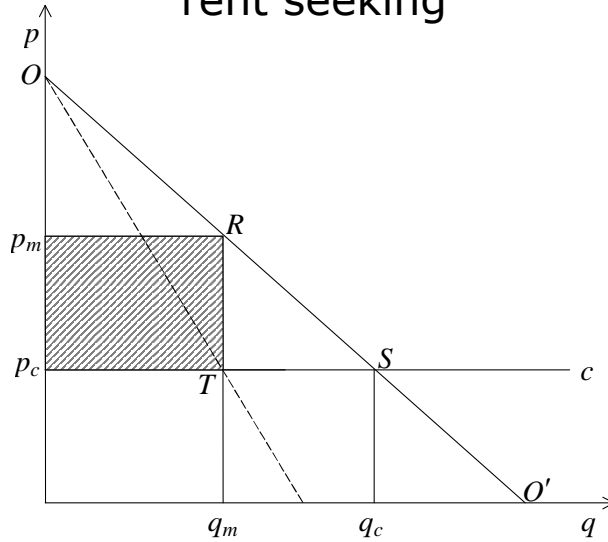
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Figure 1: Welfare loss from monopoly



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Figure 2. Possible additional loss from rent seeking



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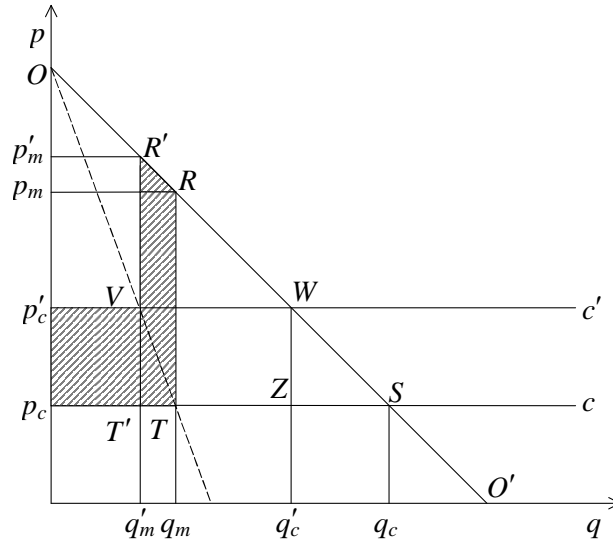
## 2. Productive efficiency

Additional welfare loss if monopolist has higher costs than a firm facing a competitive environment (see Fig.3). Why is it so?

- “Quiet life” and managerial slack. Market competition helps.
  - Leibenstein (1966) introduced X-inefficiency
  - Nickell et al. (1996, 1997) show that individual firms’ productivity higher in more competitive industries.
- Darwinian arguments: competition selects more efficient firms. Under monopoly, no market selection.
  - Olley-Pakes (1996), Disney et al. (2000): industry productivity mostly increases through entry/exit (downsizing of inefficient firms/expansion of efficient ones).

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Figure 3: Additional loss from productive inefficiency



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### 3. Dynamic efficiency

- Monopolist has weaker incentives to innovate:
  - Innovation introduced if *additional* profits higher than costs
- However, appropriability matters:
  - If competition is too strong, incentives to innovate may be reduced.
- Bell-shaped relationship between market power and incentives to innovate.

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## 4. Public policies and incentives to innovate

- Government faces a time-consistency problem: ex ante appropriability (to provide **incentives**) but ex post expropriation (to guarantee **diffusion**).
- **IPRs** are a way to commit not to expropriate an innovating firm ex-post/ to allow a firm to fully appropriate the benefits of its innovation:
  - Patents, copyright (which for a given period of time guarantee monopoly power on the innovation).
  - Trade secret law.
  - No competing clauses.

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## Essential facilities

- More generally, the issue concerns **property rights** *tout court*, not only IPR.
- Essential facilities (indispensable, non-reproducible inputs)
  - Examples: airport slots, port installations, local loop, software (?).
  - EC embraced “EF doctrine” in a stream of cases (related to port infrastructure): owner of EF should make it available to competitors.
  - but ECJ (*Bronner* case): important to preserve incentives to innovate!
- Apply EF doctrine only when the owner has not invested to create the facility.

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## Choice among welfare standards - 1

- Art 81(3) allows agreement between undertakings "... which contribute to improving the production or distribution of goods or to promoting technical or economic progress, *while allowing consumers a fair share of the resulting benefit ...*"
- Art. 2(1) of the Merger Regulation 139/2004 states that in evaluating a merger the Commission will take into account "... the interests of the intermediate and ultimate consumers, and the development of technical and economic progress provided that it is to consumers' advantage and does not form an obstacle to competition."
- Therefore EU legislation seems to favour consumer protection, although this is considered still debatable.

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## Choice among welfare standards - 2

- US legislation is considered as favouring consumers more explicitly.
- Other legislations – Canada, Australia, New Zealand – are more explicitly in favour of total surplus.
- There is no final word on this, as it is jurisprudence, always evolving, that defines the orientation of legislation.

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## Choice among welfare standards - 3

- Economic theory as such is clearly favouring total welfare. Other policies – taxation, government expenditure – should be in charge of income distribution.
- Favouring consumer welfare implies lower prices and profits. This is a building block of the debate on the relationship between firm size, profit size and effects on investment and innovation.
- The «*political economy*» approach stresses the need of the support of the weaker, e.g. in terms of lobbying power.

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## Economic integration

One basic tenet of EU policy is the elimination of trans-border obstacles set by Member States or by firms.

EU legislation prohibits price discrimination, but the result is not necessarily coherent with economic theory.

Assume that the same good is sold in both in GER e POR. Also, income  $Y_{GER} > Y_{POR}$ , and consequently demand  $D_{GER} > D_{POR}$ .

With price discrimination:  $p_{GER} = p_a$ ,  $p_{POR} = p_b$ .

Without discrimination:  $p \equiv p_{GER} \equiv p_{POR}$ .

Two options:  $p = p_m$ , with  $p_{POR} < p_m < p_{GER}$ , and  $WEL_{GER} \uparrow$ ,  $WEL_{POR} \downarrow$ , but also  $\pi \downarrow$  and then  $WEL_{PROD} \downarrow$

Or:  $p = p_{GER}$ ,  $D_{POR} = 0$ ,  $WEL_{POR} = 0$ .

In the latter case, differences increase instead of decreasing.

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## Other objectives Small and Medium size firms

- Defence of SMEs is a central issue of competition policy, be it in historical sense – see the US tradition – or in a political economy sense.
- EU political line is to state a positive value for SMEs, because of dynamism, innovation diffusion, employment creation.
- At the same time, SMEs are subject to higher obstacles because of market imperfections: lower lobbying power for infrastructure, narrower access to credit market, lower possibilities of exploitation of the Internal Market.
- As a consequence, there is a tendency to grant exemptions to SMEs for agreements, concentrations and – under same conditions – for State Aids.

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## Other objectives – Rescue of firms and employment

- Antitrust legislation develops in the US at the time of the Depression: it was meant to offer support to endangered firms and to employment.
- An example out of EU legislation EU are the « crisis cartels ».
- Another example, State Aid to for rescue and restructuring of firms.
- French request to include in the recast Merger Regulation « social reasons » in the evaluation of the approval of mergers.
- South-African example of race integration in the evaluation of mergers.

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## Other objectives - Environment

- Although not formally recognised, environmental protection was *de facto* accepted as acceptable objective in the framework of competition policy.
- CECED case: agreement among washing machine producers representing 97% of the market to eliminate from production and import the less energy efficient models.
- As all other competition dimensions – price, brand image, technical efficiency, advertising, energy saving above the agreed minimum – were still open, the Commission exempted the agreement.

The ideal tool would have been the fiscal one, but this is not at the full disposal of the EU Commission.

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## Other objectives – Trade strategy

- Export cartels – The Webb-Pomerene Act exempts fully from antitrust legislation US export firms, subject to some conditions.
- Antidumping regulations – Prohibition for third country exporters to sell « below cost » in the EU. Very often the benchmark is difficult to estimate, and there is always the possibility that the decision maker be influenced by a lobby – cartel – of European producers. (See Motta, chap 7).
- The European Union is the only institution that prohibits as general rule aid to firms by its Member States. WTO has a section dealing with disputes over support to firms, albeit with modest success.
- The tendency towards the protection and support of «national champions» is very strong throughout the world.

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## Structure of EU legislation

- Antitrust
  - Art. 81 – Horizontal and vertical agreements among undertakings.
  - Art. 82 – Abuse of dominant position.
- Merger control.
  - Merger Regulation 139/2004.
- State Aid
  - Art. 87, 88 e 89 of the Treaty.

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## Structure of EU legislation

- As for antitrust and merger control, direct applicability by the EU Commission, more precisely by the Competition Directorate General or DG Comp.
- National Competition Authorities work together with the Commission within the European Competition Network (ECN).
- The Court of First Instance and the European Court of Justice – and the national Courts – represent the appeals levels.
- As for State Aids, the sole competence is with the EU Commission, with the European Court of Justice as appeals level.

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## Structure of EU legislation – The decision process

- Commissioners College.
- Heads of Cabinet meeting.
- Special meeting of the Heads of Cabinet.
- Commissioner decision.
- Meeting of the Commissioner with the General Directorate, the Chief Economist, the Hearing officer, the Review Panel, the Legal Service – reporting to the President.
- Meeting of the Commissioner with the Cabinet and Spokespersons.
- Decision of the General Director.
- If needed, meeting of the Review Panel – *fresh pair of eyes*.
- Meeting of the Cabinet Member in charge of the dossier with the officials – case handler, Head of unit, Director – meetings among officials, meetings of the officials with the parties.

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## Commission's record at the CFI

Success rate	
Art. 81 cases	75%
Art. 82 cases	92%
Merger cases	58%
Neven Economic Policy (2006)	

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## Economics in Competition policy

- Antitrust
  - Collusion
    - Cartels and leniency
    - Tacit coordination / collective dominance
  - Abuse of dominant position
    - Exclusionary practices
    - Exploitative practices
- Mergers
  - Horizontal mergers
  - Vertical and conglomerate mergers
- State Aids

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## Economics-oriented reform of EC Legislation

- Collusion (Art 81)
  - Vertical agreements: Block Exemption Regulation amended in 1999
  - Horizontal agreements: very tough anti-cartel policy
- Abuse of dominance (Art 82)
  - Major policy review started in 2004 and still under way
- Mergers
  - Reform of Merger Regulation in 2004
  - Horizontal Merger Guidelines in 2004
  - Vertical Mergers Guidelines still missing
- State Aid
  - Revision of State Aid Frameworks to increase Economic / Effects base presently under way.

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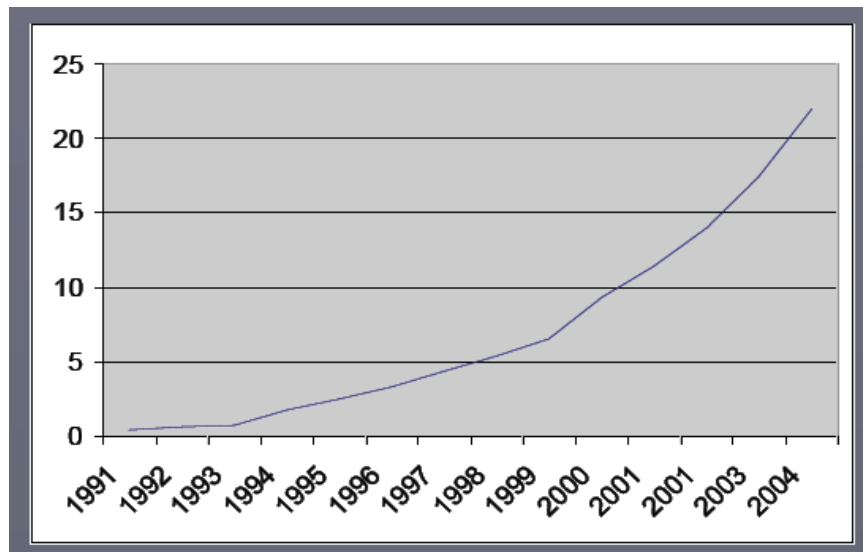
## Economics tools

- Pre 1980
  - Competitive price theory
  - Structure – conduct – performance paradigm
- Post 1980
  - Game theory – rigorous analysis of interdependent (strategic) decision making, explicit analysis of dynamics.
  - Contract theory - rigorous analysis of incentive systems (e.g. in vertical relationships) with asymmetric information, role of ownership and incomplete contracts, etc.

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## Economic advice

Antitrust turnover of economic consultancy firms (£ million)



## Jurisdiction – 1

- The jurisdiction of the EU Commission is based on the notion of events “which may affect trade between Member States”. If this condition is not met, the competence reverts to national authorities.
- Further to this general condition, additional conditions require that:
  - Agreements and practices (Art. 81) or abuses (Art. 82) implemented by undertakings controlling more than 5% of the EU market and with a turnover greater than €40 ml.
  - Concentrations concerning undertakings whose combined turnover worldwide is greater than €5 bn, and at EU level for at least two of them is greater than €250 ml (with other conditions).
  - State aids greater than €200.000 in three years for a single firm.

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## Jurisdiction – 2

- Effects doctrine: the markets affected by the behaviour of undertakings are relevant, not their seat.
- The Commission jurisdiction applies to all undertakings operating in the EU market, no matter where their seat is.
- The same argument applies for the US legislation. Therefore as EU legislation applies to american firms operating in the Europe (see cases as Microsoft and GE/Honeywell) the reciprocal applies (see Air Liquide / BOC or KLM / Air France), notwithstanding uninformed statements from different sources.

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## Relevant market – 1

- The market relevant for the evaluation of the competition is defined by identification of its boundaries, and that is done employing the substitutability notion.
- The *Notice on the definition of the relevant market* is the basic Commission document for market definition purposes within art 81, 82 and merger cases.
- The SSNIP test - **S**mall but **S**ignificant **N**on-transitory **I**ncrease in **P**rice – computes the extent to which existing demand could turn to available alternatives if an hypothetical monopolist were to raise the price by 5 - 10%.
- If the increase in price generates lower sales, the supply lending itself to substitution – be it geographical or physical – must be included in the definition of relevant market.

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## Relevant market - 2

- a. **Own price elasticity** is the percentage change in the quantity demanded induced by a 1% increase in price

$$\varepsilon = - \frac{dq}{q} / \frac{dp}{p} = - \frac{dq}{dp} \frac{p}{q}$$

- b. **Cross price elasticity** is the percentage change in the quantity demanded of good i induced by a 1% increase in price of j:

$$\varepsilon_{i,j} = \frac{dq_i}{q_i} / \frac{dp_j}{p_j} = \frac{dq_i}{dp_j} \frac{p_j}{q_i}$$

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## Relevant market - 3

Price correlation test

Critical loss analysis

Temporal markets

Seasonal markets

Multiple markets

After markets:      Kodak case  
                                    Kyocera case

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## Relevant market - 4

Geographic market definition

*Volvo / Scania case.*

Consumer preferences

How about the internal market?

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## Assessment of market power

Lerner Index

$$L_i = (p_i - MC_i) / p_i$$

Demand elasticity

$$L_i = 1 / \varepsilon$$

Market shares

Which threshold?

Ease of entry