

ANTITRUST ISSUES WITH BIG DATA: A United States Introduction

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Antitrust Issues With Big Data: A United States Introduction

- Businesses rely on algorithms to set prices and use algorithms and models to monitor, match, or undercut competitors' prices or to raise prices to the competitors' levels. If the algorithms set those prices at a supracompetitive level, should antitrust law should provide a remedy? Several legal issues arise.
- Competitors are exchanging price information in public and after transactions have occurred. Courts almost never find such conduct anticompetitive.
- Computer algorithms may tend to make conspiracies easier to maintain and harder, if not nearly impossible, to detect.

Antitrust Issues With Big Data: A United States Introduction *(cont'd)*

- Is there even a possible antitrust violation: the price fixing is carried out by software not people. Is some human “consciously committing” to break the law.
- Is there a Sherman Act Section 1 claim for algorithmic price fixing? Courts will first need to be willing to acknowledge that algorithms have changed our world and are designed by humans with a goal of something.
- There is very little case law dealing with algorithmic price fixing so far. The Justice Department secured guilty pleas in *United States v. Topkins*, 3:15-cr-00201 (N.D. Cal.), and *United States v. Aston and Trod Ltd.*, 3:15-cr-00419 (N.D. Cal.), where competitors in the online market for posters agreed to fix prices and deployed price-setting algorithms to do it. The DOJ argued the algorithms were “simply the means of effectuating the agreement and the mechanisms through which the collusive prices are set.” But because the alleged conspirators had an “actual agreement,” the antitrust laws could easily be applied.

Antitrust Issues With Big Data: A United States Introduction *(cont'd)*

- In *Meyer v. Kalanick*, plaintiff contended that Uber's smartphone app operated as an anticompetitive "hub-and-spoke" price-fixing conspiracy since the app served as the hub and each driver as a spoke. See 174 F. Supp. 3d 817, 821 (S.D.N.Y. 2016) (*rev'd on other grounds*, 868 F.3d 66 (2d Cir. 2017)). Although drivers simply follow the price given out by the app, the drivers in abide by that price as set. The plaintiff was found to have stated a claim under Section 1 because technology had made a price-fixing conspiracy plausible, even among thousands of conspirators. "The advancement of technological means for the orchestration of large-scale price-fixing conspiracies need not leave antitrust law behind," Judge Jed Rakoff held. The Court of Appeals reversed based on an arbitration clause.
- What about when two (or more) competitors, acting unilaterally, deploy algorithms to set prices without any human intervention and, by algorithm, arrive at the same, supracompetitive price?
- Liability under Section 1 only arises if each competitor made a "conscious commitment to a common scheme designed to achieve an unlawful objective." See *Monsanto Co. v. Spray-Rite Serv. Corp.*, 465 U.S. 752, 764 (1984).

Antitrust Issues With Big Data: A United States Introduction *(cont'd)*

- By contrast, “tacit collusion” or “conscious parallelism” — the process “by which firms in a concentrated market” independently decide to set prices based on those of their competitors — is “not in itself unlawful.” See *Brooke Grp. Ltd. V. Brown & Williamson Tobacco Corp.*, 509 U.S. 209, 227 (1993); see also *In re Text Messaging Antitrust Litig.*, 782 F.3d 867 (7th Cir. 2015) (Posner, J.). Yet a complaint will survive a motion to dismiss if a plaintiff adequately pleads conscious parallelism and “plus factors.” Can algorithm be or cause “conscious parallelism” ?

BIG DATA, DIGITAL PLATFORMS AND DIGITAL NETWORKS: An Overview and Some Recent EU Cases

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The Digital vs the 'Old' Economy

- New digital services (often unregulated) compete with (and disrupt) older regulated services
 - Uber vs traditional taxis
 - Skype and WhatsApp vs Telcos
 - Google vs Magazines and newspapers
 - Amazon vs bookstores/Wal-mart
- Incumbent old economy service providers often complain about the need for a level playing field (which often means either exclusion (Uber), regulation (Skype/WhatsApp) or tougher application of competition laws (Google))
 - Examples
 - Opposition to Google has been led by the German print industry
 - French attempts to subject Skype to regulation as a telephone operator presumably at the request of France Telecom
 - EU Telcos have long sought to eliminate competitive advantages enjoyed by Skype, WhatsApp and other «over the top» (OTT) internet communications services
 - Objections to *Facebook/WhatsApp* merger came from Telcos

The Digital vs the 'Old' Economy *(cont'd)*

- Antitrust authorities and sectoral regulators need to be sensitive to attempts by old economy incumbents and legacy service providers to enlist their support to limit the competitive challenge posed by digital rivals
- This is especially true in economies that prefer regulation to competition; and where 'old' economy players are protected by regulation limiting entry and price competition and/or are less efficient than their digital rivals

EU Regulation of Over the Top Internet Services

- The EU is planning legislative changes that may increase obligations of OTT providers concerning confidentiality and data protection
 - Skype's services to dial phone numbers and receive calls will be regulated like calls between phone numbers but calls and text messages between Skype users would not fall under the new telecom rules
 - Need to comply with security and confidentiality provisions applicable to Telcos
 - Possible need to provide emergency call services
 - Limitations on use of data derived from customer calls
- The EU proposals focus on data protection/privacy and fall short of French attempts to regulate Skype as a telco and require it to contribute to telco infrastructure

Past Cases and Practices

- Digital issues are not altogether novel
 - Electronic smoke-filled room -- 1988-1992
 - DOJ action against airlines posting and negotiation of future prices on GDSs
 - GDSs make vast amounts of data available to airlines
 - Airlines have long employed sophisticated yield-management algorithms
 - The EU has had extensive experience regulating CRS/GDS
 - Initial attempt to ensure neutrality ultimately lead airlines to divest their shares in CRSs (a decision some have subsequently regretted)
 - GDSs exhibit the features associated with other digital platforms
 - Two-sided markets with higher costs on acquiring side
 - Direct and indirect network effects
 - Multi-homing by airlines and travel agents
 - Market power *vis-à-vis* airlines

Current Investigations

- The Commission is now increasing its activity concerning vertical constraints
 - On 2 February the Commission announced investigations of
 - Asus, Denon & Marantz, Philips and Pioneer and on-line retailers for alleged RPM involving consumer electronics products (aggravated by pricing software)
 - Valve (which owns the Steam game distribution platform) and five video game publishers (Bandai Namco, Capcom, Focus Home, Koch Meida and Zeni-Max) concerning agreements that prevent consumers from purchasing lower-price activation codes for video games in eastern Europe for use in western Europe
 - Tour operators -- Thomas Cooke, TUI, Kuoni – and various hotels concerning agreements that may discriminate against customers based on their location by denying them access to full hotel availability and best prices
 - These investigations involve digital-economy versions of the most common EU vertical infringements
 - RPM
 - Partitioning of the single market

Current Investigations *(cont'd)*

- In the Asus investigation it appears that the use of algorithms has added a horizontal element to the vertical RPM
 - The pricing software permits alignment with highest prices so that RPM took on an horizontal dimension
- Trod/GB eye CMA (November 2016)
 - In the Trod/GEB eye case, both companies used automated re-pricing software to implement their agreement not to undercut each other's prices when selling on Amazon's UK website
 - The CMA has warned software providers that they risk violating UK competition law if they help their clients use software to facilitate illegal price-fixing agreements, although that was not a feature of the Trod/GB eye case.

Agency Studies of Big Data

- US Federal Trade Commission
 - Big Data: A Tool for Inclusion or Exclusion (January 2016)
 - Data Brokers (May 2014)
- UK Competition and Markets Authority (June 2015)
- Joint study German Federal Cartel Office and French Competition Authority (May 2016)
- In addition in the US
 - The Executive Office has produced a report on *Big Data and Differential Pricing* (2015)
 - The President's Council of Advisors on Science and Technology has produced a report on *Big Data and Privacy -- A Technological Perspective* (2014)

Agency Studies of Big Data *(cont'd)*

- FTC concerns have related mostly to consumer protection and privacy in keeping with FTC's consumer protection mandate
 - Harm caused by use of inaccurate data
 - Disclosure of sensitive personal data
 - Targeting vulnerable consumers for fraud
 - Creating new justifications for exclusion
 - Higher priced goods for lower income communities
 - Weakening the effectiveness of consumer choice

Agency Studies of Big Data *(cont'd)*

- CMA study is descriptive and focused on the use of data in three sectors
 - Motor insurance uses data to
 - Assess risk and set premiums
 - Verify customer information, correct errors and detect fraud
 - Retail clothing uses data to
 - Convert consumer interest into actual purchases through personalized targeted offers/ads
 - Enhance user experience
 - Develop high-level demographic/purchasing pattern insights
 - Games apps use data to
 - Optimize game design and target in-app advertising

CMA

- More recently David Currie, head of the CMA, has questioned whether regulators have the tools to keep up with price algorithms that learn by doing without human agency
- Regulation could address the use of algorithms that produce anti-competitive effects but do not infringe competition laws
 - Self-learning algorithms that align on prices without human intervention

Bundeskartellamt/Autorité de Concurrence Joint Study

- Joint study (May 2016) by Bundeskartellamt/Autorité de Concurrence (BKA/AdC) provides an analysis of potential antitrust harms:
 - Data as a source of market power
 - Increased market transparency (potential pricing effects)
 - Identification of specific data-related anti-competitive conduct
 - Mergers and acquisitions
 - Exclusionary practices
 - Refusal to provide access
 - Discriminatory access
 - Exclusive dealing
 - Tying and leveraging
 - Price discrimination
 - Market power

FCO Report on Digital Platforms and Networks

- In June 2016 the German Federal Cartel Office (FCO) published a separate report on the assessment of market power in digital platforms and networks.
- The report has led the FCO to seek amendments to German competition law designed to facilitate the FCO's ability to take enforcement action against digital platforms and networks
- As concerns big data, the report notes that
 - Access to data sources is a factor to be analyzed when assessing the market power of digital platforms and networks
 - Control over data is not *per se* indicative of market power
 - However, the basis on which data are collected, their relevance for competition, whether they can be duplicated and the options for combining data from different sources all need to be assessed on a case-by-case basis

FCO Report on Digital Platforms and Networks *(cont'd)*

- Internet businesses are considered to be **platforms** if they provide intermediation services which allow for direct interaction between two or more user groups that are connected by indirect network effects
- Internet businesses are considered to be **networks** if they provide intermediation services which allow for interaction between users of the same group which result in direct network effects
- Some business models combine platform and network elements:
 - Social networks (Facebook) are audience providing platforms that finance themselves through advertising

FCO Report on Digital Platforms and Networks *(cont'd)*

- Factors for assessing market power:
 - Market definition
 - In the case of matching platforms (where the product offered is the connection between the two groups using the platform) it is reasonable to define only one relevant market except in cases in which one side does not depend on a successful matching result to satisfy its demand
 - On-line platforms/networks can still constitute a relevant antitrust market even when use is offered for free
 - The user's provision of data in exchange for a service is equivalent to a monetary payment

FCO Report on Digital Platforms and Networks *(cont'd)*

- Factors for assessing market power:
 - The relevance of direct and indirect network effects
 - Economies of scale
 - Single homing/multi-homing and the degree of differentiation on the opposite market side
 - Access to data
 - Innovation potential of digital markets
- Platform/network markets with high direct or indirect network effects tend to be highly concentrated
 - Market shares are less relevant in assessing market power because of the impact of network effects on competition
 - BUT a high user-based market share lead over other platforms/networks may be relevant for the risk of tipping as a result of indirect network effects

FCO Report on Digital Platforms and Networks *(cont'd)*

- Platforms with positive bilateral indirect network effects create positive and negative market power factors:
- Positive factors that increase risk of market power:
 - Strong self-reinforcing feedback loops which can lead to tipping
 - Matching platforms have strong two-sided positive indirect network effects
 - Strong network effects are a first indication of dominance if one platform has a clear lead over rival platforms
 - Indirect network effects create barriers to entry
 - Audience-providing platforms involve one-sided network effects in that advertising side benefits from more users but not *vice versa*
 - Direct network effects
 - Key issues are entry barriers, switching costs and compatibility with competing networks
 - Compatibility can lower entry barriers and reduce tipping effects
 - Pronounced direct network effects relevant where one network has a significant lead over its rivals with regard to installed base
 - Economies of scale
 - May in themselves constitute a barrier to entry
 - May strengthen the self-reinforcing positive feedback loop inherent in platforms

FCO Report on Digital Platforms and Networks *(cont'd)*

- Negative factors that reduce risk of market power:
 - Multi-homing
 - Platform differentiation
 - Platform congestion
 - Congestion refers to the technical/physical limitations of the platform which may make it impossible to accept more users
 - Virtual congestion refers to the decline in the usefulness of the platform if its user groups become too large

Proposed Amendment of German Competition Law to Address Digital Markets

- The German Ministry of the Economy is considering amendments to German competition law designed to increase the powers of Federal Cartel Office in cases involving digital markets.
 - The amendments would:
 - Permit the definition of relevant antitrust markets for digital services such as search engines or price comparison websites – where no money exchanges hands
 - Provide additional tools for assessing the market power of two-sided digital platforms by including factors such as network effects, efficiencies of scale, access to data and innovativeness
 - Expand German merger review to cover concentrations whose transaction value (normally the purchase price) exceeds €350 million even where the target achieves less than €5 million in turnover.

Other US Agency Studies of Big Data

- Executive Office report on *Big Data and Differential Pricing* (2015):
 - Concludes that Big Data likely to produce a shift from third-degree price discrimination based on broad demographic categories towards personalized pricing and individually targeted campaigns but that buyers are using the Internet to ensure they get the best deal.
 - Recommends caution about proposals to regulate online pricing given beneficial effects of differential pricing for buyers and sellers.
 - One way to limit unfair or inaccurate applications of big data might be to give consumers greater control over their information.
- President's Council of Advisors on Science and Technology report on *Big Data and Privacy -- A Technological Perspective* (2014):
 - Focus on privacy and development of technologies to better protect it

Conclusions: Benefits of Big Data and Virtual Competition

- Benefits of Big Data
 - Increased market transparency
 - Price comparison sites
 - Output enhancing effect of targeting demand and targeted pricing
 - Possibility of competition at the level of the individual customer
 - Reduction of risk and fraud
 - Individualized products *e.g.*, health care

Risks of Big Data and Virtual Competition

- Risks involve both competition and consumer protection/privacy concerns
 - Consumer protection/privacy
 - Facilitates discrimination based on race, age, sex and risk profile
 - Identity theft
 - Targeted discriminatory pricing aimed at disadvantaged customers
 - Competition concerns
 - Facilitates or engages in price collusion
 - Creates barriers to entry
 - Downstream exclusion/discrimination by dominant digital platforms

Conclusions re Benefits and Risks

- Ambivalent attitude toward discriminatory pricing:
 - Concerns with differential pricing are often entangled with related concerns about fairness and privacy
 - Differential pricing can benefit both buyers and sellers hence the need for caution when regulating online pricing
 - Profit-maximizing differential pricing may benefit historically disadvantaged customers, provided markets are competitive and risk-based pricing doesn't undermine pricing that favors price-sensitive customers
 - One way to limit unfair or inaccurate use of big data is to give consumers greater control over their information.

Conclusions re Benefits and Risks *(cont'd)*

- Ambivalent attitude toward pricing transparency:
 - Comparative pricing enhances competition
 - Greater transparency may facilitate collusion
- Ambivalent attitude toward market entry and entry barriers:
 - Data markets tend to be both dynamic, highly concentrated and subject to network effects
 - Lack of information about demand-side and downstream competition between non-rival platforms
 - To what extent do platforms like Google and Facebook compete re diffusion of data?
 - To what extent do data brokers mitigate any concerns about a possible link between big data and market power?

Theories of Antitrust Harm

- Data as a potential source of market power
 - Is data unique
 - Scale and scope advantages of large data sets
 - Barriers to entry
 - Assumes that 3rd-party data are not comparable
 - Incumbent advantage given correlation between data volumes and service/product quality and revenue/investment
 - Denying competitors access to data
 - *GDF-Suez*: French Competition Authority imposed interim measures requiring GDF-Suez to make consumption data obtained from its customers available to rivals
 - Tying and bundling
 - *Cegedim*: Leading provider of medical information data based in France refused to sell its main data base to customers who used the software of a competitor in the adjacent market for customer relationship management

Privacy and Antitrust Harm

- Market power and privacy data/protection

- ECJ has held that issues relating to personal data are not a matter for competition law
Asnef-Equifax (2006)

- In *Facebook/WhatsApp* Commission stated that

Any privacy related concerns flowing from the increased concentration of data...as a result of the... [merger] do not fall within the scope of the EU competition law rules but within the scope of the EU data protection rules.

- Nevertheless the German Federal Cartel Office has opened an inquiry to determine whether Facebook has abused its dominant position in Germany by failing to respect German data protection laws (slide 40)
- The EU has sent a statement of objections to Facebook for telling the Commission that it would be unable to establish reliable automated matching between Facebook and WhatsApp user accounts
 - In August 2016 WhatsApp announced the possibility of its users' linking WhatsApp user phone numbers with Facebook user identities
 - Concerns here may be more procedural than substantive

Consumer Protection and Privacy

- BKA inquiry into Facebook for infringement of German data protection laws
 - Failure to provide full disclosure/protection is treated as a potentially exploitative abuse but not one linked to any antitrust theory of harm
 - Do digital platforms compete with respect to the degree of privacy protection offered consumers
 - If yes would dominant firms face less competitive pressure to protect privacy of subscriber data?
 - If the failure to protect privacy is an exercise of market power, could the failure to comply with data protection laws be treated as an exploitative abuse

Privacy and Antitrust Harm

- Antitrust-based privacy theories
 - If digital platforms compete on the terms offered users, privacy protection could be a competitive parameter with dominant firms under less pressure to provide such protection
 - Failure to provide data protection might be linked to market power
- Non-antitrust-based theories
 - Failure to comply with national data protection laws or to provide full disclosure of the use to which user data is put could constitute an exploitative abuse without any causal link between market power and the failure to respect privacy laws

Economic Policy Perspective on Online Platforms

- On May 23, 2016 the EC published an economic study on online platforms
- The EC's report discusses platforms from a regulatory policy angle, including potential market failure, the extent of self-regulation and possible regulatory responses through existing competition policy, consumer protection and data protection instruments
- The study addresses potential policy issues on platforms such as
 - Sources of bias in search engines and search rankings
 - The use of data in platforms; and
 - Platforms and intermediary liabilities

Economic Policy Perspective on Online Platforms - Economics of platforms

- Online platforms initially attracted economists' attention because of indirect network effects that they may generate
 - The more users join on one side of the market, the more users are required to join on the other side
 - Variety of users: buyers and sellers, advertisers, software developers, social media users, etc.
- More recently economists have argued that the most important characteristic of platforms is the direct interaction between its users
 - Example: Airbnb operates an online marketplace and hospitality service on which real estate owners directly interact with clients to conclude a deal to lease or rent short term-accommodation
 - Interaction differentiates platforms from retailers and vertically integrated firms
 - This interaction lies at the heart of the “sharing economy”

Economic Policy Perspective on Online Platforms – Economics of platforms *(cont'd)*

- Platforms complement and erode traditional businesses on two sides:
 - (i) Large online markets put pressure on price/margins
 - (ii) Micro-enterprises in the “sharing economy” may impact a traditional business’ way of production and work
- Regulatory initiatives face a trade-off between defending traditional business models vs defending innovative new models that may generate wider benefits

Economic Policy Perspective on Online Platforms – Economics of platforms *(cont'd)*

- Key aspect of user interaction: creation of economies of scale in data collection and analysis
- Platforms helps users on one side connect with users on the other to conclude an exchange
- This allows platform operators to monitor and collect data on user behaviour
- Aggregation of data creates a comparative advantage over individual users, *i.e.*, information assymetry
 - Can be used both to the advantage and disadvantage of platform users

Economic Policy Perspective on Online Platforms – Search rankings

- Data-driven matching of users on platforms uses tools such as paid ads, commercial search and organic search
- Search rankings, however, can be problematic
 - “Superstar economics” can mean that more popular choices remain more popular because they appear at the top of ranking
 - Can lead to lock-in of the most popular products
 - Commercial search engines still prioritize profit objectives like any other profit-driven business
 - Positions in search and paid ad rankings impact market access for businesses that depend on online distribution channels
 - Search engines should not be polluted by the commercial objectives of the platform, *i.e.*, promoting of own products or deliberately harming competitors’ interests
 - Even in pure organic search there is no “search neutrality”

Economic Policy Perspective on Online Platforms – The use of data in platforms

- The “one-way mirror” metaphor
 - Unlimited personal data collection and processing by operators
 - Limited cognitive capacity of human users
- Can result in loss of individual autonomy, lack of transparency and accountability, and use of data to the data subject’s disadvantage
- Regulation of data protection in the EU: users’ right to access, modify and delete personal data held by platforms, as well as “informed consent”
- Data also traded as a commodity on global data markets

Economic Policy Perspective on Online Platforms – The use of data in platforms *(cont'd)*

- Users' privacy protection dilemma
 - Difficult for individual users to understand which data is collected and how it is used in practice
 - The “privacy paradox:” users often complain about privacy but do not behave accordingly because their economic assessment of the costs and benefits of privacy protection drive them in this direction
- Economies of scope create a dilemma for policy makers
 - Should policy makers allow for more integration between datasets held by individual firms in order for society to benefit from economies of scope
 - Or should restrictions on secondary use in the EU's data protection regulation be interpreted more strictly

Economic Policy Perspective on Online Platforms – The use of data in platforms *(cont'd)*

- Another issue is the growing information asymmetry between content producers and the platforms on which they market their content
 - It may be problematic for innovative start-ups to access data held by platforms or other businesses
- However, competition authorities in the US and the EU have taken a prudent approach towards data access cases
 - Vibrant market for data and substitute sources available
 - No conclusive evidence on whether data markets face significant bottlenecks

Economic Policy Perspective on Online Platforms – The use of data in platforms *(cont'd)*

- The EU General Data Protection Regulation (GDPR), which entered into force on 25 May 2018, gives natural persons a right to access personal data, withdraw them and require consent for the use of personal data
 - It applies only to individuals, not to businesses
 - This leaves a gap in B2B data practices
- Information asymmetry between online platforms and authorities
 - Need for a data authority equipped with specialist data analytics staff and infrastructure to help with specific cases and improve monitoring and reporting

Economic Policy Perspective on Online Platforms – Platforms and intermediary liabilities

- Distinguish between liabilities for
 - Illegal content under the EU e-Commerce Directive (ECD)
 - Application of legal and regulatory provisions that apply to exchanges of goods (wider platform liability)
- Illegal copyright-protected content
 - New forms of media content production and distribution via online platforms
 - Some platforms are fully licensed, others only partially or not at all
- Increase of ex-post risks in transactions if there is no improvement of liability management
- Platforms have tried to solve this issue by making substantial efforts in self-regulating the market

Economic Policy Perspective on Online Platforms – Platforms and intermediary liabilities *(cont'd)*

- Robustness and credibility of self-regulation is being questioned
 - For example, while some consumer reviews and rating systems can be robust, others can be biased due to a platform's commercial interests
- There could be a role reserved for public authorities to monitor the quality of attempts from within the sector to self-regulate
 - Also suggestions of indirect public intervention by setting standards for search rankings, consumer ratings and contingent liabilities
- The emergence of the “sharing economy” has also called for the establishment of a regulatory framework between traditional businesses and new online platforms
- Before intervening, it would be preferable to take into account the capacity for online platforms to self-regulate their specific markets
 - Regulation should not protect incumbents, but support innovation

Some Recent EU Cases That Didn't Have Concerns re Big Data

- Facebook/WhatsApp
- Microsoft/LinkedIn
- Apple/Shazam

Mergers – Some Concrete Examples: *Facebook/WhatsApp*

- *Facebook/WhatsApp* 2014)
 - Three relevant markets
 - Consumer communications services
 - Social networking services
 - On-line advertising services
- Overlap limited to consumer communications services
 - Differ from social networking services whose environment is richer and not used for two-way real-time communication
 - Stand-alone apps such as WhatsApp, Viber, Facebook messenger and Skype
 - As part of a broader social networking platform – Facebook, LinkedIn
 - Proprietary apps (Apple FaceTime, i-Message)
 - Nonproprietary apps (like WhatsApp)
 - Distribution platform
 - WhatsApp - smartphones only
 - Facebook - smartphones, tablets and PCs

Facebook/WhatsApp – Competitive Assessment – Consumer Communications Services

- Market shares
 - Combined EEA Shares 30-40% in EEA market for consumer communications apps on iOS and Android smartphones:
 - WhatsApp: 20-30%
 - Facebook Messenger: 10-20%
 - Main competitors
 - Android's messaging platform: 5-10%
 - Skype: 5-10%
 - Twitter: 5-10%
 - Google Hangouts: 5-10%
 - iMessage: 5-10%
 - Viber: 5-10%
 - Snapchat: 0-5%
- Combined share significantly higher than next closest rivals' but dominance not expressly addressed

Facebook/WhatsApp – Closeness of Competition

- Closeness of competition:
 - Facebook Messenger and WhatsApp are not close competitors given differences relating to
 - Identifiers used to access the service (phone numbers vs Facebook ID)
 - Source of contacts (handset address book vs Facebook users)
 - User experience (Facebook richer)
 - Privacy policy (Facebook collects user data for its advertising activities)
 - Intensity of use
 - WhatsApp closer to Viber
 - Facebook Messenger closer to Twitter/Google Hangouts
 - One or more Facebook and WhatsApp features are offered by other players
 - High degree of multi-homing
 - No significant switching costs despite possible issues re recreating user's network

Facebook/WhatsApp – Barriers to Entry and Expansion

- Consumer communications market characterized by disruptive innovation
 - In 2013, use of messaging and social apps grew by 203% which was more than any other app
 - Development and launch costs low
 - No IP barriers
 - Parties do not control operating systems, email addresses, phone numbers
 - Data portability not an issue given spontaneous short-term nature of chatting
 - Interoperability not currently an issue and would be technical barriers in creating barriers to interoperability

Facebook/WhatsApp – Network Effects

- WhatsApp 600 million users, Facebook Messenger 250/350 million users but network effects not a barrier:
 - Fast moving sector with low switching costs, low entry barriers and strong record of new entry
 - Multi-homing is common
 - Parties do not control essential parts of network or operating system
 - Neither WhatsApp nor Facebook Messenger are pre-installed on a large base of handsets
 - Technical integration of WhatsApp and Facebook likely to be difficult
 - Already significant overlap between WhatsApp and Facebook networks
 - Between 20-60% of WhatsApp users use Facebook Messenger and 70-90% of WhatsApp users were Facebook users
 - 60-70% of Facebook Messenger users already use WhatsApp

Facebook/WhatsApp – Competitive Assessment - Social Networking Services

- Facebook is the world's largest social network provider but no horizontal overlap so issue was potential entry by WhatsApp
 - No indication of planned entry by WhatsApp
- Even assuming horizontal overlap including providers of communications services in market for networking services would greatly expand number of players to 13 or more
 - Facebook and WhatsApp are not close competitors and WhatsApp does not offer homepage feeds or timelines
 - Potential integration not an issue because not planned and in any event 70-90% of WhatsApp users already use Facebook

Facebook/WhatsApp – Competitive Assessment – On-Line Advertising

- No horizontal overlap as only Facebook active in on-line advertising (with a 20-30% share in some Member States)
 - **WhatsApp as potential provider of advertising services:**
 - WhatsApp would have to deviate from its no advertising policy and this could alienate some users
 - Even if WhatsApp introduced advertising there would still be a large number of competitors providing services that compete with Facebook including Google, YouTube, Yahoo, MSN and local providers
 - **WhatsApp as a potential source of user data valuable for advertising purposes**
 - Even if merged entity were to start collecting and using data from WhatsApp users, there will remain sufficient post-merger competition for the provision of online advertising services including Google, Apple, Amazon, eBay, Microsoft, AOL, Yahoo, Twitter, LinkedIn, Adobe and Yelp

Facebook/WhatsApp – Conclusions

- Not a surprising outcome
 - Depth of investigation suggests that complainants advanced various theories of harm with Telecom operators being strongly opposed
 - Competition between digital/non-digital economy
 - Market survey did not support Telco complaints
 - Pre-existing overlap between Facebook and WhatsApp users mitigated concerns as did dynamism of sector, absence of barriers to entry (IP/proprietary operating systems) and large number of rivals despite high market shares of the combined entity in the market for consumer communications services
 - Big Data concerns were eliminated because of large numbers of competitors (including Google) for online advertising services and data used for online advertising

Facebook/WhatsApp – The Sequel

- In December 2016 the Commission announced that it had sent a Statement of Objections to Facebook for providing misleading information during the merger investigation
 - Facebook had told the Commission that it would be unable to establish reliable automated data matching between its own and WhatsApp's user accounts
 - In August 2016 WhatsApp announced the possible linking of WhatsApp user phone numbers with Facebook user identities
 - The Hamburg Data Protection Agency said it would prevent WhatsApp from transmitting its user data to Facebook
- The Commission's concern appears to be procedural rather than substantive:
 - Even if the merged entity were to start collecting and using data from WhatsApp users, there will remain a sufficient number of alternative providers of online advertising services and a significant number of alternative data collectors so that there will continue to be a large amount of user data valuable for advertising purposes that is not controlled exclusively by Facebook

Microsoft/LinkedIn

- *Microsoft/LinkedIn*
 - Only limited overlap in on-line advertising
 - Commission examined;
 - Professional social network services
 - Customer relationship management software solutions
 - On-line advertising services
 - Professional social network services
 - Concerns that Microsoft would leverage its strong position for operating systems (Windows) and productivity software (Outlook, Word, Excel, Power Point) to strengthen LinkedIn by
 - Pre-installing LinkedIn on Windows PCs
 - Integrating LinkedIn into Microsoft office
 - Merge Microsoft's and LinkedIn's data bases
 - Denying LinkedIn's rivale access to Microsoft services/products
 - Vertical concerns similar to Google/Android investigation

Microsoft/LinkedIn – Theories of Harm

- Customer Relationship management software solutions
 - Concern that
 - Microsoft would require customers purchasing LinkedIn’s solution to also purchase Microsoft customer relationship software
 - LinkedIn’s product was not “must have”
 - Microsoft would deny rivals’ access to the full LinkedIn data base which would inhibit their ability to develop advanced customer relationship functionalities , *inter alia*, through machine learning
 - Access to LinkedIn data base not needed to compete for customer relationship solutions
- On-line advertising
 - Small overlap for display advertising and small combined share
 - No concern about concentration of the parties’ user data because such user data would continue to be available post-merger
 - No reduction in availability of user data to third parties since neither Microsoft nor LinkedIn made such data available to third parties
- Data privacy was an important competitive parameter between professional and social networks

Microsoft/LinkedIn -- Commitments

- Commitments
 - PC manufacturers and distributors free not to pre-install LinkedIn on Windows and users free to remove pre-installed LinkedIn
 - Permit competing professional social network service providers to maintain current levels of interoperability with Microsoft's office suite
 - Grant competing professional social network service providers access to Microsoft Graph which is used to build applications and services that can access personal data and emails stored in the Microsoft cloud
- Commitments amount to standard vertical commitments unrelated to Big Data concerns

French cases that did have concerns

- Two French cases involving data:
 - Denying competitors access to data
 - *GDF-Suez*: French Competition Authority imposed interim measures requiring GDF-Suez to make consumption data obtained from its customers available to rivals
 - Tying and bundling
 - *Cegedim*: Leading provider of medical information data based in France refused to sell its main data base to customers who used the software of a competitor in the adjacent market for customer relationship management

Conclusions

- To date EU cases have focused on
 - Ease of replicability (or scarcity) of data
 - Impact of scale/scope of data collection on competitive performance
 - Whether others can match or exceed any advantages conferred by the size of the merged data base
 - Presence of multiple advertising and data competitors (including Google) have eliminated concerns in merger cases
- US cases
 - *Bazaarvoice/Power Reviews* US DOJ (2014)
 - Horizontal merger between two rating and review platforms would have created near monopoly for rating and review
 - Degree of concentration aggravated by network effects and switching costs

Consumer Protection and Privacy

- In 2016, BKA initiated an inquiry into Facebook for infringement of German data protection laws
 - Failure to provide full disclosure/protection is treated as a potentially exploitative abuse but not one linked to any apparent antitrust theory of harm
 - Do digital platforms compete with respect to the degree of privacy protection offered consumers
 - If yes would dominant firms face less competitive pressure to protect privacy of subscriber data?
 - If the failure to protect privacy is an exercise of market power, could the failure to comply with data protection laws be treated as an exploitative abuse
- On 19 December 2017, BKA published its findings
 - BKA's focus on collection of user data outside Facebook
 - E.g. WhatsApp, Instagram, third-party sites and apps embedded with Facebook APIs
 - BKA found that users cannot expect data generated on external services to Facebook to be added to their Facebook account

Consumer Protection and Privacy *(cont'd)*

- Theory of harm centered on “exploitative business terms”
 - Conditioning the use of Facebook’s services on the user’s granting extensive permission to use its personal data
 - Facebook’s alleged dominant position = exploitative abuse
 - Harm to users lies in their loss of control of how their personal data are used since they are unaware as to which data from other sources are being merged
- BKA took the preliminary position that this situation is made possible by Facebook’s market power
 - “All or nothing choice” = users accept Facebook’s terms, which includes merging of their data from third-party sources, or cannot use Facebook’s service at all
 - Violates users’ constitutional right to informational self-determination

Consumer Protection and Privacy *(cont'd)*

- BKA's case appears to involve two elements
 - (i) Exploitative abuse resulting from users' "all or nothing choice" (novel theory of harm)
 - (ii) Traditional antitrust theories focusing on
 - Mass data control and "identity-based network effects"
 - The "locking-in" of users to the detriment of other social network services
 - Indispensability for advertisers
- It will be interesting to see whether the BKA can further develop pure antitrust theories of harm
 - In 2006, the Court of Justice took position that issues relating to personal data are not a matter for competition law
 - The EC reiterated that position in its Facebook/WhatsApp merger decision
 - BKA's theory using antitrust law to ensure compliance with data protection rules is difficult to justify using traditional competition law principles

ANTITRUST ISSUES WITH BIG DATA AND PLATFORMS: The UK perspective

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The concerns

- Competition concerns:
 - ❑ Collusion through algorithms
 - ❑ Dominance through big data
 - ❑ Access to essential data
- Privacy concerns
 - ❑ use of data for personalised pricing or behavioural influence
 - ❑ use of personal data unfairly
 - ❑ Privacy preventing access to essential data of dominant undertaking

The concerns *(cont'd)*

- Often queried whether competition law should be tackling privacy concerns or taking privacy as well as price into account
- In the UK, competition and privacy are institutionally linked.
 - Memorandum of Understanding between UK Financial Conduct Authority (FCA) and the Information Commissioner's Office (ICO)
 - FCA - financial services regulator also has competition law enforcement powers
 - ICO - regulator in relation to personal data protection, enforcement
 - Sharing of information with each other
 - Co-ordination of policy
 - Competition in the financial advertising sector

Actions taken to address Competition Concerns

- **UK law and policy:** UK policies aligned with the EU
- **UK competition regime:** Competition and Markets Authority (CMA) and sectoral regulators have concurrent powers to enforce competition law
 - FCA
 - ❖ Asset Management Market report
 - ❖ Market study on Investment Platforms
 - CMA
 - ❖ Study on Commercial Use of Public Information (published by CMA predecessor, the Office of Fair Trade)
 - ❖ Report on Commercial Use of Consumer Data
 - ❖ Online Comparison Tools Market Study
 - ❖ Sector reports (motor insurance, retail clothing, games apps)
 - ❖ Data Unit

Actions taken to address Competition Concerns - The new CMA Data Unit

- Appointment of Chief Data and Digital Insights Officer - Stefan Hunt (formerly founder and head of the Behavioural Economics and Data Science Unit of the FCA)
- Digital, Data & Technology Team
 - Understand how firms use data and algorithms
 - Interaction between consumer issues and data ownership
 - To build a relationship with the Information Commissioner's Office
- Fast-moving technology markets:
 - CMA will look for quicker ways to resolve concerns
- Current UK Policy
 - Annual Plan 2018/19
 - Policy priority: online and digital markets
 - Abuse of market power to detriment of consumers or other businesses
 - Algorithms and AI do not become vehicles for collusion

The Cases and matters dominating the press and CMA Activity

- Competition
 - *Streetmap v Google* [2016] EWHC 253 (Ch) (alleged abuse of dominance - unsuccessful)
 - *Unlocked v Google* [ongoing in High Court of England and Wales] (alleged abuse of dominance)
 - *Online sales of posters and frames*, CMA Case 50223 (cartel)
 - *Online auction services* (live online auction platform services), CMA Case 50408 (abuse of dominance, commitments given)
 - *Hotel Online booking*, OFT Case CE/9320-10 (alleged anti-competitive agreements, case closed)
 - MFN and across platform parity agreements; private motor insurance MFNs
- Privacy
 - Cambridge Analytics (privacy concerns; use of data)

UK Privacy and Consumer Protection

- **The General Data Protection Regulation and Data Protection Act 2018**
- **CMA commentary** on relationship between privacy and competition.
Commercial Use of Consumer data and Online Reviews
- **Unfair Commercial Practices Directive:** disclosure, competition on privacy terms
- **Modernising Consumer Markets Green Paper** by Department for Business, Energy and Industrial Strategy (BEIS). (*Consumer Protection*)
 - "Competition is central – the Government argues that it has a role to ensure that consumers are active in the marketplace and that firms compete to provide the best goods and services for the lowest price. It believes that consumers should be able to access their own data held by companies, so that they can use it to obtain better deals and that competition rules should be kept up-to-date to ensure that they are effective and actively applied."
 - "The Government will ensure the development of digital technologies to enable consumers to use their own data safely and securely to seek the most suitable product for their needs."

What does it mean to clients?

- **Necessity for increased diligence:** businesses are liable for the actions of their software/IT (pricing algorithms, data gathering tools or platforms)

"as competition enforcers, I think we need to make it very clear that companies can't escape responsibility for collusion by hiding behind a computer program" (EU Commissioner, Vestager, Bka Conference 2017)

- **Internal training:** increased monitoring duty
- **Internal systems:** implement tools that can monitor what is being communicated by algorithms.
- **Caveat advice:** legal advice should include advice that takes account of technological tools used or potentially used
- **Review and negotiation of Terms of Business of Software providers:** considerations to assist the review of Terms of Business; potential for negotiation of warranties and indemnities
- **Introduce AI ethics codes:** "Many organisations are preparing their own ethical codes of conduct for the use of AI. This work is to be commended" (UK Government, Engaging with artificial intelligence)
- **Mergers:** competition authorities may have additional considerations (market share in terms of data, user experience, privacy quality)
- **Other:** Markets and products/services change rapidly - vs payment systems

Brexit

- Prospects for divergence/continuing convergence
- Withdrawal Bill going through UK Parliament
- Withdrawal Agreement UK-EU
- Future Trade relationship
- Data flows between UK and EU
 - UK proposed Framework for Partnership
 - Role of European Court of Justice
- EU and UK competition law post-Brexit
 - Mergers - merger clearance procedures, market definitions
 - Investigations (cartels and abuse of dominance) - European law still will apply of effect on EU market
 - Substantive law
 - State aid
 - Convergence likely for the next 5 years

HIPSTER ANTITRUST IN CANADA TO BIG DATA: Fresh Challenges to Canadian Competition Law or Business as Usual?

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Populist concerns about income disparities and inclusive growth have led some to call for updating antitrust/competition law

- Criticisms of antitrust law as too focused on price and overlooking problems arising from corporate concentration.

Bank of Canada Senior Deputy Governor of the Bank of Canada echoed similar concerns in February:

- “Compelling evidence that innovation has been an important reason behind rising income inequality in advanced economies in recent decades”.
- Technology that leads to “market concentration and the rise of ‘superstar’ firms”, such as industries with network effects and scale economies.
- Barriers to entry in the digital world: those created by data from a large network or firms who use their position as gatekeepers to critical online services.
- Raised the prospect of regulation: “If user data are the primary source of monopoly rents in the digital age, how should we regulate who owns these data and how they are shared?”

BUT head of Competition Bureau is not convinced digital is different: Old wine/ new bottles

- Canadian Competition Bureau paper on Big Data and Innovation rejects the contention that a radical overhaul of competition enforcement is required for the digital economy:
 - “There is little evidence that a new approach to competition policy is needed although big data may require the use of tools and methods that are somewhat specialized and thus, may be less familiar to competition law enforcement”.
 - Firms should not be condemned merely because they are “big” or possess valuable big data.
 - But also with the evolution of big data, it is difficult to offer “categorical guidance”.

Bureau commentary on how big data could affect its analysis in three areas:

- *Mergers and monopolistic practices*
 - Bureau recognizes multiple roles of big data: both an output that is sold and priced but also an input that is neither sold nor priced.
 - Need to take into account particular traits such as platforms and network effects:
 - Network effects can generate efficiencies but also constitute a barrier to entry.
 - A firm with very low share but with access to scarce and valuable data may be found to have market power.
 - Particular non-price effects may arise with big data. Quality is a non-price dimension of competition and “it is conceivable, for example, that in some cases consumers may view privacy as an important element of quality”. E.g, the Bureau mentions a search engine that tries to differentiate itself by promising not to track users.
 - Mandating a duty to deal (e.g., provide access to data) as a remedy in a merger or conduct case should only be used in “exceptional circumstances” as it can also “chill” incentives to innovate.

TREB case: a refusal to provide access to real estate sales data by a dominant provider stifled innovation and judged to be an abuse of dominance

- privacy justification for refusal to provide access not accepted
- copyright justification also rejected
- appeal to Supreme Court of Canada: intersection of privacy and competition law may be addressed

Cartels

- Bureau rejects that computer algorithms change the analysis of whether there is a cartel: fundamental question is whether there is an agreement among competitors.
- Bureau recognizes big data may facilitate innovative ways of implementing and verifying compliance with a cartel agreement BUT it is “premature” to provide guidance on situations where competitor agreements are achieved through artificial intelligence without the intervention of humans.
- Recognizes that data tools that analyze and adjust to changes in the conduct of consumers and competitors may “soften competition” but just an extension of practices that companies used before information technology was developed.
- Conscious parallelism (i.e., where firms in an oligopoly are aware that their pricing and output decisions have a significant impact upon rivals and without an explicit agreement coordinate their behaviour as if they were engaged in collusive behaviour) is not by itself prohibited under Canadian competition law.
- But “disclosing a pricing algorithm to competitors may be construed as akin to distributing a price list to competitors and may give rise to an inference of an agreement”.

Conclusion

- The Bureau's traditional enforcement framework will continue to apply to the digital economy for now.
- Moreover, "hipster antitrust" calls for an overhaul of competition law to address income inequality and growth have not been taken up in Canada to any significant degree.

Thank you



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