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POSITIVE
COMPETITION

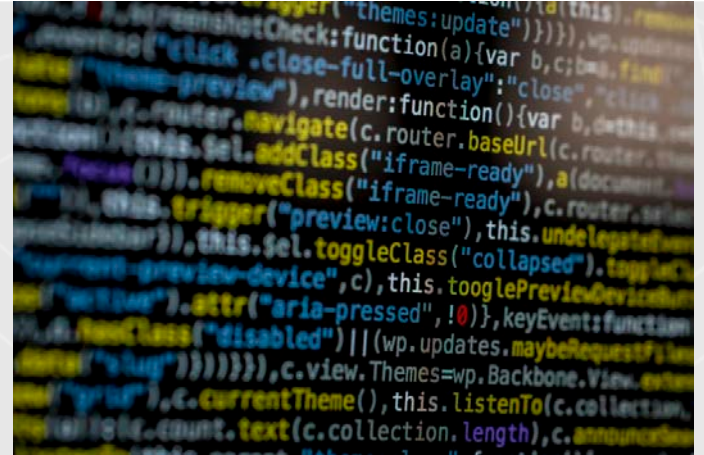
When Academia meets Practice:
Positive Takeaways for Enforcement

Big data and merger control

The relevance of Big Data for the
assessment of entry

Aleksandra Boutin

Academics debating *BIG DATA*



Features of Big Data that matter

- Tucker and Wellford (2014): **big data should not be tackled by antitrust enforcement** because it is characterized by ubiquity, low cost, wide availability and fleeting value.
 - Tucker and Wellford exclusively focus on access to large **volume** of data.
 - They do not consider the role of **data processing** in their assessment, thereby possibly underestimating the antitrust relevance of big data.
- Stucke and Grunes (2015, 2016): **big data as a potential source for antitrust concerns.**
 - They point out that some companies need enough volume of user data to increase the quality of their data-driven product, yet large user volumes are only generated if the quality of the product attracts enough consumers – the so called **chicken and egg dilemma**.
- Definitions of Big Data point to the importance of 3 V's:
 - **Volume** of data,
 - **Variety**: diversity of information in the data and sources of data ,
 - **Velocity**: speed of data generation and processing.

Examples of mergers in data driven markets

*Market entry is not about **possessing data** – it is about **processing data***

Google/ Waze

- In Google/Waze, the OFT found that Waze's navigation service quality crucially depended on the **amount of information** it collected from its customers.
- *Apparent chicken and egg* problem:
 - The more customers use Waze, the better Waze becomes because of the information it collects from users.
 - However, customers would only start using Waze if the quality is good enough.
- OFT did **not see Waze as a competitive threat** to Google because it was a much smaller player and did not have a reliable user base to build a reliable UK map.
 - OFT focused on the **volume of data** already accessible to Waze, not at its outstanding capacity to **process and analyze** large volume and variety of data in a timely fashion.
- Waze is an innovative live maps technology, able to process **real-time information** on traffic conditions through *crowd sourcing*.
- Past examples from data driven markets show that the **chicken and egg problem may vanish** when firms are able to **process data at high velocity**.
 - Yahoo lost its lead in search engine to Google despite initially having a higher volume of data;
 - Even though MySpace initially had a larger customer base, Facebook managed to take over.

Tom Tom / Tele Atlas

- In its Decision not to oppose the acquisition of Tele Atlas by Tom Tom on May 14 2008, the Commission considered that **entry by firms offering internet based map applications as unlikely.**
- The Commission **excluded that Google could enter** the market for navigable map services quickly.
 - It argued that the production of a navigable digital map database **using end-user feedback** was impossible.
 - It argued that only a certain type of data could be used for navigable digital map databases and this **data had to be collected through field surveys** using customized vehicles.
 - This required **vast resources.**
- The Commission's assessment focused on the entrants' **ability to replicate** exactly the same data that Tele Atlas and NAVTEQ generated, **using the same technology** those firms used.
- Google's used the **variety** of data that its search engine produced at **high velocity** (relying on updates from users).
- These competitive advantages allowed Google to **offer a more innovative navigation service for free.**
 - In contrast, the volume of data TomTom obtained through the acquisition of Tele Atlas lost its value quickly:
 - €1bn write off on the purchase of Tele Atlas in 2009;
 - TomTom's value slumped from €634m in the last quarter of 2007 to €213m in the first quarter of 2009.

Facebook / WhatsApp

- The European Commission looked at **demand substitution** – concluding that there are important differences between social networks and messaging services for consumers.
- WhatsApp did not only directly compete with Facebook for messenger services, but also posed an “indirect” competitive threat for Facebook.
- WhatsApp’s **ability to enter** the market for social networks or online advertising was not analyzed in detail.
- The European Commission might have underestimated the potential of WhatsApp **to collect and process** a large volume and variety of data.
 - WhatsApp could have **combined its Big Data strategy with its customers’ network** to roll out social network services that could have potentially substituted (parts of) Facebook’s product portfolio.
- WhatsApp **data were indeed later transferred to Facebook in order to improve personalized advertisements on Facebook.**
 - WhatsApp was a potential competitor of Facebook in the market for online advertising services.

Positive Takeaways for enforcement

From the academic debate and past cases involving Big Data

If it is all about data processing technology

- The relevance of Big Data for enforcement is related to the **firms' ability to collect and analyze** a large volume and variety of data in a timely fashion.
- Big Data in itself is ubiquitous, but the ability to collect and analyze it swiftly is not.
- Naturally, developing a Big Data technology can be a significant investment.
- However, a particularity of BIG DATA TECHNOLOGIES is their **incredible versatility to enter and transform existing industries**.
- Consider, for example, the spectacular entry of UBER, Deliveroo, Airbnb into markets that were not data driven before.
- Firms with leading technologies to process data were able to enter and take the lead even in markets characterized by important network effects.
 - Thereby, **overcoming the so called chicken and egg** dilemma.

Focus on the forest, not on the trees

- In Facebook/WhatsApp, the Commission looked at all the classical market definitions and concluded that the parties **were not strong in any existing market**
- This is focusing on a few trees and missing the forest.
- The relevant issue is whether WhatsApp could have developed some features that would compete for some users on one side of the multifaceted platform.
 - WhatsApp could send users a message when they are near their friends, for example proposing them to book a restaurant when they discuss lunch, etc.
 - This **does not even require that services are substitutes**: if they are complements, the way the advertising profit is shared is also relevant
- Facebook is then acquitting a potential threat and the **assessment is in substance close to an antitrust investigation** (not far from Microsoft/IE)
- Question:
 - How do you deal with such an assessment within the **current ECMR**?
 - For instance, see our proposals submitted in response to the European Commission's public consultation.

Data is not like oil, but rather like wind

- Commentators refer to data as **the oil** of the 21st century.
- But the examples discussed show that data is rather comparable to **wind**.
 - Like wind, data flows are largely accessible, but need to be **transformed into something valuable**.
 - The **accumulated** wind, or the volume of (historical) data, is not valuable in itself.
 - **Providing access** to data as a way of inducing entry most often is not helpful because entrants would need to have an adequate technology to process these data.
 - Firms in Big Data markets normally develop the technology during the data collection process (learning by doing).
- The **ability to process** data can provide firms with a **competitive advantage**.
- To what extent **accumulated experience** in processing data matters?
 - Examples show that entrants may identify a new and better technology or source of data and leapfrog the incumbent.
- Can **capacity to process** data be a **barrier to entry**?
 - Given that the incumbent had to develop this technology in the first place...

Or maybe the entrant should just install a better windmill?



Merger Policy and Innovation: Sector-Specific Issues and Remedies

Pierre Régibeau, CRA and University of Essex

White and Case Conference, Brussels November 7, 2018

Merger and Innovation: Four Main Questions

- With horizontal overlap downstream, an un-remedied merger raises prices and hence profit-margins. Higher margins mean more innovation. Should one accept an increase in prices to foster innovation?
- Are innovation-specific efficiencies likely to be significant?
- Can a merger reduce innovation even when the relevant markets in which innovations would be useful are not yet known?
- How do we apply these principles to specific sectors of activity?

Answer 1

- See Motta-Tarantino, Federico-Langus-Valletti: with downstream overlap and constant prices a merger decreases innovation. This effect is stronger, the more extensive the downstream overlap is.
- Under fairly general conditions, this effect dominates the pro-innovation effect due to increased profit margins.
- Pragmatically, there is no reason to refrain from divesting the overlap simply because the resulting price increase might be good for innovation.

Answer 2

- There are indeed many sources of potential innovation-related efficiencies decreasing the cost of innovation, increasing incentives to invest in innovation or both.

Efficiency	Cost Reduction	Increased Incentives
Internalising Spillovers		+
Internal Diffusion of Knowledge		+
Duplication Avoidance	+	+
Sequential Innovation		+
Legal Certainty	+	+

When are significant efficiencies likely

Efficiency	Conditions	Evidence
Spillovers	A and B's products rely on similar technologies Weak IPR	Technology Licensing uncommon. Trade Secrets ineffective. Large workforce turnover
Internal Diffusion	A and B's products rely on similar technologies Weak Patents	Technology licensing uncommon. Reverse engineering difficult
Duplication Avoidance	Directed R&D. A, B Pursue similar technologies	A and B obtain similar patents (EPO X Y) at similar dates
Sequential Innovation	Rapid innovation A and B pursue similar lines of research	Rapid changes in market shares. Mutual patent citations
Legal Certainty	Scope of IPRs unprecise A and B 's technologies and IPRs potentially infringe each other.	Litigation/oppositions between the parties No cross-licensing

Links between spillovers and Internal Diffusion

	Increased Diffusion	Increased Incentives
Perfectly Efficient Licensing, no Spillovers	0	0
Inefficient Licensing, no Spillovers	+	+
Complete Spillovers	0	+
Inefficient Licensing, Incomplete Spillovers	0/+	+

Answer 3

- Innovators do not compete downstream
- Firms interested in the resulting technology do not compete downstream either
- First-mover advantages → incentive to be first to discover (R&D “race”). Merger → slower innovation.
- Sources of first-mover advantage: reputation, brand, installed base, IPRs.
- The stronger/broader the IPRs the stronger the incentives to race → greater potential harm from a merger.

Answer 3: What to Look For?

- History of patenting/inventing in same broad technological areas
- Reciprocal citing of past innovations
- Commonality of patents/scientific papers cited in patent applications
- Movement of scientific personnel between the two firms
- Scientific publications of employees
- Specialised (expensive and lumpy) equipment?

Different Sectors, Different Challenges

- Pharmaceutical
- Telecoms

Example 1: Pharma

- Long lag between initial research and market introduction
- Substantially targeted research
- Still some companies have strengths in broad fields (e.g. oncology)
- Only moderate continuous improvements of current products
- Strong but fairly narrow patents
- Fairly well-defined patents
- “Me too” drugs

Pharma

- Often vertically Integrated and material overlap downstream → negative effect on innovation but divestment of products or product divisions effective.
- Pipelines are just a special case of overlap. One can think of them in terms of potential entry.
- Even longer term effects: importance of R&D capacity (Glaxo-Novartis).
- Strong first-mover advantages → plausible “innovation market” theories of harm → possible divestment of research capacity.

PHARMA

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Example 2: Telecoms

- Abuse of dominance might be harder to detect, understand, and correct.
- “Continuous” innovation
- “Disruptive” innovation

Telecoms

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Polémiques in merger enforcement

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UCL – White & Case Autumn Competition Conference, 7 November 2018

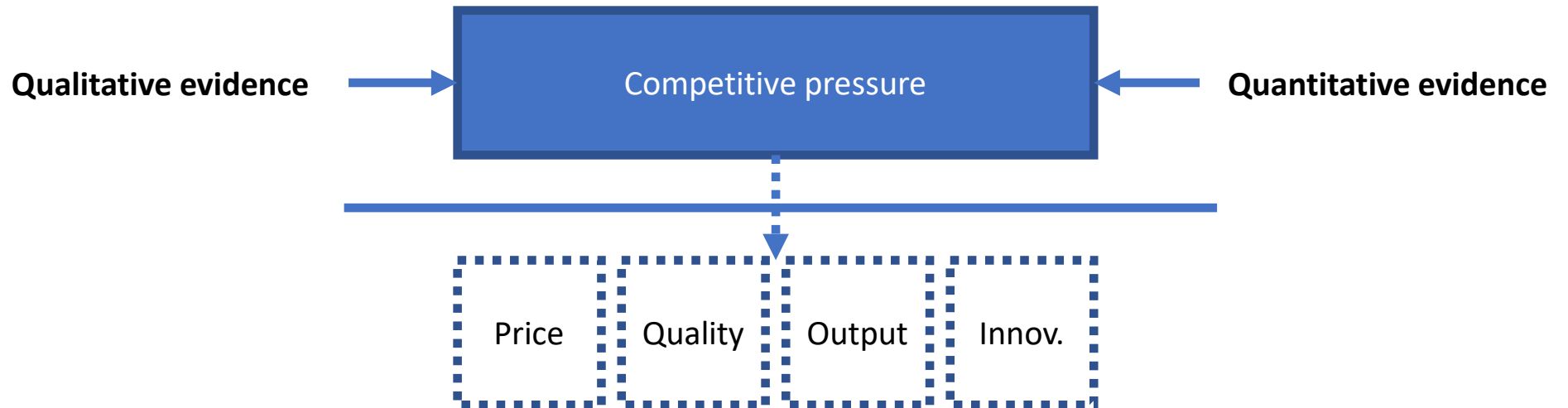
Mergers and innovation

- Controversy surrounds the use of innovation considerations in merger analysis
 - It has been argued that the analysis in *Dow/DuPont* is **unprecedented** (no market definition in the traditional sense)
 - It has also been argued that it is not **robust** enough (the available tools do not make it possible to predict the dynamic effects of transactions)
- These criticisms seem to be at odds with the legal dimension of merger control (i.e. ***what needs to be proved as a matter of law***)

Mergers and innovation

- It is sometimes assumed that the Commission needs to show harm to a particular parameter of competition (e.g. price, quality, innovation)
- These assumptions do not reflect the reality of the law as it stands:
 - Harm to the different parameters can be established by **proxy** (Case T-342/07, *Ryanair*; Case C-175/12, *Deutsche Börse*)
 - The Commission needs to show that the transaction is likely to significantly reduce the **competitive pressure** faced by the merging parties

Mergers and innovation

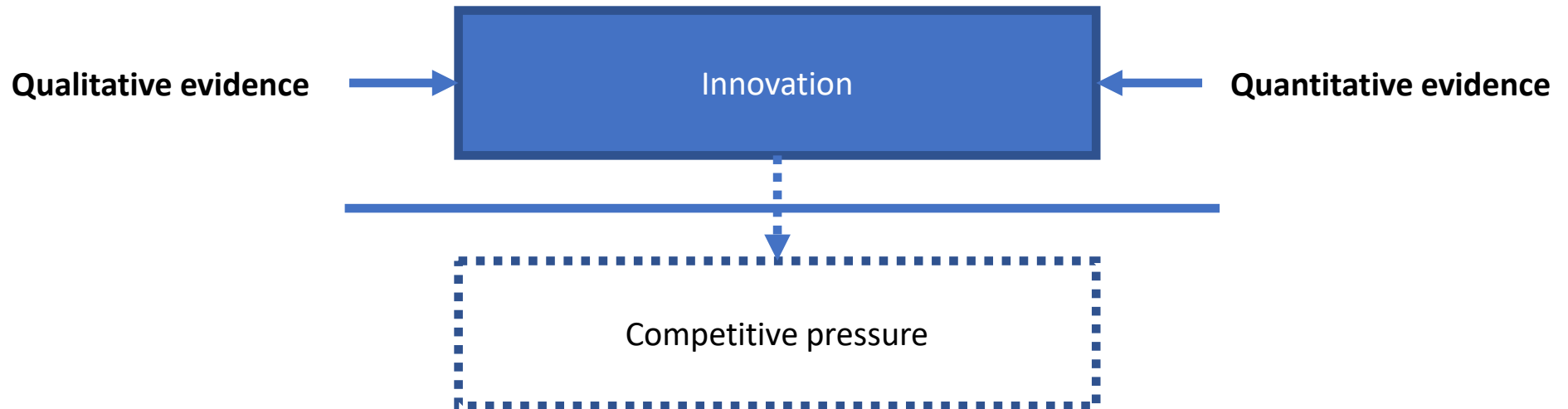


Mergers and innovation

- Against this background, nothing in *Dow/DuPont* comes across as exceptional (or new, or insufficiently robust)
 - As a horizontal merger, the parties to the transaction placed competitive pressure on each other
 - The significance of these constraints does not seem to have been seriously questioned
- If anything, the criticism should be directed at the robustness of analysis by proxy
 - This would require revising the law
 - And, in any event, it would not be parameter-specific (similar arguments could be made, for instance, in relation to quality)

Mergers and innovation

What if the analysis is turned upside down and a significant reduction in competitive pressure is inferred from alleged harm to innovation?



Institutional issues in merger control

- It is worth asking whether, and why, the merger control system tends to favour certain outcomes
 - Have some mergers been cleared with conditions even though they should have been blocked?
 - By the same token, have remedies been offered in transactions that should have been cleared unconditionally?
- How about the future of merger control?
 - Ex post studies
 - Will we see 'Article 101(3) decisions' in merger control?