Innovation and Competition Policy

Alexandre de Streel
University of Namur, CRIDS and CERRE

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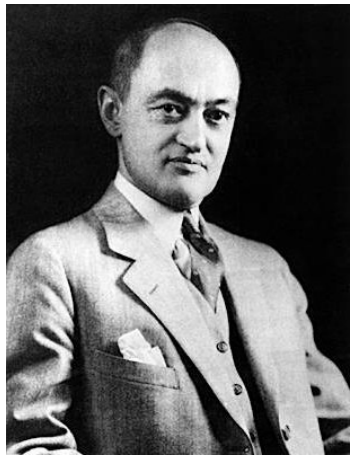
OUTLINE

1. **Innovation, Competition and Competition Law**
2. **Market power assessment**
3. **Theories of Harms**
4. **Antitrust Decision under Uncertainty**
5. **Take-away**

1. Innovation and Competition



- Debate is **not new in economics**
  - Schumpeter on appropriability
  - Arrow on contestability
  - Aghion et al. on the inverted U-curve

- But **increasingly important today**
  - Innovation and merger: Federico, Motta, Shapiro, Valletti
  - Blended with evolutionary economics: Kerber

  - Dynamic inefficiency can more costly than static inefficiency
  - Increasing firms concentration, esp. in the US (Philippon)
  - Innovation geo-political race, in particular in digital

Innovation and Competition Law: Guidelines

- **Innovation is one parameters** of competition

- **Horizontal Merger Guidelines** (2004)
  - *38. In markets where innovation is an important competitive force, a **merger may increase the firms' ability and incentive to bring new innovations** to the market and, thereby, the competitive pressure on rivals to innovate in that market. Alternatively, **effective competition may be significantly impeded by a merger between two important innovators**, for instance between two companies **with 'pipeline' products related to a specific product market**. Similarly, a firm with a relatively small market share may nevertheless be an important competitive force if it has promising pipeline products*

- **Horizontal Cooperation Guidelines** (2010)
  - 119. R&D co-operation may not only affect competition in existing markets, but also **competition in innovation and new product markets**. This is the case where R&D co-operation concerns the development of new products or technology which either may – if emerging – one day replace existing ones or which are being developed for a new intended use and will therefore not replace existing products but create a completely new demand. The effects on competition in innovation are important in these situations, but can in some cases not be sufficiently assessed by analysing actual or potential competition in existing product/technology markets. In this respect, two scenarios can be distinguished, depending on the nature of the innovative process in a given industry.

Innovation and Competition Law: Cases

- Increasing number of merger cases
  - EU 2015-2017: 10/73 cases analysed innovation ToH

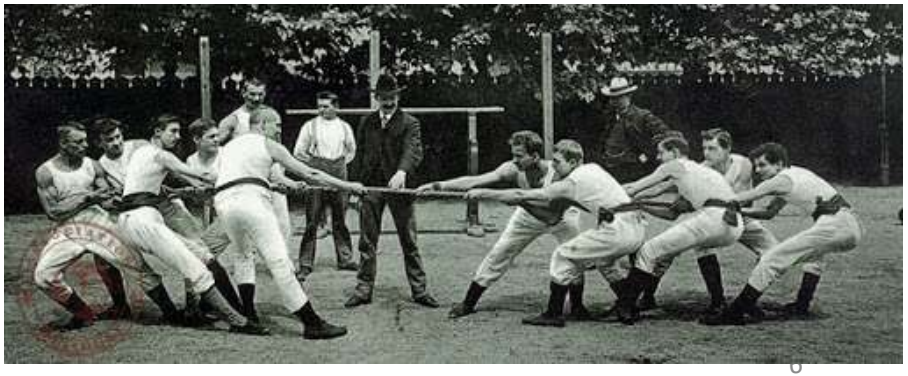
- **Defence** (mainly in US)

- **Pharma** and chemicals

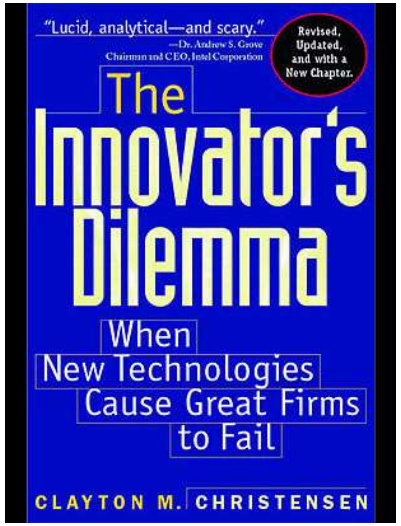
- **Digital**
  - Big tech acquisitions

Innovation and Competition Law: Tensions

- **Objectives**
  - Need more **dynamic antitrust analysis** to better reflect competitive game
    - Static analysis does not correspond to some market dynamics
  - Need to **minimise risks of errors** and legal uncertainty
    - Predictions are difficult, esp. about the future
    - Not enough robust theories … today, in industrial organisation
    - Innovation ToH can not be a way to circumvent existing limiting principles for antitrust intervention
- **Academic** Debate
  - **Conservatives**: Ibanez Colomo, Petit
  - **Progressives**: Drexl, Kerber



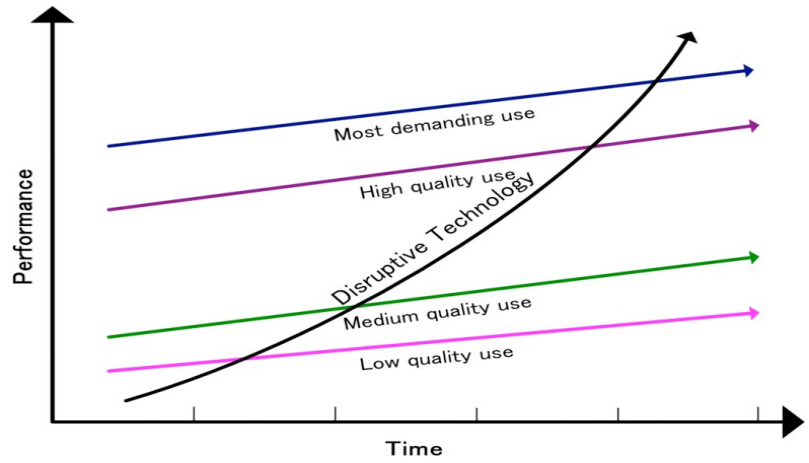
Shades of Innovation



Value network Techno process	Sustaining Innovation	Disruptive Innovation
Incremental Innovation	VCR + slow motion	Video streaming
Breakthrough Innovation	DVD	

- Christensen (1997)
- *Disruptive innovations offered less of what customers in established markets wanted and so could rarely be initially employed there. They offered a different package of attributes valued only in emerging markets remote from, and unimportant to, the mainstream*.

Disruptor Business Strategy



- **2-stages** strategy
  - Start low-end of market
  - Develop quickly and connect mainstream
- To dominate the market or be bought by an incumbents

- Often by **small new players** (Silicon Valley garage)
- But also by **smart incumbents** (e.g. Amazon Kindle)

- For strategy to be possible, disruptor needs
  - First, access to inputs (capital, people, data) and low-end customers
  - Then, possibility to connect with mainstream customers

2. Market power assessment

- **Move backwards** on the innovation value chain
  - From (existing) products to inputs

- **Technology**
  - *"Licensed technology rights and its substitutes, that is to say, other technologies which are regarded by the licensees as interchangeable with or substitutable for the licensed technology rights, by reason of the technologies' characteristics, their royalties and their intended use"* (*Technology Transfer Guidelines*, para.22)
- **Innovation spaces**
  - Not a market on its own, but an input activity for both the upstream technology markets and the downstream products markets (Case M. 7932 *Dow/DuPont*, para.348)
- **Innovation capabilities** (D. Teece)
  - *When innovation is high, **capabilities are more stable than products**. The tools for assessing capabilities may not be well developed yet, but they are developed enough to allow tentative application. Clearly, product market analysis can be unhelpful and misleading in dynamic contexts. **Using the right concepts imperfectly is better than a precise application of the wrong ones***

Market power assessment

- Identify **innovation capabilities**
  - Depend on the industry and innovation path
  - In **digital**: data, skills, computing power, risky and patient capital, customers base

- Assess **control and barriers** to those innovation capabilities
  - Different lens: "**Horizontalisation**"
  - *Facebook/WhatsApp* was conglomeral on existing products but horizontal on innovation capabilities

3. Theories of Harms: Exclusionary conducts

- **Bundling: Envelopment** strategies (Eisenmann et al., 2001)
  - Dominant platform leverages its users' base in its primary market and benefits from economies of scope in product development
    - *Microsoft/Explorer*, *Microsoft/Windows Media Player*

- **Refusal to give access** to innovation capabilities
  - Removing access to data to free ride on experimentation costs
    - *LinkedIn/PeopleBrowsr, Twitter/hiQ*
  - Refusal to give interoperability for sustaining innovation
    - *Microsoft/Sun*

Theories of Harms: Mergers

- Moving backwards on **innovation value chain**

- Elimination of a **potential competitor**
  - *Pfizer/Hospira:* potential competitor participating in the merger could present so-called "phase II products", i.e. pharmaceuticals in a late stage of development

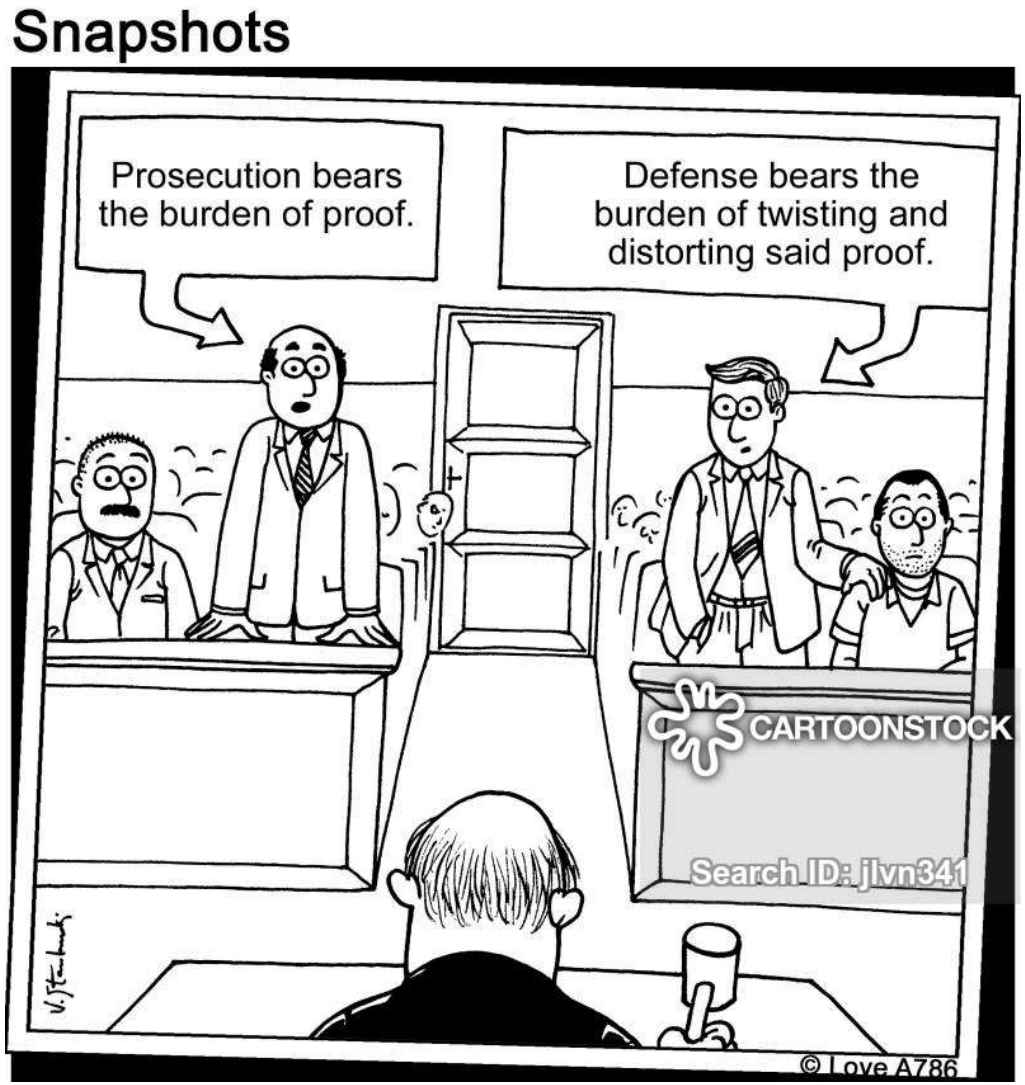
- Incentives to innovate more generally and a potential **reduction in R&D rivalry** between the merging parties
  - *Novartis/GlaxoSmithKline Oncology Business*
  - *Intel/McAfee*

- **Innovation Spaces**
  - *Dow/DuPont:* Loser links with current or future product markets

Theories of Harms: Big Tech acquisitions

ANTI-COMPETITIVE EFFECTS	PRO-COMPETITIVE EFFECTS
Effects on competition	
- **Elimination of potential competition**: the acquired firm offers a substitute. - Reinforcement of **market leaders**: if start-ups sold to them rather than to rivals.	- **Synergies** from the acquisition: input and output complementarities.
Effects on innovation	
- Innovation **killed** if the acquirer has less incentive to develop the innovation than the acquired firm. - R&D oriented towards **maximisation of acquisition value** rather than value of innovation.	- Stimulation of **innovative entry**, with possibly inefficient entry. - Innovation **accelerated** if the acquirer has more incentive to develop the innovation than the acquired firm. - **Complementarities** in innovation capabilities between the acquirer and the acquired firm: capital, skills/talent, data other resources.

4. Antitrust under uncertainty



Antitrust under uncertainty

- **Standard of proof**
  - From '**more likely than not**': Risks are errors are minimised
  - To '**balance of harms':** Risks *and* costs are taken into account (black swan event)

- **Burden of proof: Presumption**
  - Reduce **transaction and adjudication costs**
    - When welfare effects of firms behaviours are known on the basis of previous cases and/or robust theories
  - Allocate incentives for **information disclosure**
    - When information asymmetry is high

5. Take-Away

- Innovation is a key **competition parameter**
  - Good basis in economics and law
  - Need to go further to allow more dynamic antitrust analysis while minimising risks of errors

- **Market power**
  - From products to inputs: which firms control **innovation capabilities** (which vary across industries)

- **Theories of Harms**
  - **Exclusionary** conducts
    - Raising rival **access costs to those innovation capabilities**: refuse access to data, envelopment
  - **Merger**
    - Incentives and ability to **kill** innovation (pharma) or to **envelop** competitor (digital)

- Antitrust decision under **uncertainty**
  - Standard of proof: **Balance of harms**

Take-Away

- ***Innovation* level playing field**

- What about going back to **ordo-liberalism**?
  - Protection of the competitive process *as such*

- What about going back to **evolutionary economics**?
  - Longer term perspective
  - Understanding the innovation process
  - Going into the firms black boxes