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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

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# 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 21<sup>st</sup> 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
<b>Spillovers</b>	A and B's products rely on similar technologies Weak IPR	Technology Licensing uncommon. Trade Secrets ineffective. Large workforce turnover
<b>Internal Diffusion</b>	A and B's products rely on similar technologies Weak Patents	Technology licensing uncommon. Reverse engineering difficult
<b>Duplication Avoidance</b>	Directed R&D. A, B Pursue similar technologies	A and B obtain similar patents (EPO X Y ) at similar dates
<b>Sequential Innovation</b>	Rapid innovation A and B pursue similar lines of research	Rapid changes in market shares. Mutual patent citations
<b>Legal Certainty</b>	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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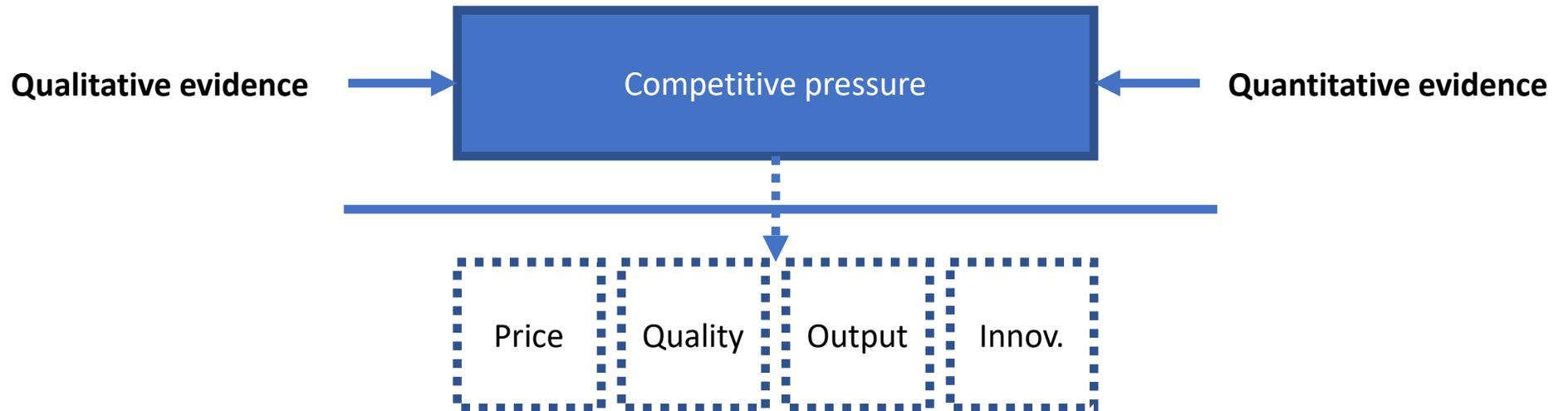
# Mergers and innovation

- 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

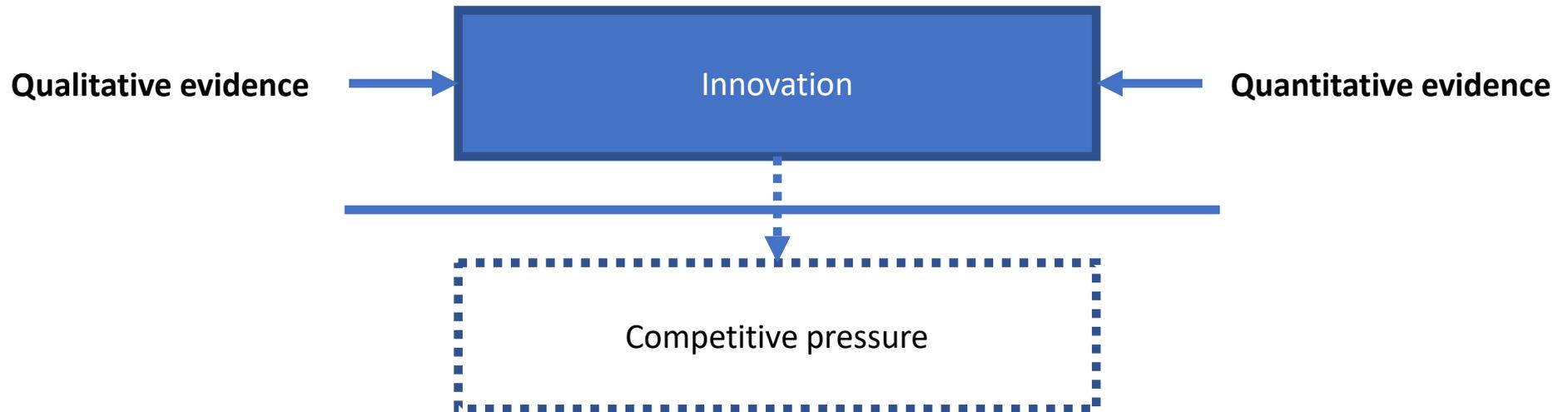


# Mergers and innovation

- 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?