Competition and its effects

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Walter Adolf Jöhr Lecture, University of St. Gallen
22 May 2015

European Commission

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Acknowledgment

Many thanks to Melissa Newham for outstanding research assistance!

Outline

Introduction to competition policy

- What is it? Why do we need it?

Competition and its effects

- On prices
- On investment and innovation
- On productivity growth

How can competition policy promote growth?

- Competition advocacy (political economy matters)
- Competition law enforcement

What is competition policy?

- Competition policy aims at ensuring that *competition* in the marketplace is not restricted in a way that is detrimental to society
- There may be 'beneficial' restrictions, e.g. exclusive territories to retailers to promote their investment
- What are the objectives of competition policy?
    - Efficiency: total surplus or consumer surplus
    - EU: promote market integration

Why do we need competition policy?

- Market forces tend to work well, but free entry does not necessarily reduce market power (e.g. sunk costs, switching costs, network effects)
- If not monitored, firms may take actions that raise their profits but harm society (e.g. anti-competitive agreements, mergers, exclusionary practices)
- Hence, we need good competition laws and strong institutions

Main pillars of EU Competition Law

- *Art.101 TFEU*: Prohibition of anti-competitive agreements (horizontal and vertical)
- *Art.102 TFEU*: Prohibition of <u>abuse</u> of dominant position (exclusionary conduct, but also excessive prices)
- *Merger regulation*: mergers should not lead to “significant impediment to effective competition”, ex ante control (important for certainty)
- *State aid control*: limit distortions to competition and trade from subsidies, aid allowed if it pursues efficiency or equity

Institutional setting in the EU

- Principle of subsidiarity: cases with significant ‘supranational’ aspects dealt with by European Commission (DG-Comp) and the others by National Competition Authorities
- Institutional settings may vary across member states (e.g. one or two agencies), but the main principles of competition law are the same

Competition as a value?

Competition policy aims at preserving competition

'Working hypothesis': competition is good

But, is it always the case?

And for whom?

- It is important to identify winners and losers; it helps to push the competition agenda

Competition: beyond economics…

- Ecology: Competition from alien species may negatively affect native ones
  - In the UK, grey squirrels compete with and displace native red squirrels
  - The Asian lady beetle, introduced in Europe and America to control aphids in greenhouses, escaped and has been wiping out native competitors by attacking their eggs and larvae

Asian lady beetle

European lady beetle

Competition: beyond economics…

- Psychology: Competitive pressure may negatively affect some individuals' effort
  - "Choking under pressure"
  - Gneezy et al. (2003): experimental evidence showing that women may be less effective than men in competitive environments (even if they perform similarly in non-competitive environments)
  - This effect is stronger when women compete against men than in single-sex competitive environments
  - For some, insulating from competition may give rise to better performance?

Competition and values

- In some circumstances competition policy may touch upon objectives and values other than efficiency, and deal with issues where other public policy considerations matter
- But if governments want to pursue other objectives, they should use other policy instruments (with the minimum possible distortion of competition)
- Competition policy should only be about efficiency

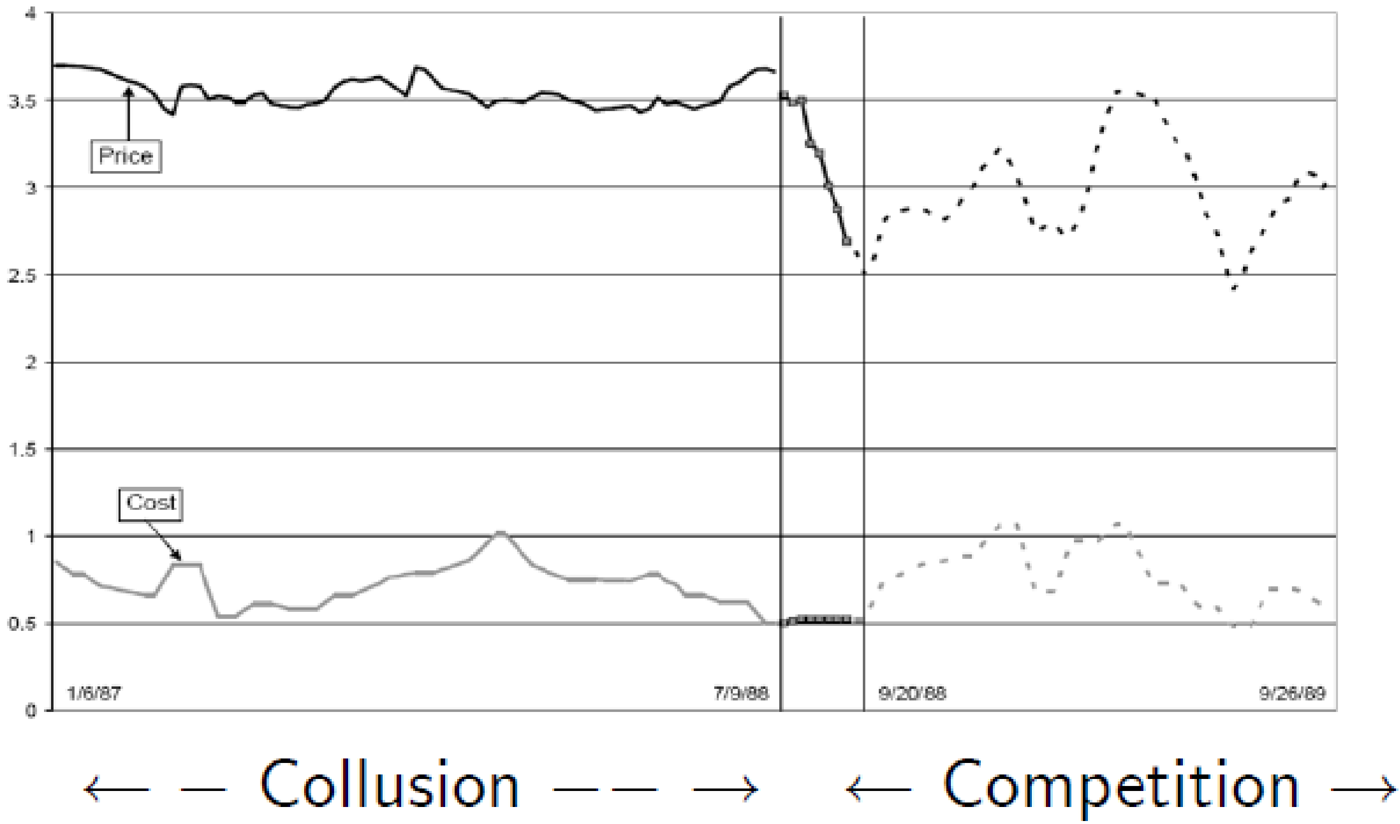
Competition and its effects: prices

- Competition decreases prices
  - Consumer and total surplus increase
  - Profits decrease
  - Since typically sellers' interest is more concentrated and buyers' more fragmented there will be political resistance: need for coalitions with buyers and citizens!

Sources of competition

- Different sources of “competition”
  - Lower tariffs and non-tariff barriers to trade (e.g. 1992 EU Single Market estimated to lower prices by 3-10%)
  - Lower transportation costs
  - Deregulation (careful, though: *free* entry does not necessarily imply *effective* entry!)
  - Adoption of modern competition laws preventing cartels (Connor: average cartel price overcharges 20-25%)

An example: the frozen perch cartel



Abrantes-Metz et al., (2006): Average weekly price of frozen perch fillets decreased by 16% after cartel collapsed, standard deviation of price increased by 263%

Antitrust intervention matters

- Aguzzoni et al. (2013): event study of all EU antitrust investigations (1979-2009)
  - On average, a surprise inspection reduces a firm's share price by 2.7% and a cartel infringement decision reduces it by 3.7%
  - Higher for firms without leniency (-3.4% and -4%)
  - Fines account for less than 9% of this loss; most of the loss is due to the termination of illegal activities
  - Suggests that cartel interventions have a sizeable effect on prices

Competition and its effects: investment and innovation

- Arrow (1962): competition spurs innovation (a monopolist has less incentive to innovate)
- Schumpeter (1942): stresses the role of large firms and market power
- Some ambiguous results in the literature:
  - Oligopoly models (e.g. Vives, 2008): lower product differentiation or large no. of firms; unclear effects on R&D
  - Schmidt (1997): more competition makes bankruptcy more likely, thereby raising effort, but may also reduce profits, hence lower managerial effort? (Raith: under endogenous entry, competition raises effort overall.)
  - Aghion et al. (2005): duopolistic dynamic model leading to inverted-U relationship

Defining "competition" properly

- Shapiro (2012): Arrow and Schumpeter's principles not in contradiction; innovation is fostered by *ex ante competition* and *ex post appropriability* (i.e. the innovator can profit from its investment)
  - Proxies such as “product differentiation” and “number of firms” imply not only more competition ex ante but also less appropriability ex post
  - With weak intellectual property rights, ex post competition would reduce incentives to invest

Competition and investments/innovation: empirical studies

- Aghion et al. (2005): find inverted U-shape relationship between competition (Lerner index) and patents in two-digit SIC industries
  - However: a) very aggregated classification; b) endogeneity; a successful firm yesterday, say due to competitive pressure, may be a monopolist today
- Large empirical literature on the positive effect of competition on productivity: Bartelsman and Doms (2000), Syverson (2011)
  - *Within effect*: firms tend to invest or improve performance in more competitive environments
  - *Between effect* (a 'Darwinian' mechanism): the productivity of the sector/economy rises by selecting the best firms and inducing weaker firms to exit

Competition and investments/innovation: telecoms

- Nardotto, Valletti and Verboven (2014)
  - Effects of UK broadband regulation
  - Broadband speed increases with *intra*-platform competition (between MNOs and firms using LLU)
  - Investments (both broadband penetration and speed) increase with *inter*-platform competition (between MNOs and alternative technology: cable)

Competition and productivity: empirical studies

- Bloom and Van Reenen (2007)
  - Product market competition is associated with better management practices (highly correlated with performance indices)
  - This competition effect accounts for a substantial proportion of the tail of badly performing firms and the management gap between the US and Europe
- Bloom, Draca and Van Reenen (2011)
  - Chinese import competition accounts for 15% of European technology upgrading over 2000-2007, via (1) increased technical change *within firms*; and (2) reallocated employment *between firms* towards more technologically advanced firms

Competition and productivity: empirical studies

- Hospital competition in the UK: good or bad?
  - Propper et al. (2008): hospitals may gear investment towards observed quality measures at the costs of unobserved quality measures
  - Cooper et al. (2011): After 2006 reforms (more competition, but not on price), mortality from acute myocardial infarction fell (i.e. quality improved) for patients living in more competitive market areas
  - Bloom et al. (2010): higher competition (greater number of neighbouring hospitals – instrumented with local political competition) raises management quality (highly correlated with lower heart-attack mortality rates, as well as other quality indices)

Competition and productivity: empirical studies

- Pavcnik (2002)
  - Chile underwent a massive trade liberalization that significantly exposed its plants to competition from abroad during the late 1970s and early 1980s
  - Evidence that liberalized trade improves plant productivity in the import-competing sector
  - In many cases, aggregate productivity improvements stem from reshuffling of resources and output from less to more efficient producers

Competition and productivity: empirical studies

- Syverson (2004)
- Models and offers evidence in the US ready-mixed concrete industry for a *selection* mechanism whereby fiercer market competition in denser markets (more concrete plants in each given area) makes it harder for inefficient producers to operate profitably
  - The lower bound of the productivity distribution increases (higher minimum productivity level)
  - Less productivity dispersion among local producers
  - A higher average productivity level
  - Larger average plant size in terms of units sold

The broader picture: competition and growth

- Competition (antitrust enforcement, liberalisation, market integration) contributes to productivity and thus growth
  - Internal productivity (“within”): competition induces firms to invest, innovate, adopt better management practices, etc. in order to stay ahead of rivals
  - Sectorial productivity (“between”): absent competition, any firm would survive. Under competition, inefficient firms exit, and high-productivity ones will replace them
- For this mechanism to work, we need <u>free entry/exit</u>
- Policy should eliminate obstacles to entry, but also refrain from protecting unsuccessful firms

The role of competition policy in this scheme

Competition Advocacy

- Promote the liberalisation of markets and the removal of entry barriers (trade liberalisation, deregulation)
- Foster development of competition-friendly market culture.
- Identify winners from competition and seek their support (losers will typically lobby hard for preserving status quo)
- Citizens often do not know how much they stand to gain from competition (OFT: measuring benefits from competition actions)

Enforcement and deterrence

- Anticompetitive agreements
- Abuse of dominance
- Merger control
- State Aid

Anticompetitive agreements

- Cartels impose higher prices on consumers; negatively affect investments and innovation; and often raise entry barriers to shield cartel members from rivals
- But some (non-price) horizontal agreements may be growth-promoting (e.g. R&D cooperation among rivals - when it involves R&D activities sufficiently away from commercial stage)
- Vertical agreements often have pro-competitive rationale (e.g. exclusive territoriality clauses protect investments). But some *may* be pernicious (e.g. most-favoured nation clauses used by Online Travel Agencies such as booking.com and Expedia)

Abuse of dominant position

- The ability and incentives of firms to become larger is a key driver of growth. Obtaining a dominant position is not a problem by itself
- It is abusing a dominant position which is forbidden
- Excluding smaller/new rivals or relegating them to a niche market distorts the competitive process
- Merit-based competition is good but it is important to preserve a level playing field. Competition policy protects the competitive process and not competitors

Merger control

- A merger between rivals removes a competitive constraint: prices will rise, and others will follow suit (effect is stronger the more concentrated the sector)
- But if the merger creates sufficiently strong synergies, net effect will be to lower prices
- Vertical mergers tend to be beneficial if they eliminate transaction costs, favour investments etc.
- By sorting out good mergers (that create more efficient and innovative players) from bad mergers (that increase prices and decrease investments), merger control has a positive effect on growth

Mergers and investments

- For competition authorities, need to look not only at prices but also at whether the merger will lead to higher investment/innovation
- For instance, the EC has had to investigate a stream of mobile mergers (AUS, IRE, GER, DEN UK).
- Mobile Network Operators' claims:
  - Consolidation will raise profits, giving firms the money they need to invest in infrastructure
  - Ambiguous link between competition and investments
  - Economies of scale will decrease cost of investments

What does theory say?

- Motta and Tarantino (in progress):
  - Oligopoly model where firms first invest and then compete in prices
  - If no 'joint economies' from investing: all prices increase; insiders' invest less, outsiders more (demand effect), total investments fall. Hence, CS and TS fall. Thus even if there is more *ability* to invest, there is less *incentive* to do so!
  - If the merger entails large cost savings, then insiders' and total investments may increase.
  - However, in this case a Network Sharing Agreement would be better than the merger (because there is no price coordination)!

State aid control

- State aid not always good (e.g. if it crowds out private investment and distorts competition)
- Good aid: targets a market failure, has a real incentive effect, is well-designed, minimises the cost to the taxpayer, does not distort competition
- Good aid needs good rules: revision of sectoral Guidelines (SAM) ensures that aid fosters innovation (R&D&I), employment (Regional aid), entry & access to finance (Risk finance), environmental protection (EEAG) or equity (Training aid)
- State aid control helps to consolidate public budgets

Is competition policy sufficient?

- Need for complementary policies facilitating entry/exit
  - Labor policies (less restrictions on hiring and firing)
  - Social policies (smooth transition for workers, training, solidarity)
  - Efficient credit markets (crucial for new/small firms)
  - Innovation policies (IPR, education, knowledge policies)
  - Bankruptcy laws (no consequences/stigma for unsuccessful managers)
- Do we need industrial policy?
  - No, if it means picking industries/firms/projects
  - Yes, if it means creating an environment where ideas/innovations can emerge and compete fairly

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