

Antitrust CHRONICLE

SPECIAL EDITION

The Digital Economy - 2018 Highlights

Thomas Kramler

Massimo Motta

Randal Picker

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Kate Collyer, Hugh Mullan & Natalie Timan

January 2019

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Dear Readers,

Looking back, 2018 was a consequential year for international antitrust developments, notably in the world of the digital economy.

CPI had the unique opportunity of publishing a number of great articles authored by leading antitrust experts on the subject, ranging from issues related to antitrust risks, mergers in the digital economy, online platforms and platform competition, as well as consumer harm and multi-sided markets.

In this special edition of the CPI Antitrust Chronicle, we offer recap some of the highlights from last year focused on the challenges brought by the digital economy to antitrust and competition law on a global scale.

We are pleased to bring our readers, new and longtime, two great interviews with Thomas Kramler and Massimo Motta. In addition, this special edition features articles from international scholar, professors, attorneys, and regulators such as David S. Evans & Richard Schmalensee, Miranda Cole, Lapo Filistrucchi, Randal Picker, Terrell McSweeney, and Caron Beaton-Wells among other notable contributors.

Looking ahead to 2019 and beyond, CPI aims to continue our pursuit of providing our readers with a high-level, balanced perspective of the cutting-edge topics in today's international antitrust debates.

As always, thank you to our great panel of authors.

Sincerely,
CPI Team¹



¹ This Special Edition of the CPI Antitrust Chronicle features articles from the 2017-2018 Chronicles focused on the digital economy. CCIA sponsored some of the editions of the Chronicle featured in this collection. Sponsoring an issue of the Chronicle entails the suggestion of a specific topic or theme for discussion in a given publication. CPI determines whether the suggestion merits a dedicated conversation, as is the case with the current issue of the Chronicle. As always, CPI takes steps to ensure that the viewpoints relevant to a balanced debate are invited to participate and that the quality of our content maintains our high standards.

04 CPI TALKS... ...with Thomas Kramler *September 2018*

An interview with Thomas Kramler, Head of the Digital Single Market Task Force in the European Commission's Directorate General for Competition.

07 CPI TALKS... ...with TMassimo Motta *May 2018*

An interview with Massimo Motta, former Chief Competition Economist at the European Commission's Directorate General for Competition.

10 **GOOGLE ANDROID ANTITRUST: DOMINANCE PIVOTS AND A BUSINESS MODEL CLASH IN BRUSSELS** By Randal Picker *December 2018*

The European Commission's recent action against Google regarding the licensing terms for Android appears to undervalue results of the business model competition that has taken place in smartphone operating systems. Apple, Microsoft, and Google entered the smartphone market with different approaches: Apple vertically integrated software and hardware; Google went two-sided; and Microsoft offered fee licenses. Two of those approaches have succeeded and one has failed, but the great irony of the situation is that now that consumers have spoken, the EC seems to be pushing Google to undertake a dominance pivot and to switch to a business model that consumers rejected.

14 **THE EUROPEAN COMMISSION'S *ANDROID* DECISION AND BROADER LESSONS FOR ARTICLE 102 ENFORCEMENT** By Nicholas Banasevic *December 2018*

Against the backdrop of the ongoing debate about the appropriate role for competition policy in hi-tech markets and the suitability of its analytical tools, this article examines some of the key findings of the European Commission's July 2018 Android Decision. While it is important to delineate between what issues should be dealt with by competition law and what might be for other areas of policy, the Decision illustrates that the tools of competition law are sufficiently flexible to be able to analyse conduct in hi-tech markets in a meaningful way.

18 **TWO-SIDED RED HERRINGS** By David S. Evans & Richard Schmalensee *October 2018*

A surprising amount of debate leading up to the Supreme Court's decision in *American Express*, and the commentary following this landmark ruling, attempt to trivialize and marginalize the modern economic learning on multisided platforms. Despite these efforts the 2nd Circuit Court of Appeals and the Supreme Court ultimately embraced the economic literature on these business models. This article debunks five red herrings that have been floated in the debate: (1) the two sides are just complements, nothing new there; (2) everything is two-sided, or who's to know what's two-sided; (3) as industries mature two-sidedness goes away; (4) markets must be one sided since the services to the two sides aren't interchangeable; and (5) two-sided analysis "devastates" antitrust law. The Supreme Court's decision has raised a host of interesting issues, including how to deal with two-sided platform businesses that look different from *American Express*'s credit-card platform and what sort of evidence is necessary or sufficient in markets with platform businesses to establish competitive effects. Like any Supreme Court decision, not every word was chosen as carefully as it might have been, and clarifications will be needed going forward. The large and evolving literature on two-sided platforms will prove helpful to sort that out and we anticipate that the courts will embrace this constructive approach.

23 **THE TRAGEDY OF THE SUCCESSFUL FIRM** By Konstantinos Stylianou *September 2018*

Twenty years after the emergence of platform literature antitrust courts and authorities still face formidable challenges in deciphering platform business models. The latest two Google cases (*Google Search*, *Google Android*) highlight the schism between what firms consider an innovative business plan and what the law is ready to accept. Noting the schism, this article focuses on a number of points that European competition law needs to address to better reconcile business practice with antitrust legal analysis with the view to enable successful firms to operate without fear of punitive enforcement.

28 **PLATFORM POWER AND PRIVACY PROTECTION: A CASE FOR POLICY INNOVATION** By Caron Beaton-Wells *September 2018*

Are the goals of competition and privacy in alignment or in conflict? The antitrust-privacy interface is the subject of much academic and policy debate, particularly in the context of digital platforms. This article maps the contours and underlying values of two models for managing the interface, one of policy consistency (as manifested in Europe) and one of policy separation (as manifested in the United States). It identifies a third model, one of policy innovation (as manifested in Australia), and explains why this model has the potential to overcome limitations inherent in alternatives.

34 **TWO-SIDED VS. COMPLEMENTARY PRODUCTS**

By Lapo Filistrucchi

September 2018

In his dissenting opinion in *Ohio et al. vs American Express*, Justice Breyer seems to call for a clarification, from Filistrucchi et al. (2014) on the distinction between products sold by two-sided platforms and complementary products. The question however has been lingering also in economic circles. In fact, it has often been the case in the past years that colleagues working in different fields have (often wrongly, but not always so) commented to me that two-sided markets are like markets for complement products. Without taking any stance on whether the alleged behavior by American Express should or should not have been deemed illegal, I discuss why and to what extent two-sided platforms are different from platforms selling complement products. I also explain why the distinction is relevant in assessing firms' behavior for the purposes of competition policy.

38 **PUBLIC INTEREST JOURNALISM, THE INTERNET, AND COMPETITION FOR ADVERTISING**

By Henry Ergas, Jonathan Pincus & Sabine Schnittger

September 2018

The advent of the Internet and of new Internet-based platforms and social networks has profoundly changed the competitive landscape for traditional publishers of "public interest journalism" or, more generally, quality journalism. Consumers now have access to virtually unlimited online content, of which quality journalism is one of many options. But despite clear gains for consumers, there has been widespread concern about the long run impacts of the changes now underway on the future of the medium, and of journalism more broadly. In this article, we investigate how recent trends towards digitalization have affected the provision of public interest journalism in Australia, how they might play out in the future and the scope for public policy responses.

43 **DATA IN EU MERGER CONTROL**

By Miranda Cole

February 2018

Much has been said (and written) about "big data" as a new factor in European merger review. This focus of course begs the questions: "is this new"? A number of cases over the last 20 years in which data played a crucial role. However, increasing volumes and diversity of data collected, and increasing sophistication of the analysis of such data, have led to increased scrutiny. That said, the Commission has applied a consistent approach to reviewing data as an "input" for many years. The only really new development is its consideration of whether the use of data to improve services can be anti-competitive.

47 **DATA, INNOVATION, AND POTENTIAL COMPETITION IN DIGITAL MARKETS – LOOKING BEYOND SHORT-TERM PRICE EFFECTS IN MERGER ANALYSIS**

By Terrell McSweeney & Brian O'Dea

February 2018

Evaluating mergers in digital markets requires enforcers to consider a number of factors beyond short-term price effects. One crucial factor is the competitive significance of data and its potential role as a barrier to entry. Innovation and quality effects are also important to consider in digital markets, including those that may arise on the "free" side of two-sided platforms. Finally, enforcers should aggressively safeguard potential competition in digital markets, including pursuing cases under Section 2 of the Sherman Act where dominant digital firms seek to acquire companies with prospects for future entry that are "more than fanciful."

52 **MEASURING MARKET POWER IN MULTI-SIDED MARKETS**

By Kate Collyer, Hugh Mullan & Natalie Timan

September 2017

With the dawn of the digital age, multi-sided markets are everywhere. From booking platforms for hotels to food delivery services as well as more traditional markets such as newspapers or radio broadcasting, multi-sided markets present competition experts with a unique set of challenges when it comes to the assessment of market power. In this article, the authors explore the key features of multi-sided markets that set them apart – the role of indirect network effects, tipping and single or multi-homing – and offer some practical suggestions for the assessment of market power.

CPI TALKS

with

THOMAS KRAMLER

September 2018

Thank you, Mr. Kramler, for sharing your time for this interview with CPI.

1. Is the current antitrust framework well suited to deal with harm to innovation, especially in the context of the digital economy? Or put another way, how well do existing competition rules work in digital markets? Is there a need to adapt the rules?

The debate over whether competition law is capable of dealing with new market developments in innovative markets is as old as competition law enforcement. In 1958, when the competition provisions of the Treaty of Rome entered into force, the skateboard, and more importantly, microchips, which are today used in virtually every piece of electronic equipment, had just been invented. Evidently, the drafters of the Treaty of Rome could not have foreseen the technical developments that followed, such as the smartphone. However they wisely formulated Articles 85 and 86 of the Treaty (now 101 and 102 TFEU) in a manner that allows them to take into account technical developments and even turn them into a yardstick for the assessment of restrictions to competition under EU competition law.¹

Every market is specific. The basic tools of European competition law (Articles 101 and 102 TFEU) have been crafted in a “technology neutral” way and can be applied to “new” or “old” markets alike. The European Court of Justice confirmed in *Telia Sonera*² that the application of EU competition rules cannot depend on whether the market concerned has already reached a certain level of maturity and that particularly in rapidly growing markets, quick intervention may be warranted to prevent harm to competition.

The history of EU competition law enforcement since 1958 shows that the basic EU competition rules are flexible enough to address technological developments. This is well illustrated by the examples of the *IBM* abuse of dominance case on mainframe interface information in the 1980s, which was settled in 1984, and the *Microsoft* interoperability abuse of dominance case, which was decided two decades later in 2004. Both cases addressed technological challenges of their time (mainframe and work group server interoperability) within the legal framework set out by the Treaty of Rome in 1958.

In the *Microsoft* case, the question of whether its refusal to supply interoperability information limited technical development, i.e., innovation by competitors in work group servers, was actually at the heart of the case and addressed extensively in the Commission’s 2004 decision and the 2007 Court judgment. The case, which led to the emergence of an innovative open source competitor to Microsoft in the work group server operating system market, shows that EU competition law can effectively be applied to cases which concern innovation in technology markets.

EU competition rules as well as their application by the EU courts have therefore proved flexible enough to address technological developments. This does not, however, mean that antitrust enforcers should be complacent about new market developments. On the contrary: in order to remain relevant, the established enforcement principles need to be applied in the context of market realities and, where necessary, adapted in the light of these realities. Market features of digital markets, such

¹ See the references to the “promotion of technical progress” in Article 101(3) TFEU and to “limiting the technical development to the prejudice of consumers” in Article 102 (b) TFEU.

² See C52/09, *TeliaSonera Sverige*, para. 108.

as the growing importance of data and network effects and the provision of “free” services to consumers in two sided digital platform markets, can and must be factored into the assessment of conduct under EU competition law. The Commission’s *Google Shopping* and *Google Android* decisions of 2017 and 2018 demonstrate this.

2. Do you think that the transatlantic antitrust differences, if any, will grow even more in light of the digital economy?

One should not overstate transatlantic differences when it comes to competition law enforcement. The overall goal, which is to protect competition in the interest of consumers, is shared across the Atlantic and there is a lot of very close cooperation between U.S. and EU enforcers and convergence in their approaches and outcomes for the vast majority of cases.

However, when it comes to monopolization/abuse of dominance cases, one has to acknowledge that the law on both sides of the Atlantic is somewhat different. Enforcement priorities might also differ, including in digital markets, and first and foremost, market conditions may be different. This can lead to different assessments of the need to intervene in certain markets.

The EU approach towards the actions of companies with considerable market power has, over time, been more skeptical than the U.S. approach.

More generally, I would say that the EU approach towards the actions of companies with considerable market power has, over time, been more skeptical than the U.S. approach. This is also reflected in EU case law, which refers to the “special responsibility” of a dominant undertaking not to allow its behavior to impair genuine, undistorted competition.³

3. Does the consumer welfare standard need to be changed to incorporate public policy considerations in light of the digital economy?

I would say that a consumer welfare standard interpreted in a way that takes into account not only price effects but also effects on competition in relation to other parameters, such as product quality and innovation, can fully cater for the challenges of the digital economy in terms of competition law enforcement.

Not to focus solely on price effects will be particularly important in two-sided digital platform markets where sometimes only one side pays and the other side is provided with a “free” service.

In such markets one should not readily assume that the side which receives the “free” service cannot be harmed through anti-competitive behavior in the absence of higher prices. Harm can also result from fewer available choices, a deterioration of product quality or an impact on distribution or product innovation. In this respect, the EU courts have held that in two-sided markets, where the customers in those markets are not substantially the same, the restrictive effects of a measure in one market cannot be compensated by advantages for the other side, if the measure does not have any appreciable objective advantages for the first side.⁴ In other words both sides need to benefit from the efficiencies of the measure in order to make it compatible with EU competition law.

A consumer welfare standard which takes into account factors such as impact on choice and innovation appears to be well suited for digital markets where many services are offered free of charge to consumers. On the other hand, EU competition rules appear less well suited to pursue policy objectives that go beyond ensuring undistorted competition to the benefit of consumers.

4. The OECD is studying whether the competition toolkit should be adapted to the digital economy. What are your views on this topic?

The work being done by the OECD on the toolkit is very much in line with the reflections and studies carried out on digital markets by many competition authorities around the world. Recently Commissioner Vestager decided to set up a panel of advisers from outside the Commission. Their objective is to seek input on what the key upcoming digital developments are that will affect markets and consumers, and on their implications for EU competition policy.

The panel is made up of Professors Heike Schweitzer, Jacques Crémer, and Assistant Professor Yves-Alexandre de Montjoye. They are working on a report on the future challenges of digitization for EU competition policy, to be delivered by March 31, 2019.

The Commission will also organize a conference on January 17, 2019 to discuss the topic with a broad variety of contributors. Additionally, the Commission is seeking contributions in particular from those stakeholders that are involved in or affected by the digitization of the economy.⁵ The conference and the report from the Special Advisers are designed to provide input to the Commission’s ongoing reflection process and to identify the key upcoming digital challenges and their implications for EU competition policy.

³ See C413/14 P, *Intel*, para. 135.

⁴ See C382/12 P, *MasterCard*, para. 242.

5. How do you view the pressure on competition rules to increasingly absorb public policy objectives like privacy or data protection?

Competition rules and data or consumer protection rules are complements and not substitutes. The objective of increasing consumer welfare overlaps, but different tools are deployed. It would be a disservice to competition law enforcement if one were to expect that its tools can solve privacy or consumer protection issues meant to be tackled through the enforcement of laws specifically designed for that purpose.

Instead of overburdening competition law enforcement with pursuing policy objectives it was not meant to cope with in the first place, it would be wiser to rely on the cooperation of competition law enforcers with data and consumer protection authorities in order to ensure the complementarity of enforcement activities in digital markets.

6. Which of the many debates around relatively novel issues (like algorithmic collusion, privacy as a parameter of competition, etc.) would you consider as most relevant?

One should be careful with predictions, especially about the future. However, one trend that is likely to impact competition law enforcement is the use of Artificial Intelligence (“AI”) by companies in order to adapt pricing or products. As AI needs (big) data to properly work, it is possible that disputes will arise between companies about access to valuable data, or companies may merge in order to get access to such data. In these cases, the assessment under competition rules would likely need to examine the competitive value of data, which is not without challenges for competition law enforcers. ■

5 More information is available at <http://ec.europa.eu/competition/scp19/>.

CPI TALKS

with

MASSIMO MOTTA

May 2018

Thank you, Professor Motta, for sharing your time for this interview with CPI.

1. How can economics best help inform digital platform market definition when users do not pay obvious prices?¹

It is true that in markets where users do not pay a price (at least, explicitly) we cannot make use of such information as, say, cross-price elasticities and price correlations, and more generally an immediate application of the SSNIP test may not be possible: how can you ask whether a 5-10 percent increase of a hypothetical monopolist would be profitable, if the price is zero to start with? Nonetheless, one may ask similar questions. For instance, would a significant increase of the space occupied by (or the time we have to devote to watch) publicity in a website lead a small or large proportion of users to leave? And one may get a good feeling of possible competitive constraints by other products by investigating how users would behave if the product at issue were not available to them any longer – the kind of questions that customer surveys routinely ask when investigating market definitions in more standard industries.

In some digital markets there is not only the difficulty that users do not pay prices – at least, “traditional” prices – on one side of the market (but recall that there typically is another side of the market where merchants and advertisers do pay a price, and hence the usual tools can be applied) but also that the market is in continuous evolution, with new services and new technologies being developed.

For instance, in the *Facebook/Whatsapp* merger, the European Commission had to define the relevant markets when the services at issue were changing very fast. In particular, they had to un-

derstand the degree of substitutability between communication apps (such as Whatsapp) with telephone services (text messages, phone calls) on one side, and with social networking services on the other. To do so, they engaged in a detailed analysis of the services being offered, of the costs (if any) that customers had to incur in using those services, and the type of “experience” that users would have. All of this analysis was carried out at a qualitative level, and it is difficult to see how one could apply the SSNIP test in a direct way there, since Whatsapp (and most communication apps) at the time were neither charging prices nor using advertising.

However, sometimes there might be unexpected events that may help an authority make some more quantitative assessments of the substitutability among products. For instance, one day WhatsApp had a widespread four-hour service unexpected outage, and what users did in such circumstances may turn out to give hints at how they look at different products. In that particular case, the European Commission found that in the following 24 hours, competing communications apps (such as Telegram and LINE) gained millions of new users, information which was used to suggest low switching costs for users and low entry barriers. But had the data been readily available, the EC might have looked at how during those four hours users switched – if at all – also to traditional telephone services or to communication through social networks, to obtain some quantification of the substitutability between communication apps and alternative services. The message is that one can try to exploit exogenous events like the one which occurred to Whatsapp to identify to what extent customers switch to other services, and which ones...

¹ Thank you to Elisa Mariscal and John M. Newman for contributing questions to CPI.

2. Should competition authorities think differently about transaction platforms (like Visa) and non-transaction platforms like Google Search, Facebook, etc.? If so, how?

Probably I missed something, but I do not see any obvious difference between so-called transaction and non-transaction platforms. In both cases, they are two-sided markets, and I am not sure why a direct transaction between one side (e.g. the merchant) and the other (e.g. the card user) should make a difference. Perhaps in the case of transaction platforms it is easier and more transparent to see that there is a connection between the two sides, while in non-transaction platforms the connection is less obvious, but in both cases competition authorities should be equally aware of the interactions between the two sides when carrying out the economic analysis of the case.

Of course there are also lots of other differences between more traditional transaction platforms and other digital platforms, from the much more pervasive role of data to the fact that digital platforms may have the potential to expand to adjacent services, to the rapidity of technological changes, but this is another story...

3. Companies can use personal data in different ways. It can function as the medium of exchange, much like currency. But it can also be used as an input to improve product quality, making it unlike currency. How does that impact your thinking on data-centric digital markets?

To a large extent, I would regard data as an asset. And like most other assets it can be traded, and can also be used to improve quality of products and services. Of course the fact that data often include sensitive and personal information does matter, and has important privacy implications. Also, the sheer amount of data collected by digital platforms is new and allow firms to engage in practices which would have been unthinkable a few years ago. In most cases, availability of data will probably lead to better and more targeted products and services, in others they may lead to competition concerns.

But still, data and information have always been available and have raised competition issues in the past as well. Consider for instance the French Competition Authority which ordered energy giant GDF-Suez to grant access to data it collected while it was a public monopolist. Firms in traditional markets also collect and value data about customers, and this can give them an edge over rivals. And such information may also allow a company to engage in principle in personalized price discrimination: if you have a long history about your customers you may anticipate how they would react to price changes, for instance, or

know if they are valuable enough to try to win them back when they are approached by a competitor. Data also were at the heart of the Nielsen case in Canada: Nielsen was dominant and had exclusive contracts for scanner data with all the major supermarkets in the country, thereby making it very hard for competitors to challenge its position.

And in the recent discussion about data portability, some digital platforms argue that they would have intellectual property rights on the data they have collected and organized. In some cases there may be some truth in this, but I also see a parallel with the well-known *IMS Health* case, where at issue there was that company's copyright on how to organize a database. And in my opinion IMS's "brick structure" success was due less to its investments and much more to the fact that since it was the first company to offer data, everyone in the industry wanted to organize data in the same way...

4. Are digital platform markets characterized by stable market power, Schumpeterian creative destruction, or something in between?

Like for any other market, I do not think one can generalize. In some cases it may be possible to contest the dominant platforms, and – who knows? – what seems today an unassailable position may one day vanish because of a new firm with some brilliant technology we cannot imagine right now. But in general I do not believe that "competition is just one click away." The suggestion that Google, Facebook, Amazon may be inherently fragile giants, and that any small start-up today may likely replace them tomorrow, is a myth. These giant platforms can count, among other things, on powerful network effects, a huge data endowment, and deep pockets that protect their leadership. (And sometimes not even huge rivals can do much against them, think of Microsoft's vain attempts to challenge Google search market dominance).

It also worries me that, even if there were challengers which may in principle overcome those disadvantages, dominant platforms might take actions aimed at making sure that this will not happen. I am thinking of all the takeovers that these companies have been making in recent years: as soon as some small companies come up with some good technology and business ideas that might conceivably develop into something bigger and potentially dangerous, it will be swallowed up. Think of Google buying Waze, or Facebook buying Instagram and Whatsapp, for instance, but there have been dozens of such takeovers in recent years. Sure enough, there often is a trade-off in such mergers, since they may result in synergies (a small firm with a great tech-

nology but poor financial assets and marketing resources may never find the route to market without teaming up with a bigger firm), and may incentivize innovations (a start-up may expect monetization of its efforts come from being taken over). But still, it seems to me that antitrust authorities should become more daring and have a much closer look at some of these mergers. I am aware that so far, it is considered very hard to challenge a merger on the basis of potential competition, but the standards for using a potential competition theory of harm should be reconsidered if we do not want potential competitors to be eliminated before they can threaten dominant platforms. (And they could still be bought by larger companies, just not the one whose market they are more likely to threaten, as it was the case for Waze in digital maps and Instagram in social networks...)

And talking about actions which may thwart competitors, platforms may also engage in abusive conduct, and for this reason it is crucial that antitrust authorities keep vigilant. Let us also recall, for instance, that the European Commission has already fined Google in the *Shopping* case (Google appealed), and has been investigating its Android and AdSense practices.

5. Do you view a substantive difference in the approach to analyzing platforms from the U.S. and European perspective, or is this mostly driven by particular market circumstances and structure?

I think that the U.S. and European authorities somehow have a different attitude in general, not only with respect to digital platforms. Whether it is because of the impact of different “philosophical” backgrounds (the Chicago School in the U.S., the Ordo-liberal School in Europe), different objective market conditions (it may be more justified to rely on market forces in the U.S., where entry is easier and financial markets work better), or different institutional settings (the U.S. agencies need to convince the judges if they want to challenge a merger or stop a certain practice, and they may not go ahead with a case because they expect courts to be conservative), the European Commission has a more pro-active approach on abuse of dominance (or unilateral conduct) cases. As you know there have been many voices in the U.S. calling for a less “laissez-faire” approach (in particular, some think that lax antitrust policy may have contributed to growing market concentration), but for the time being the differences are there to stay. Just one last (probably

6. Professor Motta, if there are any topics or issues that you would like to specifically discuss or address, you can do so here.

obvious) thought: many potential issues related to digital platforms are not necessarily competition issues. So, when we worry about Google, Facebook & Co. having “too much” personal information about us or being potentially able to use their large datasets so as to bias political choices, we should not forget that it is mainly for data protection agencies or other regulators to intervene. And the same is true for other platforms such as Uber, AirBnB etc.: often they raise labor, fiscal, or local regulation issues which may be more for regulators or (local or national) governments than for competition authorities. ■

GOOGLE ANDROID ANTITRUST: DOMINANCE PIVOTS AND A BUSINESS MODEL CLASH IN BRUSSELS

By Randal Picker¹

December 2018

I. INTRODUCTION

On July 18, 2018, the European Commission announced a new €4.34 billion fine over Android and ordered Google to change how it licenses Android software.² This is the second Commission fine for Google in roughly a year — the other was over Google's comparison shopping service and that fine was €2.42 billion.³ You can connect those two points with a line and Google can't like what that looks like.

This is an exercise in platform engineering by European anti-trust authorities. The new decision makes a statement about acceptable entry paths for firms dominant in one market by demanding that a successful firm pivot away from the practices that consumers have found valuable and that indeed led in the first place to the emergence of dominance in the new second market. Call this a “dominance pivot.” Yes, consumers like your product and indeed preferred it over the competition, now change that product to make it look much more like the product that consumers have already rejected.

Google offered a new business model for operating system software for mobile devices and the Commission didn't like the way it might extend Google's dominant position in desktop search into mobile. There is an element of truth there, but in requiring a dominance pivot, the Commission appears to undervalue the virtues of business model competition at least based on what we have seen from the choices that consumers actually made.

II. A SHORT HISTORY OF THE EC'S PURSUIT OF GOOGLE

It is worth retracing briefly what has happened here. On November 30, 2010, the Commission announced that it had opened an antitrust investigation to assess whether Google was abusing a dominant position in online search. In its press release, the Commission set out quickly how Google worked — organic search results matched with advertisements above and to the right of those — and that it was receiving complaints by Google competitors that it was favoring its own services compared with those of its competitors.⁴

On May 21, 2012, then DG Competition head Joaquín Almunia gave a speech in which he offered an update and said that the pending investigation was focusing on the concern that Google was preferring its own vertical search services against those of competitors like Yelp.⁵ In that framing, Google's core business was organic horizontal search results that were matched with ads paid for by third parties. This of course is the classic business model of media markets offering consumers content, sometimes for a fee, sometimes for free, and charging advertisers to reach those consumers. An eyeballs business.

So-called vertical search competitors had entered to offer specialized search results. In many cases, this wasn't just about organizing Web content in a different or more selected way but instead about building business models that produced new content. Google's original business was one of copying websites, building an index, and figuring out how to rank webpages in response to search queries, but it wasn't actually creating new content and instead was just offering a path through the internet. Yelp and other vertical sites pushed consumers to create new information rather than just relying on preexisting information available somewhere on the internet.

But the original case would narrow to a fight over comparison shopping services and after a series of proposed settlements by Google, on April 15, 2015, the Commission sent a statement of objections to Google regarding comparison shopping and also announced that it had opened a separate investigation into Google's licensing practices for Android.⁶ On June 6, 2017, the Commission announced that it had fined Google €2.42 billion

¹ James Parker Hall Distinguished Service Professor of Law, The University of Chicago Law School.

² European Commission, Antitrust: Commission fines Google €4.34 billion for illegal practices regarding Android mobile devices to strengthen dominance of Google's search engine, July 18, 2018 (online at http://europa.eu/rapid/press-release_IP-18-4581_en.htm).

³ European Commission, Antitrust: Commission fines Google €2.42 billion for abusing dominance as search engine by giving illegal advantage to own comparison shopping service, June 27, 2017 (online at http://europa.eu/rapid/press-release_IP-17-1784_en.htm).

⁴ European Commission, Antitrust: Commission probes allegations of antitrust violations by Google, November 30, 2010 (online at http://europa.eu/rapid/press-release_IP-10-1624_en.htm?locale=en).

⁵ Joaquín Almunia, Vice President of the European Commission, Competition Policy, Statement of VP Almunia on the Google antitrust investigation, May 21, 2012 (online at http://europa.eu/rapid/press-release_SPEECH-12-372_en.htm).

⁶ European Commission, Antitrust: Commission sends Statement of Objections to Google on comparison shopping service; opens separate formal investigation on Android, April 15, 2015 (online at http://europa.eu/rapid/press-release_IP-15-4780_en.htm).

for abusing its dominant position in search and ordered Google to fix the underlying competition problem by applying to Google's own comparison shopping service to the same rules it applied to third-party comparison shopping services.

It would take the Commission the better part of another six months to release the actual decision — it arrived on December 18, 2017, just in time for Christmas — and the released decision was heavily redacted and therefore ideal for readers who found it really valuable to read bits and pieces of economic and legal reasoning largely shorn of the factual basis for the conclusions.

Google moved to implement that remedy by providing that other firms would have a chance to bid in auctions to run the comparison shopping advertisements. That was a natural response to the Commission's call for neutrality between Google's shopping service and those of its competitors. After all, as the Commission made clear in its original November 2010 press release, the top space on a Google search result has typically been filled with advertising. That is where Google has made money for returning the organic search results down the page. It is hard to imagine that Google's competitors would get free access to Google's advertising slots, though in a letter dated November 22, 2018 directed to Commissioner Margrethe Vestager that seems to be exactly what they are seeking.⁷ Google has appealed the Commission's decision. And press reports in mid-November 2018 indicated that the Commission was perhaps nearing the end of a third investigation of Google relating to its rules regarding Google AdSense.

III. GOOGLE'S LICENSING OF ANDROID

Eight years in, Google now faces three fronts in Europe. It has appealed the July 2018 Android ruling, though for the public that ruling still sits in limbo as no public version of the decision has yet been issued. The press release and related speeches are all we have to go on at this point.

In the Android case, the Commission found that Google had impermissibly tied its Google Play store to the Google search app and to its Chrome browser. Android is a mix of open-source software and proprietary software owned by Google. That means that parts of the Android software are available for use by anyone and a firm could produce its own version — or flavor if you like — of Android, but other parts are controlled by Google.

The Google Play store belongs to Google and the Commission concluded that it had become dominant among competing Android stores. The EC doesn't bar dominance as such, but a dominant firm is barred from abusing that position and the EC tries to police that line actively. The Commission found that Google insisted that Android handset makers pre-install the Google Search app and Chrome in order to get Google Play. That might not matter really if Google Play were just one choice among Android app stores, but handset makers wanted Google Play given its strong position in the Android store market. Insisting that handset firms take the Google Search App and Chrome with Google Play seems like a straightforward example of tying and that was what the EC found problematic.

Second, the Commission found that Google had made payments to device manufacturers and mobile network operators to preinstall Google search as their exclusive search app across all of their Android devices. And third, handset manufacturers who wanted to install Google Play and Google search had to agree that they would not develop devices running an Android fork. That is not an Internet of Things eating utensil but rather a competing flavor of Android. The open source parts of Android are available to be used by others to produce their own operating systems and a fork does just that. That is not a purely hypothetical notion as Amazon built an Android fork, as Commissioner Vestager noted in her statement announcing the EC's Android fine.

I am going to focus my attention here on the tying claim. Exclusive dealing is an old idea in antitrust. It can have virtues or vices, and I don't think that I have something new to say about it here, though one could easily imagine why a firm with Google's market share should be especially cautious, as a matter of practical antitrust, in negotiating for exclusive arrangements. And the same might be said for the anti-forking or anti-fragmentation clause. That clause seemed to limit the number of potential competitors in possible versions of the Android operating system. Antitrust officials aren't likely to respond well to that type of clause even if it is true that forking — or fragmentation — matters in how Android competes with iOS.

IV. BUSINESS MODEL COMPETITION IN SMARTPHONE OPERATING SYSTEMS

Focus instead on the tying claim and start with a little history. In mid-2005, Google acquired Android with the vision of launching a new software ecosystem for smartphones. In 2007, based on worldwide sales, Nokia's Symbian operating system had 63.5 percent of the market; Microsoft Windows Mobile, 12

7 Letter of November 22, 2018 to Commissioner Vestager (online at http://www.foundem.co.uk/Comparison_Shopping_Open_Letter_Commissioner_Vestager_Nov_2018.pdf).

percent; and RIM's Blackberry, 9.6 percent.⁸ Apple introduced the iPhone in January 2007 to rave reviews but you couldn't buy it until later that year.

Both Microsoft and Google faced competitive challenges as the new smartphones threatened to diminish the importance of personal computers. Microsoft had dominated the market for PC operating systems but it had not done that with smartphones. Google had dominated the PC Internet search market, but would that position be at risk if everyone switched to smartphones?

Android was Google's response to the new competitive threat. Google had zero experience in smartphones and there is no obvious reason that it would achieve success in this new market. But by 2018, Android would come to hold roughly 80 percent of the market worldwide with most of the rest belonging to Apple. Microsoft, Nokia and RIM have basically vanished.

Google's plan when it launched Android was to build a new software ecosystem around it and to give away Android for free. Google helped to form the Open Handset Alliance, initially a group of 34 handset manufacturers, phone system operators and others to jumpstart development around Android.

But how would Google make money from Android? Microsoft charged users or PC makers for MS-DOS and Windows and that was the plan for smartphones as well. Apple sold the iPhone and iOS came bundled with it. The app store for the iPhone didn't come until July 2008. Google was entering a new market, a market that Google believed could be disruptive of its position in search. It could charge a fee to license Android but that would almost certainly have reduced the uptake of Android as Microsoft was playing exactly the same strategy and was ahead.

Google undoubtedly wanted to support Android through its advertising business as that was its great competitive advantage. Embedding Google search in Android is the natural way to do that. It meant that Android would come with a third-party payment mechanism built in and it meant that the price of Android handsets would presumably be lower given that the Android software itself would be free.

This is really the point of business model competition. Apple was being Apple: vertically-integrated hardware and software. Did that with the Macintosh, did that with the iPhone. Microsoft was being Microsoft: it had dominated the OS market for the open IBM PC architecture and it hoped to do exactly that

for mobile phones. There would be lots of handset makers, just as there were PC makers and Microsoft would make money off of phone OSs. Google was offering a different business model: lots of handset makers and advertising-supported software. This is very much a two-sided markets approach, though again one that looks very much like that used by traditional media companies. The competition between Microsoft and Google was precisely over which way of paying for phone OS software would win.

V. THE DOMINANCE PIVOT

Did the European Commission really want to force Google to enter the mobile OS software market by insisting that Google charge a cash fee for that software? That would have restricted the business model competition in mobile operating systems and would have forced Google to adopt a business model that consumers rejected when offered a choice of the Microsoft approach to mobile OSs.

The reasoning here would be that the EC could have thought that it was sensible to block competitive choices in mobile OSs if that somehow limited Google's ability to extend its position in desktop search into mobile. Sacrifice competition in one market to benefit competition in a second market. That approach isn't unthinkable, though it would seem to require an exquisite sense of knowing what was going to happen in the mobile OS competition.

But the EC didn't do that. Instead, the takeaway at this point — and recall that like the rest of the public, I haven't actually read the actual case analysis yet — is the EC thought that Google's initial entry choice in mobile OSs was acceptable and instead the problem was that Google didn't switch its original business model at the point that Google Play became dominant. That is what I am calling a dominance pivot, a demand that a dominant firm switch strategies at the point that they achieve dominance.

Switch to what? Switch presumably to the business model that consumers had rejected when they chose Android over Microsoft and also over Apple. As that sentence suggests, there are many moving pieces here. Apple has almost always had elegant hardware and software, but it was expensive. Microsoft has always charged for software. Google's vision for Android was a phone that was, at least in part, advertising supported. Different consumers presumably would make the choice that worked best for them, and it was in that framework that the original business model for Android succeeded.

8 Gartner Says Worldwide Smartphone Sales Reached Its Lowest Growth Rate With 3.7 Per Cent Increase in Fourth Quarter of 2008, March 11, 2009 (online at <https://www.gartner.com/newsroom/id/910112>).

Notwithstanding the wonder of the internet with instantly downloadable software, the behavior of the best situated people in the mobile OS industry suggests that pre-installation of software matters. Google pays Apple *billions* of dollars to get its software pre-installed on iPhones. If default settings didn't matter, Google would keep all of that money in Mountain View instead of shipping it by the truckload to Cupertino. The internet isn't slow but human beings are slow to make change and that makes default starting positions valuable and sticky. And the Commission itself noted in its press release that 75 percent of search queries on Windows Mobile devices are made using Bing. (One of course could imagine that the universe of Windows Mobile users might be restricted to people living in Redmond, WA, so this presumably is very much a self-selected group of users.)

If the EC forced Google to walk away from its original business model for mobile based on tying and instead switch to a framework in which Google would now have to buy carriage of its search products from Android handset makers just like it does from Apple, that would almost certainly change the economics of Android for Google. As I suggested in a blog post after the fine was announced, the natural response for Google would be to charge for Google Play to rebalance the funds flows of Android software. And of course, Google has announced that it plans to do just that.

VI. WHAT IS AT STAKE HERE?

I don't think that the Android case is really about the distribution of Google search on mobile devices or Google's eventual market position there. Had Google been blocked from tying search to Google Play, I think that there is every reason to think that Google search products would have been the default install on most Android handsets. Why? For the same reason that DuckDuckGo is not the default search engine on Apple's iOS. Google has no mechanism to force Apple to preinstall Google apps and services. Apple effectively auctions off distribution and Google wins those auctions because it does the best job of monetizing search.

The difference then isn't whether Google apps and services would have ended up on Android handsets. The difference is in how we organize the cash flows and the type of mobile OS competition that would have taken place. Google may well have had to buy distribution of its search app. While the European Commission seems to believe that Google has done just fine with just the revenues from the Google Play store, I have no idea whether that is right but there certainly was little reason to believe that upfront when it launched Android.

That suggests that the natural alternative for Google if it was going to have to buy distribution on Android handsets was full-blown vertical integration à la Apple or to charge a licensing fee for the Android software à la Microsoft. Vertical integration might have reduced handset competition — there are no competing iOS handsets — but even if not — if the alternative to iOS were again an “openish” IBM PC style platform — there still would have been the upfront licensing fees for the mobile OS software.

What the Commission seems to want is to force Google to buy distribution for search as it does on iOS and to charge a cash fee for Android. I understand why the Commission is concerned about Google extending its desktop position on search into mobile, but, as I have suggested, I think that was going to happen one way or the other. I don't think that the Commission can change that without more direct intervention.

But the real question is why would the Commission want to restrict competition to cash payments for mobile OSs? I get why Microsoft would want that, as they don't run an advertising-based business model. But consumers were actually presented with the choice of a fee-based OS handset — Windows mobile — and Android and obviously chose the latter.

Condemning the original Google business model here would be a mistake for the reasons already suggested. And forcing a business model pivot at this point will lead to lots of euros moving around — Google buying distribution and handset makers paying to license Android — without, at this point, any obvious change in actual competition or even here the net flow of funds between Google and handset makers. We've seen lots of empty remedies in antitrust — Microsoft MS-DOS in the U.S. in 1994, Windows Media Player in Europe in 2004 and the browser choice screen in Europe in 2009 — and the natural question is why this won't just be more of the same? ■

THE EUROPEAN COMMISSION'S *ANDROID* DECISION AND BROADER LESSONS FOR ARTICLE 102 ENFORCEMENT

By Nicholas Banasevic ¹

December 2018

I. INTRODUCTION

The aim of this article is to analyze some of the main issues that arose in the European Commission's recently adopted *Google Android* Decision and to then place these in the context of a number of broader themes that continue to be hotly debated in relation to antitrust enforcement in hi-tech markets.

II. THE DECISION

A. *The Importance of Search*

The core theme of the Decision is that the different abuses all had the same aim of cementing Google's dominance in search in the mobile space. This element is of key importance. Google already had a search monopoly on desktop when mobile internet emerged in 2007. With the rapid growth of mobile internet traffic meaning that there was a new, commercially important channel where search would take place, Google saw both an opportunity and a threat to which it needed to respond. Against this backdrop, the Decision is about how Google used Android as a vehicle to extend and protect its search dominance in the mobile space (and therefore its main source of revenue, which comes from search advertising).

Android is an open-source smart mobile operating system. Google bought it in 2005 and continued to develop it thereafter under the open-source license, meaning that anyone could copy, modify, or distribute the code to create a different version of Android – a so-called “*Android fork*.” Google started providing the core version of Android commercially to smartphone and tablet manufacturers (“OEMs”) for free, but included a range of contractual requirements relating to the terms for obtaining Google's associated proprietary apps (e.g. Google's search app) and services. The free and open-source provision of Android was a key part of getting all major OEMs signed up, which led (by 2011) to Google having a dominant position with Android, the associated app store (Play Store), as well as of course in search. The case is about the harmful effects that the different commercial restrictions had on competition once Google was dominant. Contrary to the impression that some seek to paint, it does not call into question Android as such or the open-source model.

B. *Market Definition and Dominance*

A word first about market definition and dominance. Google has focused a lot of attention on the argument that in finding

both Android and the Play Store dominant, the Commission ignored the commercial constraint coming from Apple – indeed, a look at some commentaries could lead to the belief that the Commission had not looked at this issue at all. The reality is different.

As a first step, the Decision defines various markets in the standard way, including upstream markets for smart licensable operating systems and Android app stores. The findings in this regard are the same in the sense that these products are provided to OEMs in an upstream market where Apple is simply not present, since iOS and the Apple App Store are not provided commercially by Apple to OEMs. That is not to say that there is no competition between Android devices and Apple devices downstream, but that is an indirect constraint that must be analyzed in the context of the assessment of Google's dominance.

Against the backdrop of Google's 90 percent-plus market shares and the high barriers to entry in the two upstream markets, the Decision examines in detail the extent to which the downstream device competition, or to be more precise, the possibility of switching from Android devices to Apple devices, is sufficient to constrain Google's dominance upstream. It finds on the basis of a range of factors that it is not, including the fact that: (1) an operating system is only one component among others of a smart mobile device, meaning that it is only a limited, indirect factor that is taken into account by users when considering devices; (2) empirically, there is limited switching between Android and Apple devices, not least due to consumer switching costs; and (3) Apple devices are not present on the mid to low end of the downstream device market.

The Decision's overall conclusion is therefore that both Android and the Play Store are dominant products, and indeed that the Play Store in particular is a must-have product for OEMs, since consumers expect to buy smart mobile devices with an app store pre-installed.

¹ Head of Unit, Antitrust: IT, Internet and Consumer Electronics, DG Competition, European Commission. The views expressed in this article are the personal views of the author and do not necessarily represent the position of the European Commission. I am grateful for their comments and inputs to Guillaume Lorient, Brice Allibert, Max Kadar, Andrea Amelio, and Anthony Dawes.

C. The Abuses

The abuses that the Decision concludes took place were the following:

- Tying of the Google Search app to the Play Store
- Tying of Google Chrome to the Play Store and Google Search
- Payments conditional on exclusive pre-installation of Google Search
- Restrictions on OEMs selling Android forks (so called “anti-fragmentation” obligations)

1. Tying

The legal framework applied to the two tying abuses is the standard one from *Hilti*, *Tetra Pak II*, and *Microsoft*. The relevant criteria are that: (1) there is dominance in the tying product; (2) the tying and tied products are separate; (3) the tying product cannot be obtained without the tied product; and (4) there is harm to competition.

The Decision’s conclusion that there was harm to competition is in part founded on the fact that there was a significant pre-installation advantage that Google Search and Google Chrome obtained as a result of being pre-installed on virtually all Android devices through the tie. This is not a theoretical proposition but an empirical one for the products concerned.

Google argued that the fact that consumers can easily and do in practice download alternative apps meant that there could be no foreclosure and pointed to the downloads of billions of apps as supposed proof. However, Google’s figures related to all apps, and did not focus on the two products concerned – search and browser. For these products, the figures show that downloads are limited and that on devices where Google was not pre-installed (e.g. Windows smartphones), the use of Google search was significantly lower than on Android devices. Market share developments in the two products were fully consistent with the finding that pre-installation mattered, with Google Search maintaining very high market shares and Chrome growing rapidly, with the growth rates higher on mobile devices than on desktop, where Chrome was of course not pre-installed because of any tie by Google.

One argument that Google brought in relation to this point was that any superior market performance from Google’s products was due to their superior quality and consumers’ preferences (Google made this claim for the other abuses as well). It is a familiar refrain from companies that have abused their dominance that their products are better than those of their rivals

and so would have won out anyway – this begs the question of if this were indeed the case, why the need for the restriction in the first place?

In terms of claimed efficiencies, Google argued that Android had brought significant benefits to the mobile ecosystem by providing the market with a free and popular product that was the only effective counterweight to Apple, and that the ties of Search and Chrome were indispensable for Android to be brought to market. Google’s claim essentially amounted to arguing that the tie was indispensable for Android and the Play Store to be provided at all – i.e. that the only way that it could be provided was if search (advertising) revenues could be guaranteed through search and browser tying. As a general proposition, it is very difficult to envisage that the least restrictive way that Google could obtain search revenues on mobile was through tying.

In terms of the legal framework, Google argued that by focusing only on one side of the market (i.e. harm to competition in search and browser via the tie), the Commission was ignoring the broader benefits on the other side(s) of the market (operating systems and app stores). This has echoes of arguments that have been made in the U.S. in the *American Express* case. Under EU competition law, the legal framework is clear and while it allows for the assessment of any benefits that would arise from the conduct, there should first be an analysis of any harm to competition in the market concerned arising from the specific conduct at stake (tying). Then, as part of the objective justification analysis, there should be an assessment of whether the specific restrictions concerned are indispensable to achieve any benefit. In this case, that means that it was for Google to demonstrate that the least restrictive way of monetizing Android was by tying search and browser, which is a more targeted question than the more general claims that Google was making about the overall benefits of Android.³

Google did not succeed on this point. It did not provide any specific contemporaneous evidence in relation to the need for the specific tying restrictions and indeed, the Decision found that there were a number of other ways that Google was able to monetize the Android ecosystem. In particular, Google obtains billions of dollars in annual revenues through sales of apps on the Play Store (free provision of an app store and monetization through sales of apps is also the business model of other app stores) and it also obtains significant value through the Android ecosystem via the gathering and subsequent monetization of data – in other words, the argument that the tie is necessary in order to be able to invest in and develop the Android ecosystem is not borne out by the facts.

2 A similar type of analysis was carried out in the context of the European Commission’s *Qualcomm (Exclusivity payments)* case as well as in the U.S. Department of Justice *Microsoft* antitrust case.

2. Payments conditional on exclusivity

The abuse relating to revenue share payments conditional on exclusivity is closely linked to the tying abuse in the sense that while the tying was about ensuring pre-installation of Google Search and Chrome, this conduct was about ensuring *exclusive* pre-installation of Google Search. As the conduct relates to payments (of a share of search advertising revenues) conditional on exclusivity, the legal framework is based *inter alia* on that of the ECJ's 2017 *Intel* judgment. While there remains a starting presumption that such conduct is abusive, the Decision analyzed in detail its harmful effects (where Google had raised arguments that its conduct was not capable of having anti-competitive effects).

As was the case with January 2018's *Qualcomm* Decision, the *Android* Decision is a further illustration that there is no hierarchy in relation to the elements needed to demonstrate such effects – the *Android* Decision examined *inter alia* the nature and operation of the payments, their market coverage, and contemporaneous evidence from the market which clearly indicated that pre-installing a rival search engine on even one device meant the loss of the Google revenue share across the whole portfolio of an OEM's devices, and that this was a clear disincentive to pre-install rivals.

In addition, the Decision contained a quantitative as-efficient-competitor type analysis which looked at how much a rival search engine with the same revenue per search and cost parameters as Google would have had to compensate a device manufacturer or mobile network operator for the loss of the revenue share payments from Google and still make profits. Based on an analysis of what share of searches would be contestable across the portfolio of devices, the Decision found that a rival would have been unable to offer such compensation and still make profits.

3. Prohibition on OEMs selling Android forks (anti-fragmentation)

The Decision's foreclosure analysis in relation to the anti-fragmentation abuse is conceptually straightforward. As a condition of taking the Play Store, OEMs were contractually prohibited from developing or selling even a single device running on an Android fork. Such forks were a credible competitive threat to Google's Android and the restriction covered virtually the whole market. There was therefore direct foreclosure of rival open source operating systems – one illustration of this was the fact that a number of large manufacturers had been prevented from developing and selling devices based on Amazon's Android fork ("Fire OS").

Most of Google's arguments related to the objective justification for the anti-fragmentation clauses. Google's claims essentially focused on the need for a "*non-fragmented*" Android experience – it argued that only with a uniform Android experience could app developers have a predictable development platform, and that with non-compatible versions of Android, there would be a bad consumer experience since apps would crash and any such problems would be imputed to Google. Of course, one person's "*fragmentation*" is another person's "*competition*," and Google's claims from a competition standpoint are essentially tantamount to saying that there should only be one commercially successful version of Android in the market – Google's. Indeed, there is a certain irony in Android becoming commercially successful in part because of its open-source nature and Google arguing that the anti-fragmentation restrictions were necessary to minimize the negative consequences for Google resulting from greater competition from Android forks.

On the substance of Google's specific claims, Google brought no convincing evidence that any crashes would occur on devices based on Android forks (indeed, the incentives of an Android fork provider, app developers, and device manufacturers are to ensure that no such crashes occur), and even to the extent that such crashes did occur, Google had the possibility to use a variety of branding methods to ensure that consumers could differentiate between Google's Android and Android forks. It is important in this respect to remember that in terms of the remedy, the Decision does allow Google to set technical specifications for devices which pre-install Google proprietary apps, but does not allow it to prevent device manufacturers from pre-installing Android forks across their whole portfolio of devices.

4. Strategy

While each of the four conducts outlined above were found abusive in their own right, the Decision also concluded that they formed part of a single and continuous strategy with the same objective, namely to protect and strengthen Google's dominant position in search, which remains by far Google's main source of revenue (via search advertising). This is confirmed by contemporaneous evidence from Google which *inter alia* outlines that Android was viewed as a key search monetization vehicle in the mobile space, and there is a clear interplay between the four abuses.

While the tying of search and the payments conditional on exclusive pre-installation of search by definition directly relate to search, the tying of Chrome also leads to search foreclosure since a significant number of searches take place via the browser, and

3 In this respect, arguments both before and after the Decision that the Commission should "*define the counterfactual*" are somewhat misguided. The Commission did assess the counterfactual by demonstrating the competition that the tie was capable of preventing, but once it has done this and addressed any arguments that the specific clauses in question were indispensable to achieve a claimed efficiency, it is not for the Commission to speculate in very general terms what the state of the world could have otherwise been.

Google Search is the default search engine in Chrome. The anti-fragmentation abuse prevented the growth of Android forks which could have been a credible platform for other search engines. What is more, all the abuses contributed significantly to the collection of data by Google, which is a key parameter to optimize a search engine.

III. CONCLUSION

In today's rapidly evolving digital world, a key challenge for competition policy is to ensure that it remains relevant. Criticisms of competition policy nowadays come from two main, but different directions. The first is that competition policy is ill-equipped to deal with new phenomena in fast-changing hi-tech markets and hence that its tools should be changed or that other policy instruments should deal with certain issues. The second is that competition policy is too intrusive and that the market and technological change will take care of any issues, and hence that enforcement against large players in hi-tech markets will hinder them from bringing innovations to consumers.

In considering these issues, it is first important to keep in mind that competition policy is one complementary part of a broader policy toolkit. While it is designed to make markets work better and ensure that there are commercial opportunities that will bring benefits to consumers, competition enforcement cannot of course answer every problem. The first task for competition enforcers and policymakers is therefore to recognize where the boundaries of competition policy should lie and to identify what kinds of issues are for competition law to deal with and which are not – if there are general problems that can be properly identified beyond competition law, that is something to be looked at by other policy tools, such as data protection or copyright.

Once this recognition and identification have been made, the next task is to define how best to make competition intervention relevant. In this respect, I am optimistic without being complacent. Competition enforcers should always strive to improve the quality of the analytical tools and concepts that they use, but I believe that the core goals and frameworks of competition policy that have served it well for decades remain relevant today, and that the tools are flexible and can be adapted to deal with different issues and market realities.

The *Android* Decision is in my view a good example of this. While one need not slavishly adhere to precedents for the sake

of them, the legal framework under which the different abuses were considered is the same as that which was used for cases in the past, while the Decision's analysis in relation to market conditions, harm to competition, and objective justification was able to effectively take into account what some call new phenomena, such as the role of data, "free" products, or the two-sidedness of markets (although many of these phenomena are not in fact so new).

In my view therefore, the main challenge to ensure the relevance and indeed timeliness of competition enforcement is to have a common-sense vision of what is required to demonstrate the capability of a specific conduct to have harmful effects. I often have the impression that certain commentaries go to great lengths in seeking to require a standard of effects which in practice means that there would never be competition intervention against dominant companies. While I believe that demonstrating the capability of a specific conduct to have harmful effects is very important, both as a legal matter but also more broadly for the legitimacy of competition policy, in order not to drift towards a situation where there is risk of under-enforcement, it is also important to ensure that such a demonstration is practical and reasonably grounded in the realities of every specific case rather than becoming too abstract and theoretical. ■

TWO-SIDED RED HERRINGS

By David S. Evans And Richard Schmalensee ¹

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I. INTRODUCTION

The Supreme Court's recent American Express ("*AmEx*") decision has raised a host of interesting issues, including how to deal with two-sided platform businesses that look different from AmEx's credit-card platform and what sort of evidence is necessary or sufficient in markets with platform businesses to establish competitive effects.² The large and growing economics and business strategy literature on two-sided platforms, now almost two decades old,³ will be helpful in sorting out these and other issues, as the extensive citations to that literature by the District Court, Appeals Court, and Supreme Court indicate.⁴

Unfortunately, a considerable amount of the recent debate in the U.S. on how to conduct antitrust analysis of two-sided businesses has involved attempts to trivialize or marginalize the findings of the relevant economics literature. This is surprising because there have been no critical comments on the main papers in this literature, which have appeared in leading economics journals beginning in 2003. A co-author of the seminal paper on two-sided platforms was awarded the 2014 Nobel Prize in Economic Science for a body of work that included this subject.⁵ In the *AmEx* litigation, the District Court and Appeals Court both cited this literature without any criticism.

In what follows we discuss five red herrings — assertions that have been used to marginalize the role of the extensive economics learning on two-sided platforms in antitrust analysis.

II. RED HERRING 1: IT'S JUST ABOUT COMPLEMENTS, LIKE GASOLINE AND TIRES

The first red herring says that there is really nothing novel about two-sided platforms because the services on the two sides are just complements, and the courts know what to do (and not to do) with complements.⁶

In order to process transactions between merchants and cardholders, American Express must provide services to merchants and different services to cardholders, and the prices to either group will affect that group's participation on the platform and thus the attractiveness of the platform to the other group. In oral argument, Justice Breyer contended that this interdependence in demand is simply what characterizes complements, like nuts and bolts.⁷ In his dissenting opinion, he compared the different services to gasoline and tires.⁸ In an amicus brief, eight economists compared them to tennis balls and tennis racquets.⁹

This argument has no merit. It does not appear anywhere in the serious economics literature on two-sided platforms. None of the economics journals that have published the key theoretical articles have published critical responses that say that the theory of two-sided platforms is retreading well-known concepts about complements. The claim is simply wrong.

Two complements are usually both sold to the same customers; that's the reason why the price charged for one of the products affects the demand for the other. In contrast, American Express provides merchant and consumer services to members of distinct

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2 *Ohio v. American Express Co.*, 138 S.Ct. 2274 (2018). Some platforms have more than two sides, and all that we say here also applies to such multisided platforms.

3 That literature began around 2000 with circulation of working paper versions of Jean-Charles Rochet & Jean Tirole, *Platform Competition in Two-Sided Markets*, 1 J. EUR. ECON. ASS'N 4, 990-1029 (2003). Other key contributions include Jean-Charles Rochet & Jean Tirole, *Two-Sided Markets: A Progress Report*, 37 RAND J. ECON. 3, 645-667 (2006); Mark Armstrong, *Competition in Two-Sided Markets*, 37 RAND J. ECON. 3, 668-691 (2006); and E. Glen Weyl, *A Price Theory of Multi-Sided Platforms*, 100 AM. ECON. REV. 4, 1642-1672 (2010). There are no articles in serious economics journals, including the ones that published these papers, that argue that the theories described in these foundational pieces are wrong. For nontechnical surveys, see generally Marc Rysman, *The Economics of Two-Sided Markets*, 23 J. ECON. PERSPECTIVES 3, 125-143 (2009) and David S. Evans & Richard Schmalensee, *The Antitrust Analysis of Multisided Platform Businesses*, THE OXFORD HANDBOOK INT'L ANTITRUST ECON., VOL. 1 (Roger D. Blair & D. Daniel Sokol eds., 2014). The online appendix to the latter paper lists over 350 significant economics articles published through December 2012, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2185373. The Harvard Business Review has been publishing articles for managers on two-sided platforms since 2006. See Thomas Eisenmann, Geoffrey Parker & Marshall W. Van Alstyne, *Strategies for Two-Sided Markets*, 84 HARVARD BUS. REV. 92 (2006).

4 *Supra* note 2, *U.S. v. American Exp. Co.*, 88 F.Supp.3d 143, 165 (E.D. N.Y. 2015), and *U.S. v. American Exp. Co.*, 838 F.3d 179 (2d Cir. 2015).

5 Press Release, The Nobel Prize, The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 2014 (October 13, 2014), <https://www.nobelprize.org/prizes/economics/2014/press-release/>.

6 For a related discussion see Lapo Filistrucchi, *Complements vs. Two-Sided Markets*, CPI ANTITRUST CHRONICLE, (Sept. 2018).

7 *Ohio v. American Express Co.*, (No.16-1454) (Oral argument February 26, 2018) at 22-24.

8 *Ohio v. American Express Co.*, 585 U.S. 11-12 (2018) (Breyer J., dissenting).

9 Brief for John M. Connor et al. as Amici Curiae Supporting Petitioners, *Ohio v. American Express Co.*, (No. 16-1454) (hereinafter Economists' Brief) at 4.

customer groups. The price charged to one side of the AmEx platform affects demand on the other side because of indirect network effects: merchants care about how many consumers use the card, and consumers care about how many merchants accept it.

Two complements can and often are sold by different firms. Many convenience stores sell tennis balls without selling tennis racquets, and companies often specialize in selling gasoline or tires but not both. By contrast, AmEx must serve both merchants and consumers to stay in business and must do so essentially simultaneously.

Finally, two-sided businesses like AmEx always facilitate interactions between customers on both sides of the platform. But you can buy gasoline without having any interaction with anyone who bought a tire.

III. RED HERRING 2: IF ANY BUSINESS IS TWO-SIDED, SO ARE ALMOST ALL BUSINESSES

The expansive variant of this red herring says that all businesses deal with members of more than one group — retailers, for instance, deal with both suppliers and customers — and therefore antitrust defendants will claim their business is two-sided. According to Professor Sagers, one of the signers of the amicus brief by lawyers in support of the Petitioner,

... we can expect every antitrust defendant and their sister to start claiming their business is two-sided, and lower courts will find reason within the theory to give their claims the time of day. After all, even a brick-and-mortar retail store is “two-sided” in the sense that it must balance the demands of suppliers and customers.¹⁰

Katz and Sallet provide a lighter version of this red herring. They claim there is a “lack of consensus regarding the definition of a platform [and] it is much harder to distinguish single-sided businesses from multisided ones than one might initially expect[.]”¹¹ They conclude that,

given the lack of definitional consensus regarding multi-sided platforms, coupled with the prospective applicability of existing definitions to a vast range of firms, it would be a mistake for antitrust enforcement to dramatically differ based on the threshold, and easily manipulable, question of whether a defendant is classified as a multisided platform.¹²

This suggests that there is an ongoing debate about the definition of two-sidedness. But there is no such debate. We believe that most, if not all, economists who have worked in this area would consider businesses to be two-sided platforms when there are (a) indirect network effects between members of at least one of the two customer groups and members of the other group; (b) these indirect network effects are strong enough to affect business conduct; and (c) the platform facilitates interactions between members of the two groups.^{13,14} Moreover, the serious economics literature often identifies the same narrow set of businesses, defined by these characteristics, as two-sided. There are other nuances involving two-sided platforms. People who write articles in this area, including us, often include an abbreviated definition that doesn’t go into all of these characteristics, which of course doesn’t mean that they aren’t recognized.

The definition commonly used by economists is narrow enough to exclude most ordinary, one-sided businesses. Supermarkets deal with both customers and suppliers, for instance. And supermarket customers may care about the variety and quality of goods on offer, but suppliers to supermarkets generally care only about their sales, not the number or characteristics of shoppers. More critically, supermarket customers and supermarket suppliers do not interact. Anchor Steam does not know that one of us has just bought a six-pack of their beer, just that a six-pack has been sold. There may be businesses for which this definition does not yield a clear conclusion, but they seem to be rare, and detailed inquiry into the facts of real businesses will usually resolve the issue.

The vast sea of doubt and uncertainty portrayed by some com-

10 Chris Sagers, *Ohio v. American Express: Clarence Thomas Sets Sail on a Sea of Doubt, and, Mirabile Dictu, It's Still a Bad Idea*, ProMarket (June 27, 2018), <https://promarket.org/ohio-v-american-express-clarence-thomas-sets-sail-sea-doubt-mirabile-dictu-still-bad-idea/>.

11 Michael Katz & Jonathan Sallet, *Multisided Platforms and Antitrust Enforcement*, 127 THE YALE L. REV. 7, 2142-2175 (2018) at 2148.

12 *Id.* at 2152.

13 After suggesting that there is an ongoing debate, Katz & Sallet assert that a good approach for antitrust purposes “is to define a firm as a multisided platform when cross-platform network effects occur in at least one direction and the firm facilitates interactions between two or more groups of users, can set distinct prices to different user groups, and has market power with respect to these groups.” See Michael Katz & Jonathan Sallet, *Multisided Platforms and Antitrust Enforcement*, 127 THE YALE L. REV. 7, 2142-2175 (2018) at 2150. With the exception of the market power requirement this definition is, in our experience, consistent with how economists working in this area define two-sided platforms in practice. And Katz & Sallet, note 26, observe “Our inclusion of market power is meant to capture the likely circumstances in which antitrust issues arise, not to suggest that all firms with multisided business models have market power.”

14 In his dissent, Justice Breyer notes that Rochet & Tirole (2006, p. 646) also specify that if a business is a two-sided platform, the volume of transactions it manages “depends on the structure and not only the overall level of fees charged.” Like Katz & Sallet, we tend not to stress this condition, as it is an implication of indirect network effects in the absence of arbitrage between the two sides that would make it impossible for the platform actually to determine the effective price structure. As Rochet & Tirole (*id.*) put it, the structure of charges “is relevant only if the two sides do not negotiate away the corresponding usage and membership externalities.” We are not aware of evidence that platform businesses cannot use the price structure to balance demand because of arbitrage which would in any event be difficult given that platforms can often charge membership as well as transaction fees.

mentators on the definition of two-sidedness doesn't correspond to the now vast economics literature on this topic. The courts should not get sucked into a "what about" argument that makes a spurious claim that some business is two-sided — for example, "brick-and-mortar stores" — using a definition that isn't employed in the economics literature to avoid serious analysis of businesses that are likely to be two-sided based on a widely accepted definition and analytical methods.¹⁵

Justice Breyer says under the *AmEx* majority's definition, two-sided platforms are "commonplace."¹⁶ While the majority's definition is arguably less narrow than the one advanced above, the economics literature has found that many businesses are in fact two-sided, and it is widely recognized that this model has become more important as a result of the Internet and other related technologies.¹⁷ That is why two-sided platforms have attracted increasing attention among competition authorities around the world.¹⁸

We agree that some definitions of two-sidedness that have been advanced outside the economics literature are so broad as to imply that almost any business can be described as a two-sided platform. There is some merit to Justice Breyer's criticism that the definition employed by the *AmEx* majority was incomplete.¹⁹ But that's an argument for tightening up definitions in antitrust analysis, not throwing out an uncontroversial body of economics learning, and ignoring substantial cross-side effects when the facts show they are important.

IV. RED HERRING 3: TWO-SIDEDNESS IS IRRELEVANT IN MATURE MARKETS

This two-part red herring applies to mature markets with two-sided platforms, one in which all or almost all potential customers are engaged with one or more platforms. It is first argued that as a market matures, indirect network effects at the market level weaken and ultimately vanish when the market is fully mature. It is then argued that this change implies that indirect network effects at the firm level also weaken with market

maturity and vanish in fully mature markets. Thus, even if firms were two-sided platforms before their market matured, once it has matured, it is argued, the links between the demands on their two sides have vanished.

To our knowledge this two-part argument was first made in expert testimony in the *Sabre* case and was accepted by the trial court.²⁰ It was repeated in an amicus brief to the Supreme Court in the *AmEx* case.²¹ In the economics literature it has only appeared as an assertion, without theoretical or empirical support, in a three-sentence paragraph in a single article.²²

The argument that indirect network effects at the industry level generally weaken as a market matures is somewhat plausible, though we know of neither theoretical arguments nor empirical evidence that supports it. But even if it is true, it is not at all plausible that indirect network effects at the *firm* level are absent in mature markets. To see this, suppose there is a fixed number of possible participants on each side of a set of competing platforms and that all will join one or more platforms regardless of price or small changes in the number of participants on the other side of the platform. In this case, membership demand at the market level by each group is independent of the other group's demand at the margin, regardless of price, and indirect network effects at the margin are effectively absent at the market level.

Suppose further, to track the *Sabre* case, that one group of customers multi-homes by participating on all platforms (the airlines) and the other group of customers single-homes by participating on only one platform (the travel agents). The price charged by any individual platform to the single-homing group determines the extent to which travel agents join that platform versus competing platforms. That in turn determines how much the multi-homing group would pay for access to that platform. But even with perfectly fixed demand at the market level, if an *individual platform* charged travel agents too much (or subsidized them too little) it could lose all of those customers, and the airlines would have no reason to use that platform. That re-

15 Chris Sagers, *Ohio v. American Express: Clarence Thomas Sets Sail on a Sea of Doubt, and, Mirabile Dictu, It's Still a Bad Idea*, ProMarket (June 27, 2018), <https://promarket.org/ohio-v-american-express-clarence-thomas-sets-sail-sea-doubt-mirabile-dictu-still-bad-idea/>.

16 *Ohio v. American Express Co.*, 585 U.S. 17 (2018) (Breyer J., dissenting).

17 David S. Evans & Richard Schmalensee, *Matchmakers: The New Economics of Multisided Platforms* (2016); Geoffrey G. Parker, Marshall W. Van Alstyne & Sangeet Paul Choudary, *Platform Revolution: How Networked Markets Are Transforming the Economy - and How to Make Them Work for You* (2016).

18 OECD, *Rethinking Antitrust Tools for Multi-Sided Platforms* (2018), www.oecd.org/competition/rethinking-antitrust-tools-for-multi-sided-platforms.htm; Press Release, Federal Trade Commission, *FTC Announces Hearings On Competition and Consumer Protection in the 21st Century* (June 20, 2018), <https://www.ftc.gov/news-events/press-releases/2018/06/ftc-announces-hearings-competition-consumer-protection-21st>.

19 *Ohio v. American Express Co.*, 585 U.S. 15-18 (2018) (Breyer J., dissenting). Justice Breyer points out that the majority decision did not reference the point, made by Rochet & Tirole, that for a business to be two-sided the price structure must affect the overall volume of output. See Jean-Charles Rochet & Jean Tirole, *Two-Sided Markets: A Progress Report*, 37 RAND J. ECON. 3, 645-667 (2006) at 664-665. Rochet & Tirole, being aware of their own definition, refer to credit cards as two-sided platforms in this paper as well as in their seminal 2003 publication. Also, we noted above, this role of the price structure is an implication of indirect network effects in the absence of arbitrage and is therefore a consequence of a business being two-sided rather than a defining characteristic.

20 *U.S. Airways, Inc. v. Sabre Holdings Corp. et al.*, 105 F. Supp. 3d 265 (2015).

21 Economists' Brief, *supra* note 9.

22 Oz Shy, *A Short Survey of Network Economics*, 38 REV IND. ORG. 2, 119-149 (2011) at 136.

sult is consistent with the effective absence of indirect network effects at the market level because, by assumption, all airlines and all travel agents would still join one of the remaining (competing) platforms. But, in this extreme hypothetical case, there would be one less platform competing in the market.

Thus, even if indirect network effects are weak or absent at the market level because the market has matured, there is no reason to think that they are weak or absent at the level of the individual firm. Making that assumption would be very likely to lead to an erroneous evaluation of individual firm conduct.

V. RED HERRING 4: LACK OF INTERCHANGEABILITY ON TWO SIDES IMPLIES TWO SEPARATE MARKETS

In an amicus brief to the Supreme Court in the *AmEx* case, a group of antitrust law professors presented an absurd market definition for two-sided platforms, proceeded to demolish it, and argued that their demolition proved that single-sided analysis was always appropriate.²³ They began by noting that the two groups served by two-sided platforms consume different services that are often not interchangeable. The services AmEx provides to merchants are clearly not good substitutes for the services it provides to consumers. They went on to argue that it would, accordingly, make no economic sense to include both sets of services in the same market, so that services to each group must be analyzed separately.

This is a very bright red herring. Consider competition among person-to-person money transfer services. It is true that the service provided to a person who sends money is literally different from, and not interchangeable with, the service provided to a person who receives money. Defining separate markets for sending money and receiving money, however, would ignore the core business reality that suppliers compete for transactions between senders and receivers. The transactions between senders and receivers *are* substitutable across competing money transfer platforms. An increase in the price of the transaction by one platform

— almost no matter how that price is divided between the sender and receiver sides — would tend to result in an increase in demand for other platforms. Platforms that provide similar jointly consumed services are substitutes for each other, and their products are interchangeable as a matter of business reality.

Market definition should therefore focus on identifying suppliers that provide services that are interchangeable in this sense, which typically accords with business reality and sound economics.²⁴ The objective of market definition is to identify competitive constraints. Since the early 1980s the modern approach to market definition accordingly focuses on the ability of a firm or firms of interest to raise price above competitive levels.²⁵ It is not possible to make that assessment by looking at one side of a service that is consumed jointly by the two sides. The claim that one should exclude the other side of the transaction from the market because it isn't "interchangeable" is a red herring because it focuses on a service that the platform cannot provide separately and ignores the service that the platform provides jointly.

Let's be clear on why this red herring is very dangerous. Through the rhetorical sleight of hand that different sides of the transaction aren't interchangeable, we are led to exclude the other side of the jointly consumed transaction, and the business realities of jointly competing for both sides, from the analysis.²⁶ Luckily, American courts are skeptical of market definitions that do not accord with business realities as the plaintiffs found in *AmEx*.

VI. RED HERRING 5: CONSIDERING TWO-SIDEDNESS EXPLICITLY WILL DEVASTATE ANTITRUST

The colorful language is from Professor Wu.²⁷ This is as much a red herring, a distraction from substance, as the other assertions we have examined here. There is simply no reason why accounting for the business realities of two-sided platforms and relying on uncontroversial economics learning is going to do anything other than help courts and competition authorities make better decisions. If it does, modern antitrust analysis has a bigger prob-

23 Brief of 28 Professors of Antitrust Law as Amici Curiae Supporting Petitioners, *Ohio v. American Express Co.*, (No. 16-154) at 17-20. Justice Breyer seems to accept this argument: *Ohio v. American Express Co.*, 585 U.S. 15-17 (2018) (Breyer J., dissenting).

24 Thus in the *AmEx* case, we have supported defining the market as consisting of payment services provided by AmEx and competing platforms. David S. Evans & Richard Schmalensee, *Applying the Rule of Reason to Two-Sided Platform Businesses*, 26 U. MIAMI BUS. L. REV. 1, 1-15 (2018). Economists supporting Petitioners seem at times to agree with us on this point: they assert that "...the relevant competition occurs at the platform level (i.e. competition among the credit card companies)." Economists' Brief, *supra* note 9, p. 15.

25 See generally Gregory J. Werden, *The 1982 Merger Guidelines and the Ascent of the Hypothetical Monopolist Paradigm*, 71 ANTITRUST L.J. 1, 253-275 (2003); Dennis W. Carlton, *Market Definition: Use and Abuse*, 3 COMPETITION POL'Y INT'L 3 (2007); Carl Shapiro, *The 2010 Horizontal Merger Guidelines: From Hedgehog to Fox in Forty Years*, 77 ANTITRUST L.J. 49, 701-759 (2010).

26 Another approach, which may be superior in some settings not involving the provision of services that are jointly and unseverably consumed, is to define separate markets for the services to each group the platform of interest serves but to take due account of the linkages between them in analysis. The more appropriate approach depends on both the facts of the case and the question at issue. A general rule that would require defining separate markets and ignoring linkages between them, which the antitrust law professors seem to advocate, makes no economic sense.

27 Tim Wu, *The Supreme Court Devastates Antitrust Law*, The New York Times (June 26, 2018), <https://www.nytimes.com/2018/06/26/opinion/supreme-court-american-express.html>.

lem than dealing with two-sided platforms. One-sided analyses of two-sided platforms can result in false negative decisions in addition to false positive ones.²⁸

The *American Express* decision necessarily left many issues unresolved, but it has made it clear that future cases will need to take the economics of two-sided platforms seriously. This will improve the quality of antitrust decisions. Around the world there is constructive discussion on how to do that, driven by the growing importance of platform businesses and recognition that they are in fact different from traditional ones in important respects, and that modern economic learning can help competition authorities and courts properly enforce the antitrust laws for them. ■

28 David S. Evans & Richard Schmalensee, *Ignoring Two-Sided Business Reality can also Hurt Plaintiffs*, CPI ANTITRUST CHRONICLE (Apr. 2018).

THE TRAGEDY OF THE SUCCESSFUL FIRM

By Konstantinos Stylianou¹

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I. INTRODUCTION

How can a firm know with certainty which business plans are safe for it to pursue to find success? The answer is that it cannot. For all its voluminous case-law and reputation as the most active competition law enforcement jurisdiction in the world,² the EU has yet to send firms a cohesive message about the boundaries within which they can conduct themselves shielded from antitrust liability. As a result, like Odysseus caught between Scylla and Charybdis, ambitious firms are forced to choose between crippling safe choices and the risk of competition enforcement action.

Nowhere is this dilemma more pronounced than in cases involving online platforms and platforms in general, because even two decades after the emergence of the first serious body of literature on platform theory,³ novel business models still surface frequently and have yet to be fully assessed. The two recent decisions on *Google Search*⁴ and *Google Android*⁵ did little to clarify the boundaries of acceptable business conduct, and instead further entrenched the chronic fogginess of European competition law. This observation is without prejudice to the outcome of the cases. One can agree or disagree with the findings of the Commission, but it is hard not to notice the missed opportunity to provide concrete guidance on what firms, and indeed those that revolve around platform business models in particular, can do to stay outside of enforcers' hunting grounds. It is one thing to say that the tests and standards of competition law are wrong, and another to say that they are vague. The latter is arguably more pernicious because not only does vague not equal right, it also raises uncertainty.

I focus here on four areas that the European competition law apparatus must address if it is to guide innovative firms toward success without fear of undue punishment. Firstly, it must acknowledge and actually use the properties and special characteristics of platform ecosystems in its case-law reasoning. Secondly, it must either properly define or scrap the concept of special responsibility altogether. As it currently stands, the concept only serves to justify conclusions that cannot be adequately supported by a theory of abuse, without adding any substantive elements to the analysis. Thirdly, firms need to be told what abuse of dominance means in a non-circular manner (unlike current practice) so they may have a chance to steer away from it. Ideally,

the concept will be tied to terms that have discoverable and, even better, quantifiable content. Lastly, the European competition law apparatus must settle on one or more goals for competition law, and for every instance of abuse it must explain which one of these goals was infringed and in what way. The current practice that adopts one goal but in effect safeguards another is confusing and a threat to legal certainty. The two-sided nature of platform business models further complicates the attribution.

What is argued here is not the merits of European competition law standards, but rather the *lack of clarity* surrounding them. While it would be ideal to get all rules and standards right, a first step must be to attempt to at least clarify them, even if it is done in a controversial manner. The platform economy, in all its innovativeness and malleability, needs clarity more than anything else so that firms know the rules of the game and can adapt accordingly.

II. THE SYSTEMIC NATURE OF PLATFORM ECOSYSTEMS

Platform ecosystems in digital markets may present novel features or features that are uncommon in other sectors of the economy, and therefore an elevated measure of attention is required to acknowledge them. Of those, I identify two: firstly, that digital platform ecosystems are often structured as large technical systems that comprise multiple highly interconnected parts, so that changes in one part may have unanticipated consequences for other parts and the general operation of the system as a whole.⁶

Evidently, successful firms are more likely to bear this kind of sys-

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² Mike Konczal, "Meet the World's Most Feared Antitrust Enforcer," *The Nation* (February 15, 2018).

³ See Geoffrey G. Parker & Marshall W. Van Alstyne, "Inter-network Externalities and Free Information Goods," *Proceedings of the 2Nd ACM Conference on Electronic Commerce* (ACM 2000) <http://doi.acm.org/10.1145/352871.352883>; Jean-Charles Rochet and Jean Tirole, "Two-Sided Markets: A Progress Report," (2006) 37 *The RAND Journal of Economics* 645.

⁴ Case AT.39740, *Google Search (Shopping)*, June 27, 2017.

⁵ Case AT.40099, *Google Android*, July 18, 2018.

⁶ Konstantinos Stylianou, "Systemic Efficiencies in Competition Law: Evidence from the ICT Industry," (2016) 12 *Journal of Competition Law and Economics* 557, 560–562.

temic quality due to the correlation between size and complexity. For competition law purposes, it is important to acknowledge that, because of the high degree of interdependency, pervasive control over the system may be required to achieve the necessary amount of planning and coordination, otherwise the system risks collapsing under the weight of its own complexity. Sub-optimal performance of ecosystems such as *Symbian* and *i-mode* can indeed be attributed partly to the lack of central coordination.⁷ Competition law, in investigating abuse and in designing remedies, should take into account this kind of systemic quality so that it at least correctly appreciates what this control and systemic coordination is contributing, and what will be lost if the system is broken by means of antitrust enforcement.⁸

Secondly, digital platform ecosystems may present novel business models that appear *prima facie* anticompetitive, but that require a closer inspection to appreciate their necessity within the ecosystem and their contribution to the economy. This is particularly true in platform systems where certain components are offered for free and where the distribution of cost recoupment sources may change over time. Under those circumstances, tying elements together or controlling the conditions of access to certain elements helps apportion risk and cost, both of which are essential considerations for firms.⁹ The lack of such enabling arrangements will likely result in higher costs and risks for product and service development. This may be an acceptable possibility for competition law, but it is important to at least recognize the trade-off.

The *Android* case illustrates that quite well. Google's business model is one that has allowed cheaper, broader and faster innovation by giving away Android and Play for free, but cost recoupment and risk management take place by channeling users toward the revenue-generating Google Search, and by keeping users as engaged as possible in the Google ecosystem so that if value moves from one component to another, as it is to be expected in digital markets, the firm can still maintain a healthy balance between revenue-generating sources and free subsidized

activities.¹⁰ However, these justifications were not enough to convince the Commission, which requested the dismantling of that business model.

It took many years to appreciate the procompetitive justifications of vertical and even horizontal restraints as normal business practices. As Judge Easterbrook would put it "wisdom lags far behind the market."¹¹ The fact that the Commission only recently completed a sectoral inquiry on platform regulation¹² shows that we are still deciphering how platforms operate. The hope is that the Court and the Commission will make clarity in the special characteristics of platforms, as uniquely complex systems, a top priority for their immediate next steps.

III. THE SPECIAL RESPONSIBILITY OF FIRMS

Under European competition law, dominant firms have a special responsibility "not to allow their conduct to impair the genuine undistorted competition on the common market."¹³ The concept features prominently in cases that revolve around platform business models, including both *Google* cases and the *Microsoft* case.¹⁴

The core utility and appeal of the special responsibility obligation is obvious: conduct that may be innocuous when performed by a small firm can have different effects when undertaken by a dominant firm.¹⁵ The idea is that dominant firms by their very size and influence on the market already distort competition,¹⁶ and therefore should not be allowed to engage in behavior that would be otherwise acceptable for fear of further distorting competition.

Despite the initial appeal, the special responsibility obligation has proven controversial because it prevents dominant firms from competing on the same level playing field as other firms, even when that means increased efficiency, and because it punishes firms once they have achieved success for the same practice that was legal before they reached that point.¹⁷

7 Takeshi Natsuno, *The I-Mode Wireless Ecosystem* (John Wiley & Sons 2005) 68; Richard Tee & Annabelle Gawer, "Industry Architecture as a Determinant of Successful Platform Strategies: A Case Study of the i-Mode Mobile Internet Service," (2009) 6 *European Management Review* 217.

8 Richard N. Langlois, "Modularity in Technology and Organization," (2002) 49 *Journal of economic behavior & organization* 19, 26; Carliss Young Baldwin & Kim B. Clark, *Design Rules: The Power of Modularity* (MIT Press 2000) 260; Stylianou, *supra* note 6, 562–569.

9 Konstantinos Stylianou, "Exclusion in Digital Markets," (2018) 24 *Michigan Telecommunications and Technology Law Review* 181, 243–251.

10 Geoffrey Manne, "The EU's Google Android Antitrust Decision Falls Prey to the Nirvana Fallacy," (*Truth on the Market*, July 18, 2018) <https://truthonthemarket.com/2018/07/18/the-eus-google-android-antitrust-decision-falls-prey-to-the-nirvana-fallacy/>.

11 Frank H Easterbrook, "The Limits of Antitrust," (1984) 63 *Texas Law Review* 1, 5.

12 Public Consultation on the Regulatory Environment for Platforms, Online Intermediaries, Data and Cloud Computing and the Collaborative Economy (September 24, 2015 to January 6, 2016) http://ec.europa.eu/newsroom/dae/document.cfm?doc_id=10932.

13 Case T-286/09, *Intel Corp. v. Commission*, [2003] ECLI:EU:T:2014, para 114. See also Case 322/81, *NV Nederlandse Banden-Industrie Michelin v. Commission*, [1983] ECR 3461.

14 *Google Shopping*, *supra* note 4, para 331.

15 Antonio Bavasso, "The Role of Intent under Article 82 EC: From 'Flushing the Turkeys' to 'Spotting Lionesses in Regent's Park,'" (2005) 26 *European Competition Law Review* 616.

16 Case C-333/94P, *Tetra Pak International SA v. Commission*, [1994] ECR II-5951, para 24.

17 Renato Nazzini, *The Foundations of European Union Competition Law: The Objective and Principles of Article 102* (New York: Oxford University Press 2011) 175–177; Rafael Allendesalazar, "Can We Finally Say Farewell to the 'Special Responsibility' of Dominant Companies?", *European Competition Law Annual 2007: A Reformed Approach to Article 82 EC* (Hart Publishing).

Criticism notwithstanding, the Commission and the Court of Justice firmly stand by the concept of special responsibility. At a minimum then, they are burdened with their own special responsibility to clarify the scope and meaning of the concept so that firms know what is allowed once they become dominant. Otherwise, it is almost inevitable that a dominant firm will at some point infringe competition law, considering the combination of the Court's opinion that "as a result of the mere presence of a dominant undertaking competition is weakened,"¹⁸ and the special responsibility of dominant firms to not further weaken competition. It is worth asking then, what a dominant firm can do to compete.

The proper demarcation of the special responsibility obligation is long overdue, and the available guidance over the past thirty years has been more confusing than it has been helpful. We know, for example, that the special responsibility "must be considered in light of the specific circumstances of each case,"¹⁹ including the degree of dominance, the magnitude of the competitive harm, the objective being pursued, and the means employed to achieve the objective.²⁰ And we also know that as part of their special responsibility dominant firms have an obligation to "behave in a way that is proportionate to the objectives they seek to achieve."²¹

Yet even with these pointers it remains unclear what the special responsibility adds to the concept of abuse. Assume for a moment that the Commission and the Court ignored the existence of the special responsibility obligation. How would its reasoning be different? It would still need to establish market power, identify abuse, and examine potential justifications and effects, just as in current practice. The conflation of the concept of abuse with that of special responsibility offers — at present — nothing specific absent which the Commission and the Court could not reach the same conclusions. It is therefore prudent to either discard the concept of special responsibility or to cohesively delineate its prescriptive content.

IV. EXPERIMENTATION WITH NEW BUSINESS MODELS AND THE NON-CIRCULAR DEFINITION OF ABUSE

Regardless of any special responsibility, but exacerbated by the

existence of it, dominant firms only violate competition law if they abuse their position, not by simply holding a dominant position. The Commission and the Court go to great lengths to substantiate the abuse element in case-law, but their starting point is vague, which taints the entire analysis based thereupon.²² This leaves firms with innovative business models in the dark regarding which practices may be considered abusive, and the only way to find out is *ex-post*, after they have been challenged by the Commission.

The *Google Android* case is the most recent example of that. In choosing a novel business model, whereby Google recoups the costs of maintaining the platform not from OEMs or consumers but from advertisers through tying Play with Google search,²³ Google had no guidance on whether such a practice could constitute abuse. And while no amount of guidance could result in certainty, the EU's existing approach to the concept of abuse is completely vacuous. Notice again, that the problem is not the outcome of the case, but rather the *ex-ante* guidance on what could have been an (il)legitimate business model.

At the heart of the problem is that the concept of abuse is defined circularly by means of a reference to harm to competition. For example, in an early attempt to distinguish between normal competition and abuse, the Court in *Continental Can*, after looking at "the spirit, general scheme and wording of Article 86" [now 102],²⁴ opined that "the provision is not only aimed at practices which may cause damage to consumers directly, but also at those which are detrimental to them through their impact on an effective competition structure."²⁵ Therefore — the Court continued — abuse can occur when "an undertaking in a dominant position strengthens such position in such a way that the degree of dominance reached substantially fetters competition."²⁶ The evident problem with this formulation is that the Court never explains what effective competition is or what it means for dominance to substantially fetter competition. Moreover, an attempt to define abuse by looking only at the outcome says little about the distinction between abusive and normal business practices, because even perfectly legitimate business practices can substantially fetter competition, if for example they are superior to their competitors'.²⁷

18 *Tetra Pak*, supra note 16.

19 Joined cases C-395/96 P and C-396/96 P, *Compagnie Maritime Belge Transports and Others v. Commission*, EU:C:2000:132, para 114; Case C-52/09, *Konkurrensverket v. TeliaSonera Sverige AB*, EU:C:2011:83, para 84.

20 See Case T-321/05, *AstraZeneca v. Commission*, [2010] ECR II-2850; *Compagnie Maritime Belge Transports*, Id.

21 Joined Cases T-191/98 and T-212/98 to T-214/98, *Atlantic Container Line AB and others v. Commission* [2003] ECR II-3275, para 1120.

22 Einer Elhauge, "Defining Better Monopolization Standards," (2003) 56 Stanford Law Review 253.

23 Manne, supra note 10.

24 Case 6/72, *Euroemballage Corporation and Continental Can v. Commission*, [1973] ECR 215, para 22.

25 Ibid [26].

26 Ibid.

27 Case C-209/10, *Post Danmark A/S v. Konkurrencerådet*, 2012 E.C.R. 172, paras 21-22.

A few years later, in what is now a staple excerpt from the Court's body of antitrust case-law, the Court linked normal competition to abuse and defined the latter as "recourse to methods different from those which condition normal competition in products or services on the basis of the transactions of commercial operators" with "the effect of hindering the maintenance of the degree of competition still existing in the market or the growth of that competition."²⁸ Without further guidance from the Court, it is this passage that best exemplifies the circularity of defining abuse as the opposite of normal competition and vice versa; the key element of what constitutes normal competition is missing, and this is really all that matters.

This definition was reused in many subsequent Court decisions, notably in *AKZO* and *Irish Sugar*, where the Court unhelpfully expanded on the concept by stating that "Article 86 of the Treaty [now 102] prohibits a dominant undertaking from eliminating a competitor and thereby reinforcing its position by having recourse to means other than those within the scope of competition on the merits."²⁹ Similarly to previous cases, invoking competition on the merits, (a synonym for normal competition) without elaborating on what qualifies as such, does little to shed light on what is allowed and what is not. Subsequent cases, including *Google Shopping*, add little clarity by linking abuse to indirect harm to consumers through "impact on an effective competition structure."³⁰

It should be evident that the definitions of what constitutes abuse of dominance are of limited help to firms that want to experiment with new business models that have not been tested in court before. The intense scholarly debate on the topic is not much more illuminating either.³¹ It is now the task of enforcers to adopt one or more meaningful tests of the available definitions or devise their own, which, however, should provide enough guidance for firms to *proactively*, rather than *ex-post facto*, be able to rely on.

V. PLATFORMS AND THE CORRELATION BETWEEN ABUSE AND THE GOALS OF COMPETITION LAW

One final area that platform business models have complicated for competition law is that of its goals and purposes. Competition law has always faced an existential crisis about what its

purpose is in the economy and society, and the two-sided nature of platforms comes to perplex the inquiry because its economic activity inextricably combines suppliers and consumers — two opposite, but complementary poles.

If firms are to consider the boundaries of legality set by competition law, they need to know what competition law has set out to achieve in the first place, so that they can then try to compete in a way that honors those goals. Of the various goals that competition law has been argued to serve are efficiency,³² consumer welfare,³³ the process of competition *per se*,³⁴ as well as other non-economic goals like fairness, freedom, and equal opportunities.³⁵ While all of these goals sound positive, they are not necessarily aligned. For example, in the *Google Shopping* case the Commission emphasized fairness and equality of opportunities, but did not prove reduction of consumer welfare, which other jurisdictions place a premium on. By prohibiting Google from promoting its own comparison shopping results, the Commission protected other comparison shopping websites (i.e. equality, fairness), but not necessarily the interests of consumers (i.e. consumer welfare).

The multitude and disparity of competition goals makes the link between them and any alleged abuse non-obvious and therefore necessary to affirmatively identify. The risk here is that enforcers claim to apply competition law to achieve one goal, but in reality they apply it in a way that achieves another, or they mix up multiple goals, making it impossible in the end to infer which goal of competition law the alleged abuse run afoul of. Without the specific link between goal and abuse, it is impossible for firms to know *ex-ante* the type of competition they can engage in.

Platform business models further complicate the situation because platforms serve the interests of two different sides at the same time. Should both sides be taken into account when settling on the appropriate goals of competition law and the potential violative conduct thereof? And if so, which goal should be assigned to each side (if different)? This is not a moot question; its latest manifestation was in this year's *American Express* case, where the Supreme Court, in siding with Amex, acknowl-

28 Case 85/76, *Hoffmann-La Roche & Co. AG v. Commission*, [1979] ECR 461, para 91.

29 Case T-228/97, *Irish Sugar plc v. Commission*, [1999] ECR II-2969, para 111 (citing Case C-62/86 *AKZO v. Commission* [1991] ECR I-3359, para 69).

30 *Google Shopping*, *supra* note 4, para 332.

31 For a summary, see OECD, "Competition on the Merits (Report DAF/COMP(2005)27)," (2005).

32 See e.g. Robert Bork, "Legislative Intent and the Policy of the Sherman Act," (1966) 9 *Journal of Law and Economics* 7.

33 See John B. Kirkwood & Robert Lande, "The Chicago School's Foundation Is Flawed: Antitrust Protects Consumers, Not Efficiency," in Robert Pitofsky (ed), *How the Chicago School Overshot the Mark: The Effect of Conservative Economic Analysis on U.S. Antitrust* (Oxford University Press 2008).

34 See Eleanor Fox, "The Efficiency Paradox," in Robert Pitofsky (ed), *How the Chicago School Overshot the Mark: The Effect of Conservative Economic Analysis on U.S. Antitrust* (Oxford University Press 2008).

35 *Google Shopping*, *supra* note 4, para 331.

edged that Amex's anti-steering provisions may raise merchants' fees, but do not overall raise prices beyond competitive levels in the credit card market taken as a whole, which includes merchants and consumers (the two sides).³⁶ Not only do both sides need to be considered, but each side may be served by different interests. Clarity on what competition law aims to achieve is paramount in pointing to the interests that are, in turn, to be protected. As Bork famously stated "Antitrust policy cannot be made rational until we are able to give a firm answer to one question: What is the point of the law—what are its goals? Everything else follows from the answer we give..."³⁷

VI. CONCLUSION

Alan Greenspan described antitrust as "a world in which the law is so vague that businessmen have no way of knowing whether specific actions will be declared illegal until they hear the judge's verdict—after the fact."³⁸ While a measure of uncertainty will always remain this is no excuse to shirk an effort to define, as best as possible, these key concepts and tools of competition law. As the platform economy is still being deciphered, clarifying the areas identified herein likely poses the most pressing points on which the Commission and the Court should focus their energy. ■

³⁶ *Ohio v. American Express Co.*, 585 U.S. __.

³⁷ Robert Bork, *The Antitrust Paradox: A Policy at War with Itself* (Basic Books 1978) 50.

³⁸ Alan Greenspan, "Antitrust," in Ayn Rand (ed), *Capitalism: The Unknown Ideal* (Penguin 1986).

PLATFORM POWER AND PRIVACY PROTECTION: A CASE FOR POLICY INNOVATION

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I. INTRODUCTION

Antitrust debates regarding competition in data-driven markets, particularly those dominated by digital platforms, have run headlong into issues of privacy. This was inevitable.

At the heart of the platform business model is the collection and use, for commercial gain, of unfathomably large amounts of personal information. Such information is the *sine qua non* of privacy concerns.² Given their increasing power as information gate-keepers and intermediaries across swathes of the digital economy, it is barely surprising that platforms find themselves in the line of fire for modern-day privacy concerns.

Public engagement with, and intellectual discourse on, the intersections between antitrust and privacy policies have been fueled by the Cambridge Analytica scandal. As an episode that saw the harvesting of personal information from millions of Facebook users for the purposes of electoral manipulation, it pushed the power of platforms and privacy protection, along with their political implications, onto front pages around the world.

Much of the antitrust debate surrounding privacy has been focused on whether and how to nest³ privacy into antitrust. Broadly speaking, the debate appears divided between two camps.

In one corner are those who see complementarities or synergies between antitrust and privacy policy goals. This is a view premised on a broad conception of antitrust, most commonly associated with doctrine in the European Union (“EU”), but also with the so-called “New” or “Neo-Brandeis” school that has emerged in the U.S.⁴ It is underpinned by a commitment to state intervention for the promotion of pluralist aims of antitrust, including those of a political and social orientation, not just an economic one.

In the other corner are those who regard antitrust and privacy as largely occupying different and disconnected policy terrains. This is a view premised on a narrower conception of antitrust, generally associated with the approach promulgated by the Chicago school, particularly in the U.S.⁵ It is underpinned by a commitment to self-correcting markets in the singular pursuit of economic efficiencies that serve consumer welfare.

In analyzing the antitrust-privacy interface, it may be useful to distinguish between these two approaches by reference to a model of policy consistency on the one hand and a model of policy separation on the other. Both have their limitations. A separatist model, promoting regulatory silos, risks conflict between antitrust and privacy policies in dealing with personal information or consumer data. In particular, strengthened privacy protection may undermine competitive forces.⁶ A consistency model, promoting regulatory integration, may reduce this conflict. However, it risks being at the expense of policy experimentation as policymakers remain bound by entrenched frameworks that fail to realize the potential of data in a digital economy.⁷

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2 That said, as a concept, “privacy” extends beyond a concern with keeping personal information private (it extends to behavioral privacy for example). It is also notoriously difficult to define and varies according to time and place. See e.g. Robert C. Post, *Three Concepts of Privacy*, 89 GEO L.J. 2087 (2001).

3 James C. Cooper, *Privacy and Antitrust: Underpants Gnomes, The First Amendment, and Subjectivity*, 20 GEO. MASON L. REV. 1129 (2013).

4 See Lina Khan, *The New Brandeis Movement: America’s Antimonopoly Debate*, 9(3) J. Euro Comp L. & P. 131 (2018). Further, see the collection of articles in *Hipster Antitrust*, Antitrust Chronicle, COMPETITION POLICY INTERNATIONAL (April 2018). There may be some irony in the fact that, based on his concerns about the effects of concentrated economic power on a free society, this school takes its name after the same former U.S. legal scholar and Supreme Court associate justice who co-authored the seminal article on privacy, capturing essential tenets of that right as reflected in European privacy doctrine (see further below): Samuel D. Warren & Louis D. Brandeis, *The Right to Privacy*, 4(5) HARVARD L.R. 193 (1890).

5 See e.g. Richard Posner, *The Chicago School of Antitrust Analysis*, 127 U. Pa. L. Rev. 925 (1979).

6 An effect being identified in relation to the General Data Protection Regulation introduced in Europe in May 2018. See e.g. Daniel Lyons, *GDPR: Privacy as Europe’s tariff by other means?*, AEI IDEAS (Jul 3, 2018), <http://www.aei.org/publication/gdpr-privacy-as-europes-tariff-by-other-means/>.

7 While beyond the scope of this article, the adoption of different models across jurisdictions also has implications for international data trade. See Filippo Maria Lancieri, *Antitrust Enforcement in Big Data Markets: What is the role of privacy and antitrust cultures?*, (Jan 2017), https://www.researchgate.net/publication/321638142_Antitrust_Enforcement_in_Big_Data_Markets_What_is_the_Role_of_Privacy_and_Antitrust_Cultures. There are additional related questions regarding processes of global policy convergence. See e.g. Colin J. Bennett, *The European General Data Protection Regulation: An instrument for the globalization of privacy standards?*, 23 INFORMATION POLITY 239 (2018).

Part II of this article maps the contours of these two models, as they are played out in arguments concerning whether and how to embed privacy within antitrust. Part III explains how these approaches relate to differences in the underlying values associated with privacy and antitrust, and points to the relevant legal and institutional frameworks in the EU and the U.S. as reflecting those values. Part IV proposes a third way, a model based on policy innovation, exemplified by Australia's introduction of a comprehensive consumer right to data. Part V briefly concludes the argument.

II. POLICY CONSISTENCY VS POLICY SEPARATION

There are various arguments that have been made in support of incorporating privacy into antitrust analysis reflecting a model of policy consistency.⁸ One of these involves treating privacy as a non-price element of competition. This characterization allows for privacy degradation to be treated as a reduction in quality and, on that basis, as harmful to consumers notwithstanding that, in many instances, prices (at least in monetary terms) for platform services are zero. In addition, information asymmetries between data subjects and data holders are a matter for concern on the grounds that they may facilitate consumer exploitation as well as price and, conceivably, behavioral discrimination. In turn, such discrimination is pointed to as aggravating inequality, which for some falls within the compass of antitrust-related concerns. More broadly there is general acceptance of the view that, at a certain scale, data and its uses are a source of market power that may foreclose entry. Economies of scale and network effects are key in this analysis. However, concerns are not limited to the economic implications of power in markets. The political, social, and cultural impact of so-called "data-opolies" is at issue too, and greater privacy protection (with its attendant restrictions on data extraction and mining) is identified as having the potential to ameliorate such impact.

In contrast, consistent with a model of policy separation, the relevance of privacy concerns in the antitrust arena is resisted while issues associated with the operationalization of privacy in an antitrust context are raised also.⁹ While conceding some merit to the argument that privacy may be characterized as a

non-price (quality) element of competition, challenges are identified in relation to measuring quality effects and making trade-offs between data extraction at the expense of privacy and targeted advertising (or even innovation more broadly) to the benefit of consumers. While not necessarily discounting information asymmetry as a consumer protection concern, exploitation and discrimination are seen to be outside the purview of legitimate antitrust harm theories. Foreclosure arguments are discounted on the grounds that data is non-rivalrous, and consumers multi-home. Moreover, cases of successful new platform entry (as well as cases of failure) over time are routinely pointed to as evidence against data facilitating unassailable competitive advantage. More generally, it is argued that allowing antitrust enforcers to consider privacy would inject an undesirable level of subjectivity into enforcement decisions. Risks of false-positives and the associated chilling of innovation are often articulated in this line of reasoning. Relatedly, based on the view that privacy is fundamentally a non-competition concern it is seen as a matter for legislatures, not antitrust agencies and courts.

The divergence in these approaches may be better understood if we appreciate that they reflect underlying differences not just in the way antitrust goals are conceived, but in the way privacy goals are conceived as well. Looking beyond the technocratic arguments, it appears that the divide lies ultimately between the view that antitrust and privacy share basic foundational values and the view that they are founded on values that are quite separate and distinct.¹⁰

The point is most readily made by contrasting EU and U.S. values as they relate to power in the context of both antitrust and privacy, and is borne out by an examination of the legal and institutional manifestations of those values.

III. THE ANTITRUST-PRIVACY INTERFACE: A QUESTION OF VALUES

In a model of policy consistency, most prominently displayed in Europe, power in and of itself is a problem that warrants intervention, whether in the context of privacy or antitrust.

Through a privacy lens, this is because privacy violations are re-

8 For a representative sample of sources for such arguments, see Maurice E. Stucke, *Should We Be Concerned About Data-opolies?*, 2 GEO. L. TECH. REV. 275 (2018); Peter Swire, "Submitted Testimony to the Federal Trade Commission Behavioral Advertising Town Hall," (Oct 18, 2007), <https://www.americanprogress.org/issues/economy/news/2007/10/19/3564/protecting-consumers-privacy-matters-in-antitrust-analysis/>; Pamela Harbour & Tara Koslov, *Section 2 in a Web 2.0 World: An Expanded Vision of Relevant Product Markets*, (2010) Antitrust L.J. 769-97; Wolfgang Kerber, *Digital markets, data, and privacy: competition law, consumer law and data protection*, 11 J. Intell. Prop. L. & Pract. 856 (2016); Nathan Newman, *The Costs of Lost Privacy: Consumer Harm and Rising Economic Inequality in the Age of Google*, 40 WM. MITCHELL L. REV. 850, <http://open.wmitchell.edu/cgi/viewcontent.cgi?article=1568&context=wmlr>; Frank Pasquale, *Privacy, Antitrust, and Power*, 20 GEO. MASON L. REV. 1009 (2013).

9 For a representative sample of sources for such arguments, see Geoffrey Manne & Ben Sperry, *The Problems and Perils of Bootstrapping Privacy and Data into an Antitrust Framework*, (2015) 2 ANTITRUST CHRONICLE 3; Samson Esayas, *The Idea of 'Emergent Properties' in Data Privacy: Towards a Holistic Approach*, 25 (2) Int. J. L. & T. 139 (2017); D. Daniel Sokol & Roisin Comerford, *Does Antitrust Have a Role to Play in Regulating Big Data?* in Roger Blair & Daniel Sokol (eds), CAMBRIDGE HANDBOOK OF ANTITRUST, INTELLECTUAL PROPERTY AND HIGH TECH (2016); Noah Phillips, *Keep It: Maintaining Competition in the Privacy Debate*, (Remarks for Internet Governance Forum, July 27, 2018), <https://www.ftc.gov/public-statements/2018/07/keep-it-maintaining-competition-privacy-debate>.

10 In turn these foundational values are derived from fundamental socio-cultural norms shaped by historical experience and political tradition, full discussion of which is beyond the scope of this article. See e.g. James Q. Whitman, *The Two Western Cultures of Privacy: Dignity versus Liberty*, 113 YALE L.J. 1151 (2004).

garded as violations of personal dignity, respect, and autonomy or self-determinism, concerns which are deeply rooted in the history of European armed conflicts and the continent's intellectual tradition.¹¹ Preserving image and reputation in the interests of personal dignity mean that the powers of the free press and the free market have to be curbed. Moreover, as a reaction against hierarchical class structures of earlier centuries, dignity is to be afforded to all members of society regardless of their socio-economic standing.¹² This is a function of values associated with egalitarianism, or comparative fairness.

Through an antitrust lens, in Europe (but also in the U.S. according to the Neo-Brandeisian school), power is problematic for reasons that include its propensity to generate exploitation or unfairness.¹³ It follows that attention must be given to market structure as much as to market conduct. In the latter case, consideration may be given to economic efficiency and harm to consumer welfare. However, in the former case, concentration of power is to be curtailed in its incipency or dismantled *ex-post* not only on economic grounds (so as to remove threats to the competitive process) but also on the grounds that such power spawns inequality and is insidious to the workings of a liberal democratic society. Competition on the merits is not to be "fenced out by power, privilege or favoritism."¹⁴

It follows that in both the privacy and antitrust spheres, underlying values support a strong role for government in regulating relations between private actors. That much is evident in the relevant legal and institutional frameworks.

In Europe, privacy and data protection enjoy a status as fundamental human rights.¹⁵ These inalienable protections are implemented through a formidable legal framework, as contained most recently in the General Data Protection and Regulation Directive ("GDPR"),¹⁶ and supported by a powerful institutional apparatus.¹⁷ Updating and extending a 1995 Directive, the GDPR enshrines a series of rights for data subjects and imposes significant obligations on data controllers and processors. It establishes a range of accountability and compliance mechanisms and threatens onerous sanctions in the event of breaches.

EU antitrust doctrine applies largely formalistic criteria, as distinct from economic effects or efficiency-based reasoning, in imposing liability on dominant undertakings. It imposes "special responsibilities" on such entities and has socially oriented elements that include bans on "excessive prices" and price discrimination, as well as the view that unfair trading practices may constitute an abuse of a dominant position. Competition authorities in this jurisdiction have a long track record of bringing and defending such cases before the courts and of imposing massive fines, not infrequently accompanied by behavioral and sometimes structural remedies.¹⁸

In contrast, under a model of policy separation as applies in the U.S., power in and of itself is a concern for privacy but not for antitrust (at least not according to the Chicago school, which may be facing serious challenges but still stands as the basis for antitrust jurisprudence and agency practice over the last 30 years).

In the privacy realm, it is largely the power of the state that is at issue. Such power needs to be restrained so as to prevent unjustified incursions on civil liberties. Suspicion of government authorities and their intrusion into private affairs, into the sanctity of one's own home especially, are the foundation on which much of American privacy doctrine and thinking has been built.¹⁹ Hence the regulatory focus is primarily on relations between public and private actors. Extensions of EU-style privacy into private-private relations face significant obstacles associated with the value of the free market and the value of the free press. If privacy is to be protected in this realm it is largely as a consumer protection measure so as to prevent or ameliorate market failures emanating from information asymmetry.²⁰

In the antitrust realm, power *per se* is not problematic given that it may be derived from efficiency. Firms that win market power by virtue of competing effectively are not to be stripped of their rewards for fear of eroding or removing incentives for efficiency, seen as being in the interests of consumer welfare (defined in terms of surplus as distinct from any broader notion of welfare or wellbeing). Rather it is the exercise of market power with the

11 See e.g. Robert Kagan, *OF PARADISE AND POWER: AMERICA AND EUROPE IN THE NEW WORLD ORDER* 11, 58-62 (2003).

12 James Q. Whitman, *On Nazi 'Honour' and the New European Dignity* in Christian Joerges & Navrak Singh Ghaleigh, *DARKER LEGACIES OF LAW IN EUROPE: THE SHADOW OF NATIONAL SOCIALISM AND FASCISM IN EUROPE AND ITS LEGAL TRADITIONS* 243, 251-262 (2003).

13 See Ariel Ezrachi, *EU Competition Law Goals and The Digital Economy*, Aug. 8 (2018), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3191766.

14 Eleanor Fox, *Monopolization and abuse of dominance: Why Europe is different*, 59(1) *ANTITRUST BULLETIN* 129, 132 (2014).

15 European Convention on Human Rights (art. 8); European Charter of Human Rights (arts 7 & 8).

16 REGULATION (EU) 2016/679 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of April 27, 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation) 2016.

17 See Paul Schwartz, *The EU-US Privacy Collision: A Turn to Institutions and Procedures*, 126 *HARV. L.REV.* 1966 (2013).

18 See generally Pinar Akman, *THE CONCEPT OF ABUSE IN EU COMPETITION LAW: LAW AND ECONOMIC APPROACHES* (2012).

19 See Jeffrey Rosen, *THE UNWANTED GAZE: THE DESTRUCTION OF PRIVACY IN AMERICA* 5 (2000).

20 See further Julie Brill, *The Intersection Between Consumer Protection and Competition in the New World of Privacy*, 7(1) *COMPETITION POLICY INTERNATIONAL* (Spring, 2011).

effect of excluding rivals in the absence of any efficiency justification that is of concern. It follows that in this context, but only on limited grounds, state intervention in private-private relations (or the market) may be warranted. Intervention motivated by other concerns, particularly of a fairness or distributive character, are eschewed as misplaced, tantamount to social as distinct from economic policy, and as likely to undermine the coherence and effectiveness of antitrust doctrine.²¹

Hence, in the case of privacy there appears to be a strong basis for legal protection, but only or predominantly against the state. In the case of antitrust, the argument for legal intervention is much weaker. Again, the underlying values as they relate to power are evident in the relevant legal and institutional frameworks.

The U.S. right to protection from state intrusion into citizens' private lives stems from and has been extended in jurisprudence invoking the Fourth Amendment of the Constitution (enshrining rights against unlawful searches and seizures). Efforts to import privacy protections in private relations from Europe are invariably countered by another fundamental set of rights in the U.S., namely the rights to freedom of speech or of the press, under the First Amendment. In the setting of the free market, information or data is regarded as an asset and hence may be traded as a freely alienable right. Unlike in Europe and many other parts of the world, there is no federal omnibus legislation governing privacy, but rather a mosaic of federal and state statutes and regulators that are sector-, activity-, and/or data-specific.²² The closest version of a general federal privacy regulator takes the form of the Federal Trade Commission, but its jurisdiction is limited to dealing with privacy as a consumer protection or fair trade issue. Consistent with this mandate, its primary concern has been with systems of notice and consent. It also relies heavily on soft law or co-regulatory approaches, and has no rule-making authority or power to fine.²³

In antitrust, since the 1970s and under the intellectual hegemony of the Chicago school, a laissez-faire attitude to structural concerns has meant that concentration through merger activity has met with minimal resistance. The predominant focus

of enforcement has been on so-called hard-core cartels. Faith in markets and business judgment, particularly associated with the pursuit of efficiencies, together with an imperative to avoid false-positives, have resulted in almost absentee enforcement of monopolization claims. Rule of reason tests have been favored over *per se* liability standards in relation to any conduct other than the most obvious horizontal restraints. Price discrimination has been neglected on the basis that it reflects distributive concerns. Consumer harm has been conceptualized predominantly in terms of price effects, and there has been a general insistence on measurability or quantification for the purposes of harm assessment.²⁴

As policymaking and associated laws and institutions generally reflect deeply ingrained social and political values and traditions, the EU-U.S. divergence in relation to the antitrust-privacy interface is perhaps not surprising. As models of policy consistency and policy separation, the merits and demerits of each would be open to debate and views inevitably will differ, again reflecting the values underpinning them. However, presenting the two models as a binary choice (as so often is the case in discourse about a transatlantic divide on a wide range of issues) would be a mistake. It would also be a lost opportunity. Is there another way?

IV. POLICY INNOVATION

Recent developments in Australia point to an alternative model, based on policy innovation. The Australian government has proposed introducing a new "Consumer Data Right" ("CDR").²⁵ It is presented as a policy reform to drive competition and innovation or, even more ambitiously, to advance and secure the future welfare of all Australians in a digital economy.²⁶ In effect, the reform is concerned with facilitating data portability and transfer to enable consumers to use their data to compare and switch between product and service providers, ensuring that consumers have more information and choice while giving businesses greater incentives and capacity to compete.

Similar reforms have been implemented in other countries in

21 See e.g. Mauritz Dolmans & Wanjie Lin, *Fairness and Competition Law: A Fairness Paradox*, CONCURRENCES (No. 4, Nov, 2017), <https://www.concurrences.com/en/review/issues/no-4-2017/articles/fairness-and-competition-law-a-fairness-paradox>.

22 See Franz-Stefan Gady, *EU/U.S. Approaches to Data Privacy and the 'Brussels Effect': A Comparative Analysis*, Geo J. Int. Affairs 12 (2014).

23 See generally David A. Hyman & William E. Kovacic, *Implementing Privacy Policy: Who Should Do What?* (Feb 13, 2018), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3123115.

24 See e.g. Maurice Stucke & Ariel Ezrachi, *The Rise, Fall, and Rebirth of the U.S. Antitrust Movement*, HARV BUS REV. (Dec 15, 2017); Joshua Wright, *Abandoning Antitrust's Chicago Obsession: The Case for Evidence-Based Antitrust*, 78 ANTITRUST L.J. 301 (2011).

25 See <https://treasury.gov.au/consumer-data-right>. The proposal is based on recommendations made by the Productivity Commission, *Data Availability and Use*, Inquiry Report (May, 2017), <http://www.pc.gov.au/inquiries/completed/data-access/report>.

26 In part, the basis for this broader ambition, is that the reform is concerned also with greater sharing and release of public sector data (not discussed in this article). See Australian Government, Department of Prime Minister and Cabinet, *New Australian Government Data Sharing and Release Legislation*, Issues Paper for Consultation (Jul. 4, 2018), <https://www.pmc.gov.au/resource-centre/public-data/issues-paper-data-sharing-release-legislation>.

specific sectors,²⁷ and the GDPR, which is economy-wide, also provides for data transfer.²⁸ However, in aspects of both its substantive provisions and its institutional arrangements, the Australian model is arguably first-of-its-kind. The following facets of the reform are especially noteworthy in this respect:

First, “consumers” are to include not just individuals, but also businesses irrespective of size.

Second, “consumer data” is to be defined broadly, including data that identifies and is identifiable with the consumer, whether provided directly by the consumer, collected in the course of actions taken by the data holder or held by the data holder even if created by others.

Third, the right is essentially that of consumers to have access to and control over their data, enabling them to have it transferred by the data holder to an accredited third party at their direction, and in a form that is digitally practicable.

Fourth, both the nature of the data and the form in which it would be transferable are to be based on an outcomes-focused principle, namely that it should include the data and in the form that a competing business would need in order to make a reasonable offer for the consumer’s patronage. Subject to that principle, it is recognized that types of data will vary between sectors and that technological change will affect the nature of data that is generated over time. Hence there will be an industry data-specification process that enables the relevant industry to agree on the types of data that will be covered, as well as mechanisms for transfer and security protocols.

Fifth, the emphasis on creating an inalienable right of control steers (deliberately) away from a right of ownership (a property right), which would be alienable and is arguably nebulous in any event, as it would be practically difficult if not impossible to exercise.²⁹ Furthermore, it is a right of *joint* control of data as an asset shared by data holders and data subjects, one of the implications of which is that, unlike the GDPR, the CDR does not extend to a right to deletion (the so-called “right to be forgotten”). While sharing control with data holders, data subjects are

empowered to limit aspects of data use in ways that may most concern them (for example, on-sale of data without disclosure or consumer consent).

Sixth, the CDR is to apply economy-wide. While this is important in creating incentives for all private enterprises to act on the privacy concerns of consumers, application of the new law is neither automatic nor immediate. Rather, it is recognized that in certain respects the reform is experimental and that there may potentially be significant transition and set up costs. Hence, adopting a scalable risk-based approach, it is to be rolled out sector-by-sector, starting with the banking sector, to be followed by telecommunications and energy. This will not only enable the system to be industry-customized and reduce upfront costs but will facilitate consumer education in one sector that should then be more readily transferable to others, as well as allowing for the policy to be refined as lessons are derived from the implementation experience.

Finally, consistent with competition being its primary rationale, the new regime makes the Australian competition authority, the Australian Competition and Consumer Commission, the lead regulator. The Commission is to have responsibilities over the approval of data-specification agreements and standards, accreditation of data recipients, handling complaints about, and taking enforcement action in response to breaches of the CDR rules. In the event of liability, significant penalties would apply.

At the heart of this model is a basic distinction drawn between privacy and competition as each relates to consumer data. While privacy focuses on managing data use by *others*, the CDR focuses on enabling consumers *themselves* to control its use. In essence, the distinction is between limitation or aversion of a threat (to which privacy policy is directed) and opening up and spreading of opportunity (to which competition policy is directed). Drawing the distinction allows for the narrative surrounding data to be changed, from one concerned with harms to one concerned with benefits.

At the same time, the proposed reform does not alter, or in any way erode, existing protections for personal information under

27 In banking in particular, see e.g. Open Banking Goes Live – What Will it Mean for Consumers? (2018), <https://www.consumersinternational.org/news-resources/blog/posts/open-banking-goes-live/>.

28 In the U.S., Senate Intelligence Committee Vice Chairman, Mark Warner, has produced a set of policy proposals for regulating large digital platforms which include U.S. adoption of GDPR-style legislation with its right relating to data portability. See Sen Mark R. Warner, *Potential Policy Proposals for Regulation of Social Media and Technology Firms*, White Paper (DRAFT), <https://graphics.axios.com/pdf/PlatformPolicyPaper.pdf>. Not surprisingly the proposals are attracting much comment, including scathing critique from commentators of the Chicago-persuasion. See e.g. Kristian Stout, Senator Warner’s retrogressive proposals could lead to arbitrary and capricious interventions that would harm entrepreneurs and consumers, *Truth On the Market* (Aug. 10, 2018), <https://truthonthemarket.com/2018/08/10/senator-warner-retrogressive-proposals-could-lead-to-arbitrary-and-capricious-interventions-that-would-harm-entrepreneurs-and-consumers/>.

29 Cf. Luigi Zingales & Guy Rolnik, *A Way to Own your Social Media Data*, New York Times (Jun. 30, 2017), <https://www.nytimes.com/2017/06/30/opinion/social-data-google-facebook-europe.html>. It also steers well clear of debates as to whether consumers should be paid for their data. See e.g. *What if people were paid for their data?*, (Apr. 9, 2018) The Economist, https://medium.com/@the_economist/what-if-people-were-paid-for-their-data-8df63f021e38.

privacy laws in this jurisdiction. Indeed, in several respects, the new right strengthens privacy protections in establishing greater transparency and choice for consumers in controlling how their information will be used, providing for the mandatory accreditation of data recipients, ensuring there are standards for data transfer and security set by a Data Standards Body, allocating a strong role for the Australian privacy regulator in advising on and enforcing privacy protections, and providing a range of avenues for consumers to seek meaningful remedies for breaches, including external dispute resolution and direct rights of action.

In broader terms, the CDR reform is motivated by what is seen as a modern-day imperative for government and private enterprises in a digitally transformed economy, namely to ensure that there is a “social license” for data collection and use. Social license is to be derived from community acceptance and trust in providing data and allowing for its use, to the benefit of the economy and society as a whole.³⁰ In this sense, the proposed CDR is more than a competition, consumer protection, or even privacy reform. The need to build social license in these areas is based on growing evidence of citizen-consumer distrust in technology generally, in data handling practices specifically, and an associated increasing distrust in societal institutions. This distrust creates a risk for data holders: there will be a tipping point where the balance of willingness tips away from data supply to data restriction and where government steps in to regulate in ways that may too tip the balance towards restriction. Such tipping would be to the detriment of businesses that profit from data collection and use, but also to the detriment of progress and innovation that benefits consumers and the community generally.

The CDR aims to alter this direction, building trust by ensuring that consumers, as the source of the data from which we all benefit, have greater influence over how value is created and extracted from it, as well as ensuring that there are robust institutional and governance arrangements supporting it.³¹ The values underpinning and embedded in the model could be characterized as social – shared control and shared benefit – but the outcomes undoubtedly will be economic. Moreover, “the social” and “the economic” will be mutually reinforcing. The trust engendered by greater consumer control over data and confidence in “the system” facilitating this control should contribute to an ongoing support for data-sharing initiatives and active participation by individuals in the data eco-system. If data is shared and used in trusted, protected, and inclusive ways, this will drive even more value that can, in turn, create more trust, inclusion, and control. The full value of data will be unlocked.

V. CONCLUSION

The privacy debate is not a passing fad. As economies and societies continue to be transformed by the data revolution, privacy protections will continue to be paramount, and digital platforms are likely to continue to be a hotbed for such concerns. Policymakers will have to confront pressing questions over how best to protect privacy while at the same time promoting competition.

Policy responses are shaped by societal values. In the EU there is an alignment in the values associated with both competition and privacy, allowing for consistency in policy responses. In the U.S. there is less alignment and, in some respects, misalignment, allowing for potential conflict. Drawing on an innovative Australian model, this article proposes a different approach. Taking a page out of both the U.S. and EU books, it treats privacy concerns as distinct from competition but also recognizes the possibility of policy responses that have positive mutually reinforcing effects on both. ■

30 See Productivity Commission, *Data Availability and Use*, Inquiry Report (May, 2017), chp 4, 177-178, <http://www.pc.gov.au/inquiries/completed/data-access/report>.

31 See Productivity Commission, *Data Availability and Use*, Inquiry Report (May, 2017), chp 5, 192, <http://www.pc.gov.au/inquiries/completed/data-access/report>.

TWO-SIDED VS. COMPLEMENTARY PRODUCTS

By Lapo Filistrucchi ¹

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I. INTRODUCTION

In his dissenting opinion on the recent U.S. Supreme Court decision in *Ohio et al. vs American Express*, Justice Breyer seems to call for a clarification, from Filistrucchi et al.,² on the distinction between products sold by two-sided platforms and complementary products. Indeed, a great part of the discussion among the consenting and dissenting opinion centers on this distinction. The question that the U.S. Supreme Court debated is however not new and has been lingering in economic circles. In fact, it has often been the case in the past years that colleagues working in different fields have (often wrongly, but not always) commented to me that two-sided markets were like markets for complementary products.

Without taking any stance on whether the alleged behavior by American Express should or should not have been deemed illegal, I aim to clarify here why and to what extent two-sided platforms are different from platforms selling complementary products. I will also explain why the distinction is relevant in assessing firms' behavior for the purpose of competition policy.

II. WHY TWO-SIDED PLATFORMS ARE DIFFERENT FROM FIRMS SELLING COMPLEMENTARY PRODUCTS

According to the economic literature, a two-sided platform is a firm that sells two different products or services to two groups of consumers, while recognizing that the demand from one group of consumers depends on the demand from the other group and, potentially, *vice versa*.

For example, online directories sell search services to customers looking for information and listing services to customers interested in listing their business, house, and so on... They are well aware that the larger the number of listings the higher the demand for searches and the larger the number of searches the higher the demand for listings. Similarly, producers of video game consoles sell consoles to users and both license the right to develop software and sell software development kits to video game developers. A console is more valuable to users the more video games are available. Similarly, video game developers are willing to pay more if there are more video game players and *vice versa*.

In other words the demands on the two sides of the market are linked by indirect *network effects*³ and the platform recognizes the existence of (i.e. internalizes) these indirect network effects.

So far, the definition would indeed apply also to a firm selling complementary products, whose demand for one product, by definition, increases with the sales of the complementary product.

Typical examples of complementary products are the inkjet printer and the ink cartridge. Clearly, the more printers a firm sells the higher the amount of ink cartridges it can expect to sell. A profit-maximizing firm prices accordingly and often sets a lower price for the printer hoping to boost sales of cartridges and thus recover the profits foregone on the readers' side.

Similarly, in a two-sided market, a newspaper publisher or a TV broadcaster may respectively set a low cover price to readers or a low subscription fee to viewers in order to boost demand of advertising slots from advertisers and recoup profits foregone on the readers' or viewers' side.

A first difference between two-sided platforms and firms selling complement products is that in the case of two-sided platforms one (albeit only one) of the links between the demands may be negative.⁴ In other words, demand from one customer group may decline with higher sales to the other group of customer, in a sort of substitutability.⁵

¹ Department of Economics, CentER and TILEC, Tilburg University, and Department of Economics, University of Florence.

² "The majority relies on an academic article which devotes one sentence to the question, saying that "a two-sided market [is] different from markets for complementary products [e.g., tires and gas], in which both products are bought by the same buyers, who, in their buying decisions, can therefore be expected to take into account both prices." Filistrucchi, Geradin, Van Damme, & Affeldt, "Market Definition in Two-Sided Markets: Theory and Practice," 10 J. Competition L. & Econ. 293, 297 (2014) (Filistrucchi), *Ohio et al. vs American Express*.

³ Demand is characterized by an indirect network effect as consumers' willingness to pay for a product depends on the number of consumers (or the quantity bought) of another product.

⁴ Intuitively, it cannot be the case that the two demands faced by a two-sided platform are linked by two negative indirect network effects, because in that case the platform would be unable to profitably compensate both customer groups for the unwanted interaction with the other group. The firm would have no reason to choose a two-sided business model.

⁵ Interestingly, since it cannot be that both indirect network effects are negative, while a situation similar to two-way complementarity is possible, one similar to two-way substitutability is not.

For instance, it is well-known that TV viewers typically dislike advertising, as it interrupts the programs they watch and are not targeted to individual tastes. Hence, holding constant the price paid by viewers to watch a TV channel, the higher the amount of advertising on the channel the lower the demand from viewers. Indeed, in the TV market, a broadcaster can either set a high fee to viewers or broadcast a high amount of advertising: the two typical business models in the TV market are the Pay TV one in which viewers pay a subscription fee and bear little advertising or the free TV one in which viewers do not pay a fee but bear a lot of advertising.⁶

Hence, one might be tempted to conclude that a two-sided platform is just a more general case that includes the case of a firm selling complement products. One, however, would be wrong.

In fact, a second and more important difference is that, according to the definition of a two-sided platform,⁷ the buyers of the two products do not internalize the links between the two demands, which are therefore, to this regard, called *externalities*.

So that, whereas the provider of an online directory knows that the higher the number of listings the higher the demand for searches and the higher the amount of searches the higher the demand for listings, searchers do not consider that by searching on the directory they increase the value of a listing nor are they interested in the fee for a listing. Similarly, whereas a producer of video game consoles knows that video game developers value consoles that have more users and that users value consoles that have more games, users do not take into account that by buying a console they increase the value of the console to game developers nor do they care about the royalties paid by video game developers.

In fact, here lies the crucial difference between a two-sided platform and a firm selling complement products: the two products sold by a two-sided platform are bought by different customers unlike complementary products that are bought by the same customer. It is exactly because each customer buys only one of the two products sold by the platform that buyers typically do not internalize the indirect network effects. In the case of complement products, both products are bought instead by the same buyer who, in his buying decision, can therefore be

expected to take into account both prices.⁸

When you consider buying an inkjet printer, if you are not too naïve, you will ask not only the price of the printer but also the price of the cartridges. The salesman would probably expect such a question. On the other hand, it would surprise the news agent if you also asked, in addition to the price of the newspaper, the price of an advertising slot in the newspaper. He is not likely to know it. Knowing it would not increase his sales as his customers do not buy advertising slots on the newspaper.

As discussed in Filistrucchi et al. (2014) and recognized by the U.S. Supreme Court, in cases involving two-sided platforms the distinction between two-sided *transaction* and *non-transaction* platforms is crucial.⁹ This distinction is important because it highlights a fundamental difference in the pricing strategies available to platforms and, therefore, in the way these firms compete.

Two-sided non-transaction platforms are characterized by the absence of a transaction between the two sides of the market and, even though an interaction is present, it is usually not observable by the platform, so that the platform is unable to set a per-transaction or per-interaction fee or a two-part tariff.¹⁰

Examples of two-sided non-transaction markets are traditional media markets: newspaper publishers, for instance, set access prices on both sides.

Two-sided transaction platforms are instead characterized by the presence and observability of a transaction between the two groups of platform users. As a result, the platform is not only able to charge a price for joining the platform but also one for using it, i.e. it can charge a two-part tariff.¹¹

An example of a two-sided transaction platform is a payment card company,¹² which sells the services of a card to buyers and that of a point-of-sale (“POS”) terminal to shops.

While two-sided non-transaction markets are characterized by *membership externalities* (or indirect network effects), two-sided transaction markets are characterized also by *usage externalities*.

6 See Emilio Calvano & Mihele Polo, 2016. “Strategic Differentiation by Business Models: Free-to-Air and Pay-TV,” CSEF Working Papers 438, Centre for Studies in Economics and Finance (“CSEF”), University of Naples, Italy, revised November 7, 2017.

7 See, for instance, Evans D.S., 2003, “The Antitrust Economics of Multi-Sided Platform Markets,” Yale Journal of Regulation, 20(2): 325-381.

8 See also J. D. Rochet & J. Tirole, “Platform Competition in Two-Sided Markets,” 1(4) J. EUR. ECON. ASSOC. 1990-1029 (2003).

9 This distinction was originally proposed by Filistrucchi (2008), who used however the terms “two-sided markets of the media type” and “two-sided markets of the payment cards type.” It was later renamed as above by Damme et al. (2010).

10 A two-part tariff is a tariff (i.e. a price) which is composed of a fixed part, independent of usage, plus a variable part, that depends on usage. A traditional example were the tariffs of fixed phone lines (before the appearance of flat tariffs): they included a subscription price (the fixed part) plus a price per minute (the variable part).

11 Note however that the fact that a two-part tariff can be charged does not necessarily imply that it will be charged. Indeed both or either of a membership fee and a per-transaction fee can be charged. In fact, the crucial point is that a per-transaction fee can be charged. For example, for most payment cards in Europe and the U.S., cardholders pay at most an annual fee, while merchants pay a two-part tariff.

12 Other two-sided transaction platforms are the markets for payment cards, virtual marketplaces, auction houses and operating systems.

Membership externalities arise from joining the platform (buying a newspaper or placing an ad in a newspaper, holding a payment card or having a point-of-sale terminal, listing your product at an auction or attending an auction), while usage externalities arise from using the platform (paying or accepting payment with a card, selling and buying a product at an auction). The value of joining the platform depends on the number (or more generally the demand) of customers of the other side. The benefit of using the platform similarly depends on the demand for usage by the other side.

For instance, assuming that a customer holds a card and a shop has the corresponding point-of-sale terminal, even if this customer wants to pay by card, the merchant has to be willing to accept that card for that particular transaction and *vice versa*. Once again, these externalities are not internalized by the users of the platform, i.e. the cardholder and the merchant. For instance, suppose a given merchant would benefit from being paid by card because she would not need to go to deposit cash and she would not have to face the risk of being robbed (or, at the opposite, would not benefit from being paid by card because of having to pay a transaction fee). A cardholder would not take that into account when offering to buy in cash or by card. He would only consider his own convenience.

When the platform is a transaction one, the link between the two customer groups is in some sense stronger because of the additional usage externality. In fact, when a transaction is needed to use the services of a platform, one member of each customer group needs to agree in some way with one member of the other group in order to use such services. The platform cannot sell its usage services unless both customers buy them.

Indeed, Justice Breyer, in his dissenting opinion, was correct to observe that in the case of payment card companies, which are two-sided transaction platforms, “the services resemble complements because they must be used together for either to have value.” Still, the products are not complements in an economic textbook sense because they are not bought by the same customers.

It is true that, as observed above, demand for the products on one side may decline with a rise in the price on the other side. Yet, typically, there is no individual customer that finds the two products complementary because no customer wants to consume both. For instance, in the case of an online directory for hotels, it may be the case that demand from travelers will decline with an increase in the price charged to hotels for the listing services. However, no traveler wants to list his hotel.

Consider the case of a heterosexual nightclub. The owner knows that success of the evening will depend on getting both men and women on board. She will take into account that men would find the evening more attractive the more women they find in the club. Similarly, at least to some extent, women will like the evening more the more men are around. In such a situation, irrespective of income differences between men and women, the owner may find it profit maximizing to differentiate prices of entry tickets between men and women.¹³ No customer, neither man nor woman, will buy both entry tickets, because for no single customer are the two entry tickets complements. Except, in one special case: when a couple wishes to enter the nightclub. Only then, the couple may reason as a single customer and find the two entry tickets complementary.

Importantly, it is exactly because the entry tickets are not complements that raising the ticket price to one customer group, lowering it to the other group will change the mix of men and women present in the nightclub, and thus determine the commercial success of the evening. Even more, it is only because of this feature that the market is two-sided.¹⁴ If all customers were couples, and they were ready to split the total price paid to enter according to some rule independent from the price of the two entry tickets, it would make little sense for the owner of the nightclub to price differentiate.

III. WHY TWO-SIDED PLATFORMS RESEMBLE PLATFORMS SELLING COMPLEMENTARY PRODUCTS

For all the reasons mentioned above, two-sided markets are inherently different from markets for complementary products. So why then do even economists sometimes say that two-sided markets are like markets for complement products? Are they simply wrong?

Remember that two-sided platforms take into account or *internalize* the network effects between the demands they face.

As a first result, we already observed that they know that by changing their price to one group of customers they will influence also the demand from the other group of customers, even if they hold constant the price charged to the latter group. When demand for the product sold to one customer group declines (rises) with an increase (decrease) in the price charged to the other group, there is a similarity with the case of complementary products.

A second, more important consequence of the internalization

13 In Southern Europe this often leads to the typical two-sided pricing strategy in which women do not pay or are even subsidized (with a first free drink) and men are charged a higher price.

14 Filistrucchi, L., Geradin D., Van Damme E., 2013, "Identifying Two-Sided Markets," *World Competition*, vo. 36(1), 33-59.

of the network effects, is that, under some conditions, competing two-sided platforms selling substitute products may behave (e.g. price) as firms in one-sided markets that sell complementary products. Consider two competing platforms that sell on each side of the market substitute products. One would expect prices on each side to be strategic complements and quantities on each side to be strategic substitutes. It may be the case that, at least on one side, products sold by the two platforms become complements once network effects are internalized by the platforms. If this happens, quantities will become strategic complements and prices will become strategic substitute.

In general, it is the sign and the size of the own and cross network effects, together with their internalization, by the platforms that determines whether the firms behave as in the case of complementary products. When this happens economic theory predicts market outcomes that will appear counterintuitive if one starts from the assumption that products on each side are substitutes.¹⁵

Consider two competing TV stations offering content to viewers and advertising space to advertisers. Keeping fixed the amount of advertising, TV channels are substitute for viewers. Assume also that keeping fixed the number of viewers, advertising on one channel is a substitute for advertising on the other channel and vice versa. It may be the case that, once one allows broadcasters to take into account the network effects, products sold by the two platforms become complements once network effects are internalized by the platforms. As a result, if one TV station reduces its amount of advertising, the other might do so too. In addition, entry by an advertising financed competitor might increase advertising on existing channels.¹⁶

Hence, to some extent, it is correct to say that “two-sided markets are like markets for complementary products.” More precisely, it is correct, under certain conditions, when referring to firm (pricing) strategies. Yes, this a different sort of complementarity than the one Justice Breyer seems to have in mind in his dissenting opinion.

IV. WHY THE DIFFERENCE BETWEEN TWO-SIDED PLATFORMS AND FIRMS SELLING COMPLEMENT PRODUCTS MATTERS FOR COMPETITION POLICY

Yet, even when firms in two-sided markets behave as firms selling complementary products, welfare consequences may be very different. The reason lies once again in the fact that customers on the two sides are different and that, as a result, the two consumers’ welfare may not move in the same direction.

Consider for instance the case of an inkjet printer. Assume (just to simplify the argumentation) that each customer needs to buy one printer and 10 cartridges. Suppose the price of the printer declines by 10 dollars and the price of each cartridge increases by 1 dollar each. Then the total price paid by each customer will not change and consumers’ welfare will not change.

Consider instead the case of a pay-per-view TV station offering a soccer match. Assume (just to simplify the argumentation) that there are 100 viewers buying one match subscription and there is only one advertising slot at half time that can be sold to a unique advertiser. Suppose that the price paid by the viewers declines by 10 dollars and the price paid by the advertisers increases by 1000 dollar. On the one hand, the two price changes will have effects on different customers: the viewers will enjoy the price reduction, while the advertiser will bear the price increase. On the other hand, advertisers will benefit from the likely increase in the number of viewers, while viewers may also enjoy a reduction in the length of the advertising due to the increase in the advertising price. In this case, the viewers’ welfare is likely to increase, while advertisers’ welfare may rise or decline.

When consumers’ welfare moves in opposite directions, competition policy needs to take a stance on which customer group, if any, should be given more consideration. For instance, in the assessment of a merger in the EU, should it give more weight to the welfare of one customer group, should it give equal treatment to the two customer groups and sum up their consumers’ welfares or should it consider the two consumers’ welfares incomparable and require each customer group to benefit from the merger?

All of this is not an issue in markets for complement products, in which there is only one customer and, hence, one consumer’s welfare. But in a two-sided market it is likely to be crucial for the decision to be taken.

Hence, to this other extent, it is not correct to say that “two-sided markets are like markets for complementary products.” More precisely, it is not correct, except in very special circumstances, when referring to welfare effects of firms’ (pricing) strategies, even when such (pricing) strategies are similar to those used by firms selling complementary products. Blurring the distinction between two-sided platforms and firms selling complement products may end up hiding fundamental choices of competition policy that antitrust authorities, courts, and legislators should be taking explicitly. ■

¹⁵ See, for instance, Boffa, F., Filistrucchi, L., “Optimal Cartel prices in Two-Sided Markets,” NET Institute Working Paper No. 14-19.

¹⁶ See, for instance, Reisinger, Rössner & Schmidtke, 2009, *Journal of Industrial Economics*.

PUBLIC INTEREST JOURNALISM, THE INTERNET, AND COMPETITION FOR ADVERTISING

By Henry Ergas, Jonathan Pincus & Sabine Schnittger ¹

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I. INTRODUCTION

The advent of the Internet and of new Internet-based platforms and social networks has profoundly changed the competitive landscape for traditional publishers of “public interest journalism” or, more generally, quality journalism. Consumers now have access to virtually unlimited online content, of which quality journalism is one of many options. But despite clear gains for consumers, there has been widespread concern about the long run impacts of the changes now underway on the future of the medium, and of journalism more broadly. In this article, we investigate how recent trends towards digitalization have affected the provision of public interest journalism in Australia, how they might play out in the future and the scope for public policy responses.²

II. WHAT IS PUBLIC INTEREST JOURNALISM

There is no commonly accepted definition for what constitutes public interest journalism: we define it broadly as journalism that confers large positive “externalities” on the public, and where these public benefits extend beyond whatever monetary payment the journalist or publisher might earn from publishing an article. Public interest journalism would certainly include investigative reporting, and can perhaps best be described as a subset of quality news journalism. The future of public interest journalism is therefore tied to future trends in the provision of quality news content.

Viewed in analytical terms, the essence of public interest journalism is that it focuses on situations where power can be abused, be it by government, business or society more generally. By exposing these abuses — whether they involve corruption, coercion or simple error — public interest journalism does not only right an immediate wrong: it also helps deter the kind of conduct at issue. Additionally, a vibrant and effective media that has the incentives and ability to identify, investigate and publicize abuses of power strengthens the community’s trust in our system of government.

Because its impacts are so pervasive, the benefits of public interest journalism far exceed the economic rewards that newspapers, broadcasters and other sources of content obtain from investing in it. It is therefore understandable that the financial strains which many segments of the traditional media have experienced in recent years would raise fears that public interest journalism will become ever harder to fund, reducing its level, both relative to the past and compared to the level which is in

the best interests of the community.

In examining whether those fears are justified, it is important to start by noting that the “digital disruption” which has helped cause those financial strains has brought far-reaching gains to Australian consumers, and consumers of journalism more broadly. Access to content has become vastly easier and the range of content that can be accessed has exploded: if consumers have a complaint, it is more likely to be about “information overload” than about a paucity of content. This is, moreover, an area where the “death of distance” is not mere hyperbole, with instant accessibility to news from around the world yielding especially large benefits to all Australians but especially to the millions who have close personal, social and economic links overseas.

Whether or not the supply of quality or public interest journalism is in decline, and the role of the Internet in bringing this about, is not as straightforward as is commonly assumed. In Australia, as is the case in most developed economies, the circulation and readership of print newspapers has generally fallen for many years, although some publications have fared better than others. Yet these changes are reflective of a long-term trend that commenced well before the Internet became widespread, beginning with the decreased use of public transport, where people read newspapers while commuting, and the rise of the television evening newscast.

There have also been frequently cited significant job losses in the traditional print media, yet there are no direct links between the provision of quality news content, on the one hand, and the number of journalists working in Australia on the other. Historically,

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² This short article summarizes the results of a larger study prepared on behalf of Google in the context of a recent Senate Enquiry on the future of Public Interest Journalism. Green Square Associates: Impact of news aggregators on public interest journalism in Australia; May 2018. In press: available on request from the authors.

that number has varied considerably year-on-year, and it is not the case that the number of journalists in Australia is particularly low today, or even that it has consistently declined in recent years. Also, traditional newspapers are transitioning from a pre-Internet world in which they were effectively protected from competition, including by regulation, distribution costs and geographic markets, to one where competition for audiences of online news and non-news content is intense. In such a context, it is inevitable and indeed essential that traditional newspapers make efficiencies in order to compete and remain viable.

Particularly given the changing dynamics of the online news environment, there is also a distinction to be made between public interest journalism and the organizations that produce it. Historically, most, although by no means all, quality journalism has been produced by traditional (quality) newspapers. However, new models for producing and funding quality journalism are emerging and more may emerge.

III. COMPETITION IN THE TRADITIONAL AND NEW MEDIA

The vast amount of news and other online content has intensified competition among news publishers, as well as competition for consumers' attention and time more generally. An increasing number of consumers, particularly younger people, now prefer to access news online, and the Internet offers diverse new platforms and channels whereby news can be accessed. Online-only news businesses have entered the Australian market, while time-saving innovations such as search engines and news aggregators assist consumers in discovering news content. For consumers, this has brought about an unprecedented level of choice and variety in news content, as well as convenience in terms of the channels via which news can be accessed.

The role of the Internet as a low-cost distribution channel has led to the dismantling of the geographic monopolies and other barriers to entry that historically shielded traditional print newspapers from competition. At the same time, the Internet has generated an enormous expansion in the supply of advertising space, and has thus disrupted the traditional business models for newspapers. These trends have enabled new online players to emerge, but have also contributed to a substantial reduction in the main source of funding for traditional media: revenues from classified and display advertising. These competitive forces are superimposed on an environment in which consumers' time and attention is increasingly scarce; even without new online competitors for the news space, the Internet would still have presented great challenges for traditional media.

IV. ECONOMICS OF QUALITY JOURNALISM

From an economic perspective, theory alone does not offer clear predictions as to how the Internet and its range of new technologies for accessing online content will affect the future production of quality and public interest journalism. As is often the case with two-sided markets, where agents compete for two or more types of purchasers, models yield ambiguous results, and are sensitive to the calibrations adopted.

What is clear, however, is that digitalization has brought many gains to media itself. The costs of producing and distributing content have been greatly reduced, as electronic distribution replaces the printing and cumbersome physical delivery of newspapers; and all media make extensive use of information technology and advanced communications in gathering, investigating and checking stories, as well as in converting raw information into "news." Productivity advances have occurred at every stage of the content production process, with public interest journalism (which involves finding, collating and testing large volumes of information) benefiting more than most forms of content.

In many respects, the Internet has enabled traditional newspapers to achieve potentially significant reductions in the costs of producing news. Historically, more than half of the costs of producing a typical newspaper (for instance, in the U.S. or in Germany) related to the costs of physically producing the paper, including the costs of raw material such as paper and ink, as well as the costs of physical distribution (OECD 2010).³ In contrast, the costs of content creation and editorial work only amounted to around 24 per cent of costs for a German newspaper and 14 percent for a U.S. newspaper. For newspapers, the trend towards online publishing will eventually all but eliminate print production and distribution costs. The Internet can also be expected to affect at least a share of the costs of producing quality news content, including the costs of investigative journalism, for instance costs relating to accessing documents or to checking and verifying primary news and facts. The ability to transfer digital content across the Internet has also enabled cost reductions from greater sharing of news content across metropolitan and regional newspapers. One of the by-products of these cost reductions is a substantial reduction of entry barriers and therefore a more diverse media landscape. New publishers of news have been able to establish themselves without incurring the large upfront costs of setting up print operations and distribution channels. Innovative revenue models are also emerging.

It is equally true, however, that the shift to a connected world

3 Organization for Economic Co-operation and Development, 2010. The evolution of News and the Internet, 11 June.

has greatly intensified the competitive pressures on the media. By lowering barriers to entry, digitalization has allowed both the emergence of new forms of content — such as blogs and on-line videos — and encouraged convergence between previously separated markets. In addition to competing more directly with each other, Australian newspapers must now compete for readers with publications overseas, while Australian broadcasters risk losing their viewers to competitors located tens of thousands of kilometers away. Equally, thanks to the development of their websites, high quality public broadcasters such as the ABC and the BBC, which previously did not compete directly with newspapers, now do, offering for free what commercial suppliers want (and ultimately need) to charge for. At the same time, competition for “eyeballs” has increased as time-poor consumers have an almost unmanageably rich menu of online options from which to choose; getting consumers interested in news has become a far tougher challenge.

It is not only rivalry over consumers that has become more intense. Competition for the advertising dollars that have traditionally funded the bulk of the costs of newspapers and other producers of public interest journalism has intensified. Like consumers, advertisers now have a much broader range of options for reaching audiences. Moreover, as more and more activities move on-line, “eyeballs” can be reached through an ever-greater range of platforms, breaking down any barriers that might once have insulated media advertising from other marketing channels. In choosing among those options, advertisers naturally place a substantial value on the ability to accurately target audiences, gauge their reactions and assess their return on investment. The technology that underpins the new digital platforms has provided the ability to tailor and measure advertising far more effectively than the traditional mass media could.

Dramatic changes have then taken place on the revenue side of quality journalism. To a greater or lesser extent, both traditional and new media are “advertiser-supported” and operate a “two-sided” business model.⁴ Platforms that operate in two-sided markets serve and compete for two distinct groups of customers who “need” each other in some way; the platform provides the means of enabling members of the two groups to capture the benefits from having access to one other. For media platforms, the two customer groups are readers or audiences, on the one side, and advertisers, on the other. In the case of newspapers, the platform creates content, the content attracts readers or audiences, who in turn attract advertisers who effectively pay for most (or all of) the content. The same fundamental relationship generally exists for online platforms, where the use of both the infrastructure and the search, aggregation, and content

services that are offered to consumers without a direct charge are paid for by advertising revenues.

Increased competition for readers, and the better “targeting” of specific segments of consumers facilitated by the internet, have resulted in the decline of traditional newspaper readership and a loss of print advertising revenues for these organizations. In addition, the widespread availability of news and other specialized content on the Internet has undermined the business model of traditional news organizations, which relied on cross-subsidizing the production of news with revenues sourced from other types of content. Twenty years ago, a reader interested in, say, sports, would have to buy an entire newspaper, consisting of a bundle of news (including on local, state or national politics, international affairs and many other topics), even if none of that other content interested them. Today, a reader who is interested in sports or any other topic can visit one of many specialized websites, which may additionally offer more in-depth or up-to-date information; he or she is no longer obliged to buy a newspaper or even visit a general news site.

By the same token, 20 years ago, an advertiser wishing to purchase ad space had a limited number of options: a small number of national and regional newspapers, magazines, radio stations or television channels. Moreover, given limited advertising “real estate,” that advertising was expensive. Today, the Internet has vastly expanded the space in which advertisers can reach consumers, advertisers can buy advertising cost-effectively (directly or through aggregators), in different and innovative formats (including photos and videos), and at a scale that suits their requirements. As the geographical monopolies held by traditional newspapers in terms of consumers and advertisers have been eroded, their most important sources of revenue — classified and display advertising — has migrated to online marketplaces and other online media.

All of these trends are apparent in the declining share of advertising revenues directed to traditional print media (newspapers and magazines), and the rapid growth in online advertising. In nominal terms:

- Advertising expenditures in print media have fallen consistently from a peak of around \$6.2 billion in 2005; as of 2016, print media expenditures were around \$2 billion, and are expected to fall further; while
- Digital advertising expenditures in Australia were zero until 2001, but grew to \$7.4 billion by 2016 (from around \$6 billion in 2015), and continue to climb.

4 Evans, D.S. and Schmalensee, R., 2005. The industrial organization of markets with two-sided platforms (No. w11603). National Bureau of Economic Research.

V. FUTURE OF QUALITY AND PUBLIC INTEREST JOURNALISM

Over any longer-term time horizon, the availability of quality or public interest journalism in Australia – as provided by the private sector media and specifically newspapers – requires that a sufficiently large subset of consumers is either prepared to pay directly for content, or is sufficiently interested in that content to attract adequate advertising revenues. There are some indications that at least a share of the audience is willing to pay for news content, although in Australia that share is undoubtedly lessened by the presence of public sector broadcasters and other private publishers, who offer their news content free of charge and who compete aggressively for online audiences with traditional (private sector) media.

Given the scale and pace of these changes, it is hardly surprising that the traditional media have struggled to adjust, with newspapers experiencing particular difficulties. Nor is it surprising that adjustment has been uneven, with some suppliers adjusting better than others. Nonetheless, focusing on those newspapers that seem to be best at navigating the new environment, we find that the strategies they have adopted have three key elements:

- **First**, the most successful publishers have harnessed technology to drastically reduce costs and improve quality. Computer-aided forms of investigative journalism are now widespread—for example, the recent exposés of the Panama and Paradise papers relied on online coordination within a global consortium of newspapers and on the types of database searches of which only national governments used to be capable. Quality improvements also apply to the services those publishers provide advertisers, for instance by working with platforms such as Google to make available highly detailed information about segment demographics and the behaviors of their readers.
- **Second**, they have placed greater emphasis on increasing subscription revenues, notably by expanding online sales, which reduces their reliance on advertisers and simultaneously makes them more attractive to advertisers. Properly managed pay-walls are critical in this respect, not only in motivating consumers to subscribe but also in restoring papers' control over the “bundle” of content consumers can access — to that extent at least partially reversing the unbundling of newspaper content which the emergence of digital platforms initially induced.
- **Third**, the most successful publishers have given increased prominence to unique content, thereby differentiating their offering from the enormous range of material the World Wide Web makes available. While that unique content can take many forms, those publishers who target the higher quality end of the market show every sign of viewing in-depth analysis and reporting

as being a crucial part of their unique offering to readers. That is not to downplay the disruptiveness of the current transformation. As with every major structural change, it will impose substantial costs — just as the development of very high speed printing presses reshaped the newspaper industry early in the twentieth century, eliminating many smaller papers and rewarding those that could secure scale economies; and just as the development of broadcasting and the shift from public transport to commuting by car reduced newspapers' circulation and led to the disappearance of evening papers (or at least of those that charge a price). But it would be foolish to consider increased productivity, subscription focused business models, and the shift from “me too” reporting to unique content — which together have led to a shrinkage in the size of some news rooms — as harbingers of the impending extinction of public interest journalism.

Looking forward, new online-only sources of quality and public interest journalism are likely to enter the market. In addition to the online-only news organizations that have set up business in Australia, business models that focus on local or investigative journalism have also been established overseas, with some seeming more viable than others.

VI. POLICY IMPLICATIONS

Whether public interest journalism is currently “undersupplied” relative to a “social optimum,” or whether the advent of the Internet will reduce the availability of public interest journalism, cannot be established with any degree of certainty. The emergence of successful new online-only publishing and payment models suggests that public interest journalism is not inevitably tied to the success of traditional (print) newspapers, and that there is a distinction to be made between public interest journalism and the organizations that have traditionally produced it. At the same time, the incentives for all media organizations to differentiate their product are likely to create a continuing role for public interest journalism in the product offering of content providers, especially those targeting the higher quality end of the product spectrum.

Any substantial reduction in the availability of public interest journalism would most likely occur in small markets, for instance in regional parts of Australia, where local publishers also face significantly more competition, including for advertising, than was historically the case. But even in small regional markets poor outcomes are not inevitable. Australian media organizations are investing and expanding into these markets to attract and build audiences. More sharing of journalistic infrastructure across regional news publications or other media

such as regional television may also enable cost savings that make smaller publications more viable. The recently passed Broadcasting Legislation Amendment (Broadcasting Reform) Bill 2017 will similarly enable savings from scope economies. There are also international lessons to be taken from publishers that have built successful business models that cater to small markets.

In any case, there are no simple policy solutions that would address a shortfall in public interest journalism, if it were thought to exist. There is no way of rolling back the forces of the Internet that have disrupted traditional publishing models (and to do so would ignore and potentially threaten the tremendous consumer and social benefits that technology has delivered). Market interventions in Europe have not been successful, while measures whereby the Australian Government becomes the arbiter of what constitutes worthwhile journalism will almost certainly raise concerns about political preferences and conflicts of interests:

- Mandated copyright payments have been tried and have failed in Europe. The effect of mandating some form of copyright payment in Germany and Spain was to either entirely eliminate news aggregation services for consumers, or to skew the competitive landscape to the disadvantage of smaller aggregators.
- The Australian Government provides a public subsidy (of around \$1.3 billion in 2016-17) to the public sector broadcasters, some share of which supports public interest journalism. One way of increasing the effectiveness of that funding would be to make it more contestable, for instance by allowing other media organizations to bid for the provision of news and journalism services. But direct measures to subsidize public interest journalism create the potential for a conflict of interest, since decisions about the extent of any subsidy and which organization(s) would receive it would be in the hands of those who might themselves be the target of investigative

journalism, and who might then have their own motives for (not) selecting one candidate organization or another.

- The alternative to offering ex ante public subsidies would be to offer ex post awards for investigative journalism achievements. Here too, there are potentially serious incentive problems, given that those who would appoint, say, a decision-making board, may select board members with a similar political outlook or interests. An aggressive, independent publisher may then risk not being favored in any selection process. Concerns around the heavy burden that Australia's defamation laws place on publishers was a consistent theme throughout the Senate Enquiry hearings. Australian law limits the defenses available to journalists, and the costs involved in defamation matters can easily run into the millions of dollars, prohibitive for publishers without substantial resources. One option therefore worth considering is to reform Australian defamation laws with a view to mitigating some of the significant costs and risks encountered by journalists and publishers of investigative journalism. Any legislative reform of this type would potentially be far-reaching and would have to be carefully considered. Yet if there exists a policy concern about the extent of open debate regarding matters of public interest, there may be a case for reviewing the balance of interests between protecting reputations, on the one hand, and the public interest in bringing to light potential malfeasance, on the other. ■

DATA IN EU MERGER CONTROL

By Miranda Cole ¹

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I. INTRODUCTION

Much has been said (and written) about “big data” as a new factor in European merger review. This focus of course begs the questions: “is this new”? Supermarket loyalty schemes and airline frequent flyer programs, for example, have been collecting significant amounts of data about us for many years. Weren’t there a number of cases over the last 20 years, both behavioral and transactional, in which data played a central role? In the behavioral context, we can go all the way back to *IMS Health*. That was essentially about whether rights to the 1860 brick-structure impaired the ability of others to collect and manage data in the form required by pharmacies. Not dissimilarly, almost ten years ago, *TomTom/TeleAtlas* addressed the combination of two significant sets of mapping data.

That said, some things have changed. Increasing volumes of data are being collected and analyzed by a wide range of companies (not only those active in the digital economy). The data collected and the results of data analysis are being used in new and increasing numbers of contexts. Interestingly, there are also increasing numbers of entities with access to comparable sets of some types of data (e.g. location data for smartphone users). However, the collection and use of data (even large sets of data) is not a new phenomenon. As Commissioner Vestager put it, the developments outlined above, do not suggest that we “[...] need a whole new competition rulebook...”²

Data can clearly be relevant in competition assessments, but it bears thinking about how and why. The mere collection or possession of data is not in and of itself anticompetitive. Nor are most of the uses made of data. In the merger context, the Commission’s recent cases have largely focused on whether data is monetized to fund a multi-sided platform, and, where it is, whether the acquisition of data that can be used for that purpose has the potential to be anticompetitive. In *Microsoft/LinkedIn* the analysis also looked at the potential use of data to improve an algorithm (or for “machine learning,” to use the language of the case). In other words, these assessments have largely focused on the use of the data as an “input” to one or more related markets, looking at the potential vertical effects of the acquisition of exclusive control over particular data sets.

There have, however, been a small number of cases that considered whether the combination of data sets could have anticompetitive horizontal effects. The first section below briefly considers these cases, with the remainder of the discussion focusing on the development of the approach to the potential vertical issues.

II. POTENTIAL HORIZONTAL EFFECTS

In both *TomTom/TeleAtlas* and *Nokia/Navteq*, the Commission considered potential markets for non-navigable and navigable digital map databases. Although the Commission conducted this analysis as part of its review of a vertical “stack” of markets – in which digital map databases were inputs to a potential intermediate market for navigation software and potential downstream markets for end user navigation apps and services – its analysis of the upstream digital map database markets was horizontal. This is hardly surprising, given that it was the combination of the datasets in this upstream market that was the trigger for the vertical foreclosure analysis. In *Nokia/Navteq* (the second of the two cases), the Commission assessed the horizontal overlap in the (following *TomTom/TeleAtlas*) two player market for navigable digital map databases – which, following the transaction, would be vertically integrated and competing with third parties to provide navigation services – looking at customer focus, market evolution, pricing, barriers to switching, and market entry). Ultimately, the Commission concluded that the merged company would be unlikely to pursue a strategy of closing off competitors – its ability to deny competitors access to map databases was limited by TeleAtlas. The Commission found that the merged company would lack incentives to close off supply of digital map databases to its competitors because a loss in sales of maps would not be compensated by increased sales of mobile telephones, and other mobile phone manufacturers would be able to compete with Nokia by working with independent developers of navigation apps or developing other features for their handsets.

Much more recently, in *Microsoft/LinkedIn*, the Commission assessed the impact of access to a combined data set (of infor-

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² Vestager, “Competition in a big data world,” DLD 16 Conference, Munich, January 17, 2016.

mation about individuals' jobs, career history and professional connections, email and other contacts and search behavior) on the potential online advertising market.³ The Commission identified two ways in which the combination of the two relevant data sets could raise horizontal issues: (i) the combination could increase market power in a hypothetical market for the supply of data or could increase barriers to entry/expansion in that market for actual or potential competitors that need the data to operate on that data market; and (ii) even if the parties had no intention or technical ability to combine the two data sets, they could have been competing prior to the transaction on the basis of the data that they each controlled (such that the concentration would eliminate that competition). This approach was entirely consistent with the Commission's approach to horizontal issues generally (including in the context of the analysis of intellectual property).

The Commission found that the transaction did not raise horizontal concerns because the parties did not (at the time) make data available to third parties for advertising purposes (such that the transaction would not limit the volume of data available to third parties for that purpose). It went on to find that there would remain large amounts of user data valuable for advertising purposes that was not under the exclusive control of Microsoft. The Commission concluded this analysis by noting that the parties were small players in the relevant market and only competed with each other to a very limited extent in the supply of online advertising inventory (and its possible segments).⁴

III. POTENTIAL VERTICAL EFFECTS

Most of the Commission's more recent data-related transactional reviews have focused on potential vertical effects that might arise from the use of the data as an input in related markets. The Commission has considered whether the data concerned cannot be replicated by rivals that and, without access to this data set, cannot compete in the related market.

A. Data as an Input

In its 2012 *UK mobile wallet* review, the Commission considered the impact of the transaction on the market for data analytics services. It characterized the data that would be collected or used by the joint venture to provide data analytics services as: (i) customer data collected by the mobile network operators (the parents of the joint venture) that was to be provided to the

joint venture in anonymized form, (ii) data collected through the mobile wallet, and (iii) data collected under contracts with merchants (e.g. data collected through loyalty schemes and transactions). Having identified the types of data and the market in which it could be an "input," the Commission considered whether this particular combination of data (personal information, location data, response data, behavioral data and browsing data) would represent a "unique" data set that would become an "essential input" for targeted mobile advertising, such that other providers of mobile advertising intermediation services would be dependent on the joint venture for essential inputs or would be unable to compete. The Commission found that the data available to the joint venture would, to a large extent, also be available to a number of other entities, including Google, Apple, Facebook, card issuers, reference agencies and retailers. As the Commission noted, customers give personal data of this type to (or consent to its use by) many different entities, such that this particular type of data is generally considered to be a "commodity." It concluded that, while the broad range of data collected by the joint venture would be very valuable for its mobile data analytics and advertising services, many other strong players offered comparable data sets, such that competing providers of advertising services would not be foreclosed from an essential input.⁷

In short, in its 2012 *UK mobile wallet* analysis the Commission analyzed whether parties to a concentration would enjoy a competitive advantage in a market through a data set augmented as a result of the concentration as a result of being able to improve or target its products or services (in a manner that competitors are unable to match). In 2016, Commissioner Vestager described exactly that analytical approach when she noted that the Commission would consider "whether companies control unique data, which no one else can get hold of, and can use it to shut their rivals out of the market."⁸

The Commission has effectively been applying the following analytical framework to assess whether the ability to control "input" data impedes effective competition in a related market in which that data is used for some time:

- Is the data that is the "input" indispensable (e.g. there is no actual or potential substitute);
- Are there technical, legal or economic obstacles to sourcing comparable data from elsewhere; and

3 Commission Decision of December 6, 2016 in Case M.8124 – *Microsoft/LinkedIn*.

4 Id. at paras. 179-180.

5 Commission Decision of September 4, 2012 in Case COMP/M.6314 – *Telefónica UK/Vodafone UK/Everything Everywhere/JV*.

6 Id. at para. 543.

7 Id. at para. 557.

8 Vestager, Data Ethics event on "Data as Power," Copenhagen, September 9, 2016.

- Does exclusive access to the data set(s) reserve to the merged entity (through the ability to exclude others) the market in which the input is used.

As noted above, there are strong parallels between the approach to assessing the potential for data to foreclose access, and the approach to assessing the potential for the assertion of intellectual property to foreclose. The framework set out above echoes that in *Magill*.⁹ Not surprisingly, the threshold for a lack of access to data to have the ability foreclose is also very high.¹⁰

B. Implementation and Evolution of the Commission's Analytical Framework

The Commission has applied this framework over the last six years, elaborating further on certain elements.

In 2014's *Facebook/WhatsApp* decision, the Commission considered whether Facebook would acquire data that was likely to strengthen Facebook's position on the online advertising market (or any segments of it).¹¹ Specifically, it looked at whether the acquisition would give Facebook access to additional user data (generated through WhatsApp use) that would enable Facebook to better target ads shown to Facebook and Instagram users who were also WhatsApp users.

The Commission noted that, because WhatsApp did not collect user data that was valuable for advertising purposes (it essentially collected user names (or nicknames), mobile phone numbers and a certain amount of metadata), the transaction would not increase the amount of data potentially available to Facebook for targeting advertising.¹² However, it went on to consider whether, even if Facebook were to collect and use data from WhatsApp for advertising purposes, there would be a potential anticompetitive effect. It found, to the contrary – that large amounts of valuable user data (not within Facebook's exclusive control) would remain available to Facebook's competitors. It also found that there would be a sufficient number of alternative providers of online advertising services – there were a significant number of other market participants that also collected user data.¹³ As a result, the Commission concluded that the

combination of the merging parties' data would not provide them with a non-replicable advantage, because competitors could obtain data and/or data analytics services in other ways (e.g. from data brokers or data analytics services providers, or by collecting and analyzing data themselves).

The Commission also followed this approach in *Verizon/Yahoo!*, looking at the data generated by users of Verizon and Yahoo!'s websites, apps and services that could be used by Verizon and Yahoo! to better target advertising on their websites and apps.¹⁴ It concluded that the combined data sets would not raise barriers to entry, not least because the parties were relatively small market participants. It went on to note that the parties' data sets were not unique.

Indeed, the market test in *Verizon/Yahoo!* suggested that the improved data capability resulting from the acquisition might enable the combined entity to better compete against its stronger rivals¹⁵ (as the Commission had also noted in its earlier *Microsoft/Yahoo!* review).¹⁶ In both of these cases, the Commission's assessment of the potential competitive effects of the data sets that the concentration would create concluded that the concentration would be pro-competitive, in that far from creating an ability to exclude, the increased scale post-transaction would create a more effective competitor.¹⁷ These two cases of course highlight the importance of market power in any input foreclosure analysis – if the entity acquiring the data lacks market power in the related markets in which the input can be used lacks both the ability and incentive to foreclose.

Most recently, in *Microsoft/LinkedIn*, the Commission considered for the first time the potential for data to "improve" a service, specifically through developing and offering improved functionality. It considered whether Microsoft would be able to adopt an input foreclosure strategy by denying access to "LinkedIn full data"¹⁸ to competing providers of customer relationship management ("CRM") software. In other words, it considered whether data could be used through "machine learning" to improve the merged entity's product while foreclosing competitors from making comparable improvements by denying those competitors access to the relevant data.

9 Joined Cases C-241/91 P and C-242-91 P, *RTE and ITP v. Commission* [1995] ECR I-00743.

10 See, for example, Case C-7/97, *Oscar Bronner GmbH & Co. KG v. Mediaprint Zeitungs und Zeitschriftenverlag GmbH & Co. KG* [1998] ECR I-07791 and Case C-418/01, *IMS Health GmbH & Co. OHG v. NDC Health GmbH & Co. KG* [2004] ECR I-05039.

11 Commission Decision of October 3, 2014 in Case M.7217 – *Facebook/WhatsApp*.

12 Id. at para. 166.

13 Id. at paras. 188-189.

14 Commission Decision of December 21, 2016 in Case M.8180 – *Verizon/Yahoo!*.

15 Id. at para. 93.

16 Commission Decision of February 18, 2010 in Case M.5725 – *Microsoft/Yahoo! Search Business*.

17 Id. at para. 184.

18 "LinkedIn full data" refers to all the data that LinkedIn collects, or could collect, and store about its users and their activity, such as professional details, connections, interests, posts, endorsements. See, *Microsoft/LinkedIn*, at para. 58.

The Commission initially noted that it was not clear that LinkedIn full data would be an “important input” (within the meaning of the Non-Horizontal Guidelines¹⁹) in the near future. Prior to the concentration, LinkedIn had not made its full data available to third parties for machine learning, and it was unclear whether it would have started licensing its full data absent the transaction. The Commission also stressed the potential pro-competitive effects of Microsoft using LinkedIn full data to improve its CRM software solutions (noting the possibility of new products and/or improvements to existing products).²⁰

Despite this, the Commission went on to conduct an “even if” analysis. It found that, even if LinkedIn data were to be used for machine learning in CRM, the concentration would not foreclose competing CRM providers. In particular, it concluded that the merged entity would not have the ability to implement a foreclosing strategy for a number of reasons. First, LinkedIn did not have sufficient market power in the hypothetical market for the provision of data for the purposes of machine learning in CRM software solutions. Second, European data protection rules limit Microsoft’s ability to process LinkedIn full data. Third, LinkedIn full data was not (and would not become in the relevant timeframe) an essential input for machine learning-enabled CRM functionality. At the time of the concentration, all major CRM vendors either had already started adding advanced machine learning-based functionalities to their CRM services or were planning on doing so in the near future. However, none of these offerings had been developed with or required access to LinkedIn full data. Fourth, LinkedIn full data would only be one of the many types of data available for this purpose, and there were many other possible source of data that could also be used for machine learning.²¹ As a result, the Commission concluded that it was unlikely that the use of LinkedIn full data for machine learning only in Microsoft’s CRM software would affect a “sufficiently important” proportion of Microsoft’s CRM competitors (such that there would be a significant price increase or reduction in incentives in the market to innovate).²²

IV. THE NATURE OF DATA ITSELF

The Commission’s consideration of the potential use of data in the markets for both online advertising and CRM software and productivity software solutions highlights a key feature of data – it can be used as an input to a range of purposes that fall into different relevant markets. It is important to identify the mar-

ket(s) in which the data is used as an input, since that frames the nature and scope of the potential alternative types and sources of data (and thereby the “uniqueness” or replicability of the data). There may well be alternative sources that are comparably useful in some related markets but not in others, for example.

In this context, it is also crucial to consider whether alternative data sets must contain the same data or whether it is sufficient that the alternatives be comparable. For example, it is implicit in the Commission’s cases to date about user data collected and used by providers of consumer apps that alternative data that can be used to improve online ad targeting need only be comparable. They do not need to provide exactly the same data about exactly the same users to represent viable alternative data sets. Similarly, the market investigation in *Microsoft/LinkedIn* made it clear that the data sets available to competing CRM solution providers are comparable, in the sense that they have comparable utility in enabling software like CRM to “learn.” There are, however, some, albeit very limited, circumstances in which the actual data must be replicated. For example, in the *Reuters Instrument Codes* case, the short alphanumerical codes that identify securities and their trading locations, could not be “replicated” by anything else. Similarly, there was no alternative to the “final price” used to value credit default swaps (which are traded over the counter not on exchanges) for entities creating indices based on those prices in the *Markit/ISDA* case.

It is important that analyses of the replicability of data carefully consider these issues. For that reason, the very term “big data” is not helpful in the development of the analytical framework, since its breadth and imprecision is inconsistent with the way we need to think about data in these analyses.

V. CONCLUSION

The cases to date suggest that there is a framework for assessing both the potential horizontal and vertical issues that concentrations focused on data can raise. They also make it clear that the Commission’s approach to identifying data that cannot be “replicated” has been measured and careful, as is its review of the potential for data to foreclose market access. ■

19 Guidelines on the assessment of non-horizontal mergers under the Council Regulation on the control of concentrations between undertakings, OJ C 265, 18.10.2008, p. 6–25.

20 *Microsoft/LinkedIn*, at paras. 246–250.

21 *Id.* at paras. 257–264.

22 Indeed, LinkedIn full data appears to be relevant only for machine learning in the CRM B2B marketing and B2B Sales segments, which accounted for less than 30 percent of the entire CRM software solutions. Moreover, LinkedIn was only one of many data sources available to competing CRM software providers. See, *Id.* at paras. 275–276.

DATA, INNOVATION, AND POTENTIAL COMPETITION IN DIGITAL MARKETS – LOOKING BEYOND SHORT-TERM PRICE EFFECTS IN MERGER ANALYSIS

By Terrell McSweeney & Brian O'Dea ¹

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I. INTRODUCTION

Often, it is possible to analyze the competitive effects of a merger by focusing on price and quantity. If a particular merger is likely to raise prices or reduce quantity, we can generally be reasonably confident that the merger is anticompetitive. The virtues of price and quantity are that they tend to be readily observable and to lend themselves to empirical analysis. Antitrust practitioners have a variety of tools to model price and quantity effects based on sales and diversion data.

For many digital markets, however, relying solely on traditional price-based modeling in merger analysis is likely to be ineffective. This is particularly true in two-sided markets, which involve two distinct sets of customers. Two-sided markets are nothing new. Newspapers have sought to attract both readers and advertisers for centuries. Banks have sought to attract both creditors and borrowers for millennia.

It is common in two-sided markets for users on one side to subsidize those on the other side. Digital markets are no exception. Indeed, digital products and services are often offered to customers for “free.” Examples include Internet search engines, social networks like Facebook and Twitter, booking engines such as OpenTable and Expedia, and even software such as Adobe PDF.

Modeling price effects on the “free” side of these digital markets is of little value. So how should antitrust enforcers proceed? The easiest approach would be to zero in on just the paying side of these markets in merger investigations and to treat that as a proxy for overall competition.

But such an approach would fail to capture substantial possibilities for harm to users on the “free” side of the market. Competition can be vigorous even where products or services are offered for “free.” Often that competition takes the form of innovation to provide customers with quality improvements or new products. Mergers in digital markets can threaten that competition – even in situations where users on the “paying” side of the market may be neutral or even supportive of the transactions. The U.S. antitrust agencies’ 2010 *Horizontal Merger Guidelines*’ section on innovation makes clear that enforcers should look at both sides of two-sided markets in the merger enforcement context and carefully examine the possibility for harm to inno-

vation and quality effects in mergers involving digital markets. Enforcers should also look closely for evidence that mergers in digital markets may eliminate potential competition and pursue cases aggressively in this area, including under Section 2 of the Sherman Act where appropriate. Finally, competition enforcers should be attuned to the competitive significance of data, which may operate as a barrier to entry that may be strengthened by mergers in digital markets.

II. THE COMPETITIVE SIGNIFICANCE OF DATA

It is no secret that digital markets run on data. Data are a competitive asset. Some data are public or can be obtained from data brokers for a fairly nominal cost. But a lot of valuable data are proprietary and can operate as a barrier to entry. Some have argued that the aggregation of data is unlikely to present a competitive problem because data are non-rivalrous, meaning that their collection or use by one company does not prevent simultaneous use by another.² While it is technically true that data are non-rivalrous, that fact may in practice prove irrelevant. Data of particular competitive significance may often be difficult and costly to obtain. The firm that does obtain those data will often have little incentive to share.

An incumbent firm may have a significant advantage over entrants if it possesses a valuable database that would be difficult, costly, or time consuming for a new firm to match or replicate. In those situations, competition enforcers can and should assess the competitive implications of data.

In some cases, a particular category of data may itself constitute an appropriate relevant market. In *Dun & Bradstreet/Quality Education Data* (2010), for example, the FTC found that the merging parties “were the only significant U.S. suppliers of

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2 See, e.g. Tucker & Wellford, *Big Mistakes Regarding Big Data*, ANTITRUST SOURCE 3-4 (Dec. 2014).

3 Analysis of Agreement Containing Consent Order to Aid Public Comment, *In the Matter of The Dun & Bradstreet Corporation*, Dkt. No. 9342, at 1 (Sept. 10, 2010), <https://www.ftc.gov/sites/default/files/documents/cases/2010/09/100910dunbradstreetanal.pdf>.

[K-12] educational marketing data.”³

More commonly, data may operate as a key input for the delivery of a digital product or service. The FTC treated data as an input in the market for electronic public records services for law enforcement customers in *Reed Elsevier-ChoicePoint* (2008). The parties were the largest suppliers of public records services and offered a combination of data and analytics capabilities to customers. Other firms also possessed relevant data. But the quality of those data (in terms of breadth and depth), and the analytics offered in connection with those data were insufficient to serve law enforcement customers, who demanded “the most complete database of public records” and “sophisticated search algorithms . . . that identify and display non-obvious relationships between records.”⁴ The case demonstrates that even when a firm is able to replicate a substantial share of the data collected by a market leader, that might still not be enough to compete effectively.

Nielsen-Arbitron (2013) is another case in which the FTC found data to be a significant barrier to entry.⁵ Nielsen and Arbitron possessed “the most accurate and preferred sources of individual-level demographic data for [television and radio] audience measurement purposes.”⁶ The FTC determined that the proprietary data of Nielsen and Arbitron were key inputs to offering downstream cross-platform audience measurement services – services, it should be noted, which had “yet to be developed and marketed.”⁷ The evidence demonstrated that it would be difficult for other firms to replicate the data generated internally by Nielsen or Arbitron. The consent required divestiture of assets related to Arbitron’s cross-platform audience measurement business, including data from Arbitron’s representative panel.

In short, data and analytics capability can be significant barriers to entry in digital markets. What’s more, those barriers may become self-reinforcing, which presents a serious issue from a competition perspective. The leading digital incumbents collect massive quantities of proprietary data on a real-time basis

and use those data continually to refine their offerings. For a new entrant, gathering “enough” data and building “enough” analytics capability to challenge an incumbent is likely to be a monumental undertaking. And that undertaking may become harder still as time goes by as network effects take hold. Moreover, increasingly sophisticated machine learning and artificial intelligence technologies that require massive data sets on which to train may raise additional barriers to entry. Roger McNamee of Elevation Partners, a private equity firm that focuses on technology markets, recently explained that once a firm reaches critical mass in a digital market, “the venture capital looks elsewhere” and that “[t]here’s no point taking on someone with a three or four years head start.”⁸ In light of these dynamics, competition enforcers should pay particularly close attention to whether a merger would enhance data-related barriers to entry – even if short-term price effects are unlikely.

III. ASSESSING INNOVATION AND QUALITY EFFECTS

While we all agree that innovation is important, there has long been a debate over the circumstances that best promote innovation. Joseph Schumpeter famously claimed that an innovator required market power to fund costly research and development.⁹ In contrast, Kenneth J. Arrow argued that competition best promotes innovation.¹⁰ Arrow observed that a monopolist has already largely maximized its earnings in a particular market. The monopolist has a limited incentive to innovate according to Arrow due to cannibalization – it will only gain from its innovation to the extent that it expands the market, whereas a firm with a smaller share stands to gain by capturing sales previously made by others.¹¹ The modern economic literature tends to suggest that most industries align more closely with Arrow’s view. As Professor Chad Syverson of the University of Chicago explained at the Federal Trade Commission’s 2016 microeconomics conference, the general pattern is that “competition tends to increase innovative activity.”¹²

Antitrust enforcers should and do incorporate innovation ef-

4 Analysis of Agreement Containing Consent Order to Aid Public Comment, *In the Matter of Reed Elsevier and ChoicePoint*, File No. 081-0133 (Sept. 16, 2008) at 2-3, <https://www.ftc.gov/sites/default/files/documents/cases/2008/09/080916reedelseviercpnal.pdf>.

5 Analysis of Agreement Containing Consent Order to Aid Public Comment, *In the Matter of Nielsen Holdings N.V. and Arbitron Inc.*, File No. 131-0058 (Sept. 20, 2013) at 3, <https://www.ftc.gov/sites/default/files/documents/cases/2013/09/130920nielsenarbitronanalysis.pdf>.

6 *Id.* at 2.

7 Statement of the Fed. Trade Comm’n, *In the Matter of Nielsen Holdings N.V. and Arbitron Inc.*, File No. 131-0058, at 1 (Sept. 20, 2013), <http://www.ftc.gov/system/files/documents/cases/140228nielsenholdingstatement.pdf>.

8 McNamee, as quoted in Ip, *The Antitrust Case Against Facebook, Google, Amazon and Apple*, WALL ST. J., Jan. 16, 2018, <https://www.wsj.com/articles/the-antitrust-case-against-facebook-google-amazon-and-apple-1516121561>.

9 See SCHUMPETER, CAPITALISM, SOCIALISM AND DEMOCRACY, VIII (3d ed. 1950).

10 Arrow, *Economic Welfare and the Allocation of Resources for Invention*, in THE RATE AND DIRECTION OF INVENTIVE ACTIVITY: ECONOMIC AND SOCIAL FACTORS 609 (1962), as cited in David McGowan, *Innovation, Uncertainty, and Stability in Antitrust Law*, 16 BERKELEY TECH. L.J. 729, 732 (2001).

11 Note that a monopolist would still have an incentive to innovate defensively if it anticipates that another firm could successfully innovate and displace its current market position. At the same time, depending on market characteristics, a monopolist may believe that it has sufficient time to identify innovative competitive threats and copy or coopt them before an entrant gains a substantial market presence.

12 Syverson, as quoted in McConnell, *Top Economists Debate Competition-Innovation Connection*, GLOBAL COMPETITION REV., Nov. 4, 2016, <http://globalcompetitionreview.com/article/1073077/top-economists-debate-competition-innovation-connection>.

fects into our analysis, and the U.S. antitrust agencies' revised 2010 *Horizontal Merger Guidelines* include a section that specifically addresses innovation effects.¹³ Innovation in the merger context may be a non-price dimension of current competition. It may also be an important factor in assessing the prospects for future competition, particularly where a firm is planning to enter a market with a new technology.

One argument made against aggressive antitrust enforcement in digital merger cases is that competition enforcers are unlikely to be able to assess the competitive effects of a particular transaction with sufficient accuracy and across a sufficiently long time horizon to justify antitrust intervention. While digital markets are often dynamic and fast-moving, the underlying market structure in these markets can prove to be remarkably durable – particularly once a firm achieves a dominant position. The dynamic nature of a market is not, by itself, a good reason for refraining from aggressive antitrust enforcement in these markets.

Issues of both innovation and market dynamism were front and center in the U.S. DOJ's challenge to Bazaarvoice's consummated acquisition of PowerReviews, a case that involved online product review and ratings platforms. The DOJ alleged that the two companies had previously engaged in "feature driven one-upmanship," and that the transaction "significantly reduced incentives to . . . invest in innovation."¹⁴ An exhibit featured company executives commenting on how Bazaarvoice and PowerReviews had "pushed each other to innovate in ways that help[ed] consumers and retailers."¹⁵

The court in *Bazaarvoice* acknowledged that the social commerce industry was "at an early stage of development, rapidly evolving, fragmented, and subject to potential disruption by technological innovations" and that "the future composition of the industry as a whole is unpredictable."¹⁶ Judge Orrick held, however, that "while Bazaarvoice indisputably operates in a dynamic and evolving field, it did not present evidence that the evolving nature of the market itself precludes the merger's likely anticompetitive effects."¹⁷

The FTC confronted the issue of innovation in the context of two-sided markets in its review of Zillow-Trulia. Zillow and Trulia both operated websites and mobile apps that provided consumers with free access to residential real estate listings and information. These consumer-facing offerings made up one side

of the two-sided platforms managed by Zillow and Trulia; the companies supported these free offerings by selling advertising products to real estate agents looking to reach those consumers.

FTC staff conducted a thorough investigation that yielded some important conclusions. On the paying side of the platform, staff investigated whether a merged Zillow-Trulia could profitably raise advertising prices to real estate agents. The evidence, however, suggested that real estate agents use numerous methods in addition to the platforms operated by Zillow and Trulia to attract customers.¹⁸ Staff also examined whether the merger would reduce the combined entity's incentives to innovate by developing new features attractive to consumers, ultimately concluding that it would not. While the Commission voted unanimously to close that case, if evidence in a future case suggests that a merger is likely to result in negative quality or innovation effects, the mere fact that those effects occur on the "free" side of the market should matter little to an antitrust enforcer.

IV. SAFEGUARDING POTENTIAL COMPETITION

Enforcers should look closely for evidence that mergers in digital markets may eliminate potential or future competition. The FTC has obtained numerous divestitures over the years in pharmaceutical markets based on potential competition concerns. Notably, the concern in these instances is not that any current measurable competition between the parties will be lost – but rather, that the loss of a potential entrant could lead to less competitive outcomes in the future. As noted above, this is the approach the FTC took in *Nielsen/Arbitron*, a case in which the FTC required a divestiture of competitive assets to protect future competition in the market for cross-platform audience measurement even though the service itself was still in development.

In 2015, the FTC challenged the merger between Steris and Synergy, the second and third-largest sterilization companies in the world. At the time of the merger, Steris was a leading provider of sterilization services in the United States. The Commission alleged that Synergy planned to enter the United States with a promising new x-ray sterilization technology. According to the Commission, the merger would harm future competition by terminating Synergy's entry plans, thereby depriving customers of additional competition and a promising new sterilization

13 See U.S. DEP'T OF JUSTICE & FED. TRADE COMM'N, 2010 HORIZONTAL MERGER GUIDELINES § 6.4.

14 Complaint, *U.S. v. Bazaarvoice, Inc.*, C-13-0133 ¶¶ 8, 62 (N.D. Cal. Jan. 10, 2013), <https://www.justice.gov/atr/case-document/file/488911/download>.

15 Plaintiff United States of America's Post-Trial Proposed Findings of Fact ¶ 198, *United States v. Bazaarvoice*, No.13-cv-00133 (N.D. Cal. Jan. 8, 2014) (filed Oct. 31, 2013), <http://www.justice.gov/atr/cases/f301400/301437.pdf>.

16 *U.S. v. Bazaarvoice*, 2014 U.S. Dist. LEXIS 3284 *34 (N.D. Cal. Jan. 8, 2014).

17 *Id.* *261.

18 See Statement of Commissioners Ohlhausen, Wright, and McSweeney Concerning Zillow, Inc. / Trulia, Inc., File No. 141-0214 (Feb. 19, 2015), https://www.ftc.gov/system/files/documents/public_statements/625671/150219zillowmko-jdw-tmstmt.pdf.

19 See *id.*

20 Complaint, *In the Matter of Steris Corp. and Synergy Health PLC*, Dkt. No. 9365 ¶¶ 68-70 (May 29, 2015), <https://www.ftc.gov/system/files/documents/cases/150529steris-synergypart3cmpt.pdf>.

technology.²⁰ The district court judge denied the FTC's request for injunctive relief. There was no dispute that Synergy had engaged in considerable planning to enter the U.S. market, nor that Synergy's decision to abandon those efforts came only after the company agreed to merge with Steris. The district court disagreed with the FTC, however, that the merger played a role in Synergy's change of heart. It thus held that the FTC had failed to show that Synergy "probably would have entered the U.S. contract sterilization market . . . within a reasonable period of time" absent the merger.²¹

Several commentators have suggested that the U.S. antitrust agencies haven't been aggressive enough in blocking acquisitions by dominant firms in the digital space. Some have gone so far as to call on the FTC to "put a hold on all future mergers and acquisitions by Facebook – and potentially Google and Amazon."²²

The FTC lacks the authority to categorically ban or "put a hold on" acquisitions by individual companies. Moreover, the *Steris* case illustrates the practical limitations of potential competition doctrine under the Clayton Act from a litigation perspective. The FTC lost that case even though the potential competitor was a large, established company with over half a billion in annual revenues that had engaged in definitive planning to enter the market at issue. Quite often, acquisitions in digital markets involve start-ups that have no or negligible revenues and no concrete plans to challenge the incumbent directly.

One concern in digital markets is that a powerful incumbent will identify firms that may pose only a small risk of potentially challenging its dominant position and acquire them. Let's say a dominant digital incumbent acquires 20 firms, each with just a five percent chance of someday competing directly against it. Much of the debate in this area has to do with disagreement over how *much* of a threat the upstart must present to the current incumbent to justify blocking a merger. If the question is whether it is probable or likely that any *individual* firm would have directly challenged the incumbent, the answer is clearly no.

At the same time, if we look at the twenty acquisitions collectively, there's a roughly 64 percent chance that at least *one* of those firms would have grown to challenge the incumbent but for its acquisition. Looking at each acquisition individually under Section 7 of the Clayton Act is likely to miss the forest for the trees.

To the extent that the acquiring firm possesses monopoly power in a relevant market, that firm's acquisitions should be evaluated as potential Sherman Act Section 2 violations. In 2017, the FTC challenged Mallinckrodt ADR's acquisition of synthetic therapeutic hormone assets from Novartis under Section 2. The FTC's complaint referred to the acquisition as a "defensive move" by Mallinckrodt to "extinguish[] a nascent competitive threat to its monopoly" for a therapeutic hormone product used to treat rare but serious disorders.²³ To settle the charges, Mallinckrodt agreed to pay \$100 million and to grant a license to a third party to develop the synthetic assets. While that case did not involve digital markets, it is a model for how the agencies should evaluate acquisitions involving dominant digital firms.

Provided the acquirer possesses monopoly power, the acquisition of a potential competitor is properly held to a considerably stricter standard under Section 2 of the Sherman Act than it would be under Section 7 of the Clayton Act. Areeda and Hovenkamp advocate for a "relatively severe approach" in this situation with a presumption of illegality:

It will commonly be difficult if not impossible to prove that a firm is a "unique" and "truly probable" potential entrant. And even if it seems clearly to be one of several firms that are "equally probable" potential entrants, it is important to preserve all those significant possibilities of eroding the monopoly and to prevent possible reinforcement of the monopolist's position via the assets acquired. Accordingly, we would adopt a relatively severe approach to holders of significant monopoly power: the acquisition of any firm that has the economic capabilities for entry and is a more-than-fanciful possible entrant is presumptively anticompetitive, unless the acquired firm is no different in these respects from many other firms.²⁵

Several points are worth highlighting. First, "more-than-fanciful" is a low bar. Evidence that a dominant digital firm was motivated by "defensive" reasons alone might show that the competitive threat posed by the acquired firm was "more than fanciful." Second, the acquired firm need not represent a truly unique threat to trigger condemnation; even if there are "several" firms more or less equally situated, the acquisition would still be presumed illegal. The burden would be on the incumbent to prove that there are in fact "many" firms that are indistinguishable from the acquired firm from a competitive perspective. More

21 *FTC v. Steris Corp.*, 133 F. Supp. 3d 962, 978 (N. D. Ohio 2015).

22 Lynn & Stoller, *How to Stop Google and Facebook from Becoming Even More Powerful*, THE GUARDIAN, Nov. 2, 2017, <https://www.theguardian.com/commentisfree/2017/nov/02/facebook-google-monopoly-companies>.

23 Complaint, *In the Matter of Mallinckrodt Ard Inc.*, Civil Action No. 1:17-cv-00120 ¶¶ 1, 8 (Jan. 18, 2017), https://www.ftc.gov/system/files/documents/cases/170118mallinckrodt_complaint_public.pdf.

24 See Press Release, Fed. Trade Comm'n, Mallinckrodt Will Pay \$100 Million to Settle FTC, State Charges It Illegally Maintained its Monopoly of Specialty Drug Used to Treat Infants (Jan. 18, 2017), <https://www.ftc.gov/news-events/press-releases/2017/01/mallinckrodt-will-pay-100-million-settle-ftc-state-charges-it>.

25 AREEDA & HOVENKAMP, ANTITRUST LAW: AN ANALYSIS OF ANTITRUST PRINCIPLES AND THEIR APPLICATION ¶ 701d (4th ed. 2015).

generally, this approach reflects a focus on preserving the *possibilities* of future competition and a concern that acquisitions by a monopolist may strengthen barriers to entry and make it more difficult for other firms to challenge the monopolist's position.

The challenge, from a litigation perspective, is to show that the dominant digital firm possesses monopoly power in some relevant market. Demonstrating "monopoly power" under U.S. case law is more art than science. Courts have generally held that a market share of 70 percent is sufficient to establish a *prima facie* case of monopoly power.²⁶ But courts have also found monopoly power for shares between 40 and 70 percent based on additional factors, such as strength of competition, entry barriers, and the ability to sustain supracompetitive profits. Entry barriers may be unusually high in digital markets given strong network effects and the self-reinforcing cycle of proprietary data aggregation and increasing analytics sophistication. Whereas the standard economic assumption is that the consolidation of power will attract new entry, statements by private equity and venture capital investors suggest that the consolidation of power in digital markets may actually chase capital away. Competition enforcers should be prepared to explain these unique features of digital markets to courts. We believe that they counsel in favor of challenging mergers in digital markets on Section 2 potential competition grounds even when the acquirer's nominal share is substantially below 70 percent, depending of course on the facts of the specific case.

Given the substantial difference between the standards applicable to a potential competition challenge under Section 7 of the Clayton Act versus Section 2 of the Sherman Act, certain problematic acquisitions may fall through the cracks. An acquirer may be dominant, but yet not quite a "monopolist" in the eyes of a court, and the prospects for future direct entry may be possible, but not quite "reasonably probable." If courts prove reluctant to recognize the unique features of digital markets and are overly restrictive in recognizing the harm associated with the loss of potential competition, a legislative solution may be required. That solution could involve explicitly recognizing and strengthening the actual potential competition doctrine under the Clayton Act (particularly given that the Supreme Court has failed to endorse the doctrine). Or it might involve clarifying the indirect evidence necessary to establish "monopoly" power under Section 2 of the Sherman Act. Finally, the FTC could potentially examine serial defensive acquisitions by a dominant digital firm as a course of conduct under its Section 5 "unfair method of competition" authority.

There would be costs associated with a more aggressive approach

towards potential competition. Acquisitions may generate efficiencies. And the ability of startups to "cash in" by selling to an incumbent may itself motivate some innovation. As Areeda & Hovenkamp explain, "if a dominant firm habitually purchases new rivals at attractive prices, investors would have an added incentive to enter."²⁷ Some argue that it would be shortsighted and harmful to block this avenue of monetization based on uncertain forecasts of whether a particular firm might, one day, grow to challenge its acquirer.

Nonetheless, as Carl Shapiro notes in the draft of a forthcoming paper, "there would be a big payoff in terms of competition and innovation if the DOJ and FTC could selectively prevent mergers that serve to solidify the positions of leading incumbent firms, including dominant technology firms, by eliminating future challengers."²⁸ The difficulty of identifying those mergers does not counsel against bringing *any* challenges in the face of uncertainty. Shapiro explains that "[s]ound competition policy would tolerate some false positives – blocking mergers involving targets, only to find that they do not grow to challenge the incumbent – in order to avoid some false negatives – allowing mergers that eliminate targets that would indeed have grown to challenge the dominant incumbent."²⁹ We agree and believe that such an approach is consistent with the underlying purpose of the antitrust laws. We would also note, in the context of digital markets, that the elimination of a firm that *would have* challenged a dominant incumbent is likely to be far more consequential from a competition perspective than the consumer welfare loss associated with an individual false positive.

IV. SAFEGUARDING POTENTIAL COMPETITION

Digital markets are often characterized by network effects, which can lead to barriers to entry that grow over time rather than diminishing. Close consideration of data, innovation, and potential competition are important for sound enforcement in digital markets. It is also worth thinking about other ways to reduce barriers to entry in these markets. For example, increasing consumers' rights to and control over their data might foster competition to improve quality of services in order to retain customer data. Regulations permitting consumers to withdraw their data in a usable format when they want to use a different service may also lower barriers to entry for less data-rich innovators. While these possibilities are outside the field of antitrust, antitrust is not a panacea for ensuring competitive markets. Well-tailored regulation can work hand in hand with antitrust enforcement to foster competition and innovation. ■

26 See ABA SECTION OF ANTITRUST LAW, ANTITRUST LAW DEVELOPMENTS 230 (8th ed. 2017).

27 AREEDA & HOVENKAMP, *supra* ¶ 701b.

28 Shapiro, "Antitrust in an Age of Populism," (Oct. 24, 2017, forthcoming in *International Journal of Industrial Organization*), <http://faculty.haas.berkeley.edu/shapiro/antitrustpopulism.pdf>.

29 *Id.*

MEASURING MARKET POWER IN MULTI-SIDED MARKETS

By Kate Collyer, Hugh Mullan & Natalie Timan¹

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I. INTRODUCTION

Digital markets are becoming an increasingly important feature of every economy. Online platforms are now commonly used to compare goods and services ranging from hotels to insurance, as well as to purchase diverse goods and services. Many of these platforms can be described as multi-sided, and understanding the nature of competition in such markets is crucial for competition authorities. This article² focuses specifically on the market power aspect of the nature of competition and provides practical and pragmatic suggestions on how to measure market power in such multi-sided markets. The paper draws operational conclusions on how to adapt existing enforcement and merger assessment tools to address some of the challenges posed by multi-sided markets.

The first section of the paper sets out some important features of multi-sided markets, including indirect network externalities, single-homing and multi-homing, price structure and tipping. The second section provides some practical steps in assessing market power in multi-sided markets and the final section sets out some measures of market power, and how they may need adaptation in multi-sided markets.

II. FEATURES OF MULTI-SIDED MARKETS

Multi-sided markets are platforms that match two or more groups of customers. Evans & Schmalensee (2007) define multi-sided platforms as having (a) two or more groups of customers; (b) who need each other in some way; (c) but who cannot capture the value from their mutual attraction on their own; and (d) rely on the catalyst of the platform to facilitate value creating interactions between them.

This section sets out some key features of multi-sided markets that may be important to an assessment of market power.

A. Indirect Network Externalities

As the definition makes clear, indirect network externalities (“INE”) are an important feature of multi-sided markets. The benefit one side of the market derives from being on the platform depends on the number of customers on the other side of the market, and vice versa.³ As a result, the demands of each group of customers are interlinked and this generates feedback

loops between them.

INE distinguish multi-sided markets from other markets such as a vertical supply relationship. These INE go in both directions, but are not necessarily equally strong in each direction. When there are strong INE in both directions, the interaction between these INE on both sides can create a feedback loop that may have second and third and fourth order effects. For instance, the ultimate effect of a price increase to one side of the market could be much greater if it led to further feedback loops with participants increasingly leaving both sides of the market as the market becomes less valuable to each group of customers. The strength of these feedback loops may enhance or constrain the platform’s market power and should be taken into account in any assessment.

B. Single-Homing and Multi-Homing

The extent of single-homing and multi-homing by customers on each side of the market is a key competitive aspect of multi-sided platforms (Rochet & Tirole, 2003). If customers on one side only join one platform, then customers on the other side can only access those customers by joining the same platform. Armstrong (2006) shows that this creates “competitive bottlenecks,” with single-homing customers on one side and multi-homing customers on the other, the platform competes aggressively for the single-homing customers and once they are on board it earns profits from customers on the other side who multi-home.⁴ Below, we suggest some practical ways to identify the extent of single- and multi-homing and thereby assess market power.

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2 An earlier draft of this paper was discussed at a Hearing on “Rethinking the Use of Traditional Antitrust Enforcement Tools in Multi-Sided Markets,” that was held by the OECD Competition Committee on June 22, 2017 in Paris.

3 For example, the more businesses that join a platform, then the more consumers find that platform to be attractive; and the more consumers join a platform, then the more businesses find that platform to be attractive. In addition, the platform may allow advertisers to promote themselves to consumers (or businesses, or both), which may be a third side of the market.

4 Firms compete aggressively on the side that uses a single network in order to charge monopoly prices on the other side that is trying to reach them. Armstrong, 2006, “Competition in Two-Sided Markets,” *The RAND Journal of Economics*, 37(3): 668-91. As a result, competition between platforms can have large price effects on the side of the market that uses a single platform and little or no effect on the side that uses multiple platforms. Rysman, 2009, “The Economics of Two-Sided Markets,” *Journal of Economic Perspectives* – Volume 23, Number 3: 125-143.

C. Price Structure

In a multi-sided market, the price structure reflects the inter-linked demands of the two groups of consumers and the need to get both sides on board. This often results in complex pricing where the price to each group of consumers does not reflect the marginal cost of supplying them.

To see the importance of price structure in multi-sided markets, consider the example of a platform supplying businesses on one side of the market and consumers on the other side. Assume that in this example consumers are more sensitive to price than businesses. In order to get consumers on board, the platform allows them to use the service without charge, but the businesses pay (a fixed fee and/or commission) to be present on the platform. The platform needs to set a fee to businesses that ensures their participation and takes account of the feedback loops between both sides of the market. Fewer businesses will choose to use the services of the platform at higher prices and this will reduce the attractiveness of the platform to consumers on the other side of the market, etc.⁵

As this example shows, the platform must be able to use the price structure to internalize the externalities arising from the INE. Platforms will always be able to control the price structure in markets where the two sides do not transact. However, in markets where the sides do transact, one side of the market can reflect some of the increased costs of doing business on the platform in the price charged for transactions. Businesses on one side of the market may pass-through the fees they are charged by the platform to the consumers on the other side of the market when transacting with those consumers through the platform. This may undermine the platform's price structure and limit its ability to internalize the externalities by facilitating value creating transactions between the two sides. For example, when a business passes through platform commissions to consumers, it will not consider how this may reduce consumers' demand for the platform's services, which then affects the demand of all business customers for the platform's services. It is only the platform which can take these externalities into account in its pricing to both sides of the market.

Therefore, in addition to the complex pricing that can be a feature of multi-sided markets, it will also be important to consider the degree of pass-through when considering the extent to which multi-sidedness affects the behavior of the platform.⁶

D. Tipping

Network externalities can lead to markets tipping to one, or a few, providers. The feedback loops that can arise when there are strong INE mean that multi-sided markets tend to be relatively concentrated. A multi-sided market may be less likely to tip the more differentiated the offering from competing platforms are and the more that customers on one or more sides multi-home. Scale economies and having a critical mass of consumers may also be important in determining the concentration of a market with platforms because they influence their financial viability. Once a market tips, the joint behavior of consumers and businesses may mean that the market power of the platform becomes well-established. It may take considerable coordination by both consumers and businesses to switch to another platform to restore competition. Such coordination may be unlikely in the absence of major technological changes in the sector. For these reasons, establishing whether there is a "first-mover-advantage" may be important in identifying current market power and the potential longevity and sustainability of this market power.

E. When the Multi-Sided Nature of the Market is Relevant to Assessing Market Power

This discussion suggests that any assessment of market power in multi-sided markets should take account of these features. The standard results from one-sided markets do not apply directly to multi-sided markets and any assessment of market power needs to take this into account explicitly (as we show below). Many of our standard tools for assessing market power are more complex to apply in multi-sided markets and may need to be adapted. At a minimum, this may involve simply taking into account the impact multi-sidedness has on the platforms' business strategy and decisions.

III. MEASURING MARKET POWER IN MULTI-SIDED MARKETS

In this section, we identify some practical approaches which authorities should consider when measuring market power in multi-sided markets. We discuss these practical approaches before going on to identify measures of market power.

A. Understand the Nature of Competition and Identify the Market(s) Where Market Power Relevant to the Theory of Harm is Expected to Arise

As a first step, an assessment of market power should start from a solid understanding of the nature of competition in the mar-

⁵ The platform may operate at a loss-making level for some time while it seeks to build up participation on both sides of the market.

⁶ We note that there is a debate as to whether a further distinction might be made between those markets where a platform is closely involved in the transaction (such as online travel agents or Amazon Marketplace), and those markets where the platform is less closely involved. Where a platform is closely involved in the transaction, it might be possible to define the market as the supply of the underlying product or service to consumers/customers, rather than as the supply of intermediation services. This would have consequences for the way in which market power were assessed. See BKartA, B6-113/15, Working Paper – "Market Power of Platforms and Networks," June 2016.

ket under consideration. It should then proceed with an analytical framework that takes account of any important features arising from the multi-sidedness of the market.

When thinking about market power and the effect of the conduct, it is important to identify clearly the nature of competition, including understanding the extent to which multi-sidedness with multiple consumer groups and interlinked demand affects market power. This is most likely to be where there are (strong) INE. In addition, in multi-sided markets, competitive constraints on market power may come directly or indirectly from any and all sides of a competing platform. For example, if a platform tries to engage in exclusion on one side, a rival may be able to respond with strategies on the other side. This suggests the need to look at all sides of the market when assessing market power.

The market power we are interested in also depends on the conduct or agreement that we are interested in. Therefore, measuring market power will be specific to the conduct under investigation. It is important, at least from an economics perspective, that market power is not considered in isolation from the conduct and the theory of harm.⁷

B. Take a Sequential Approach to Measuring Market Power in Multi-Sided Markets

Given the potential feedback loops between different sides of a market, a purist approach may suggest measuring market power by assessing all sides of the market simultaneously. However, this is likely to be a very challenging task and may not be practical, or even possible. When the multi-sided nature of the market appears important, then a reasonable and pragmatic approach is to start by using standard tools to assess market power for each side of the market separately and then factor in the indirect network effects by using a range of evidence and judgement. As we discuss below, care will be needed when using and drawing inferences from our standard tools.

IV. MEASURES OF MARKET POWER

In this section, we focus on identifying different measures of market power and explain how these relate to the conduct considered. These measures of market power are not exclusive to multi-sided markets. However, we explain how they may need

to be adapted when used in multi-sided markets and we identify some additional challenges that may arise in this context and where care will need to be taken when interpreting the results of standard measures.⁸

Any assessment of market power should be based on a thorough assessment of the competitive constraints and, in multi-sided markets, it will often be necessary to use multiple sources of evidence and always consider the linked nature of demand.

A. Market Shares and Concentration

Shares of supply can be a useful indicator of concentration and therefore market power, particularly for homogenous products or services. Their usefulness depends on how well the market is defined in the first place. There are challenges to using market shares as an indicator of market power in multi-sided markets, particularly for platforms.

The first challenge is how to measure market share. It is not always clear how shares should be computed to take account of the multi-sidedness of the market. The pragmatic solution would be to follow the sequential approach outlined above and to measure market shares on all sides of the platform. Market shares can then be evaluated within the overall analytical framework that takes account of the nature of the linked demands and the feedback loops. This flexible approach allows for more weight to be attached to high market shares on one side of the market if the evidence suggests, for example, that that side is prone to single-homing.

As with all markets, it will be necessary to think through which shares one wishes to measure. For example, it will not be possible to compute value shares on both sides if one side does not pay for using the platform. It may then be necessary to measure the number or value of transactions to calculate market shares. The standard problem of interpretation also arises with, for example, concerns regarding the relevance of market shares as measures of market power in markets where services/products are differentiated.

In multi-sided markets, it may be challenging to distinguish between customers and competitors because customers on one side of the market may also be competitors to the platform. For example, hotels that list on an online travel agent platform

7 Some questions that one might ask include: (i) How does any potential market power arise in a market that has indirect network effects and aspects of multi-sidedness? (ii) How is the behavior under investigation related to the market power in the relevant market? (iii) Are the network effects and multi-sided nature of the market important to the market power? (iv) Are the network effects and multi-sided nature of the market important to the behavior being investigated? (v) Is the behavior being investigated important for the network effects in the market (e.g. foreclosure which may lead to the market tipping permanently or preventing some potentially important innovation)?

8 As an aside we note that the cellophane fallacy presents a particular challenge when measuring market power in multi-sided markets, outside of the context of mergers. This standard problem may arise in any market because, in the presence of market power, prevailing prices would not equate to competitive prices and the application of the hypothetical monopolist test to prevailing prices is likely to lead to the relevant market being defined too broadly (i.e. including products which are not close substitutes at competitive prices).

might also compete directly for bookings. To take another example, third party sellers are customers on Amazon Marketplace and might also compete with Marketplace to attract direct sales. Care will be needed to ensure that customers and competitors are correctly identified and captured in measures of market shares.

Authorities typically aim to identify longer term measures of market power (e.g. sustained high levels of market share) rather than measures which take a snapshot of a market in flux or out of equilibrium. However, a multi-sided market with network externalities may be prone to tipping and authorities may wish to intervene earlier. In that context, care will be needed to identify whether indications of market power at a relatively early stage in the development of the market may lead to long term market power.

The challenges outlined above indicate that care needs to be taken when interpreting what market shares and, more generally, concentration indicate about market power in multi-sided markets.

B. Margins, Profitability and Pricing

As with market shares, measures of margins and profitability can be used to assess market power. Alongside the usual pitfalls of using such measures, multi-sided markets present additional problems given the existence of feedback loops and the complexity of pricing structures. Theoretical models have been developed that explicitly take account of the linked nature of demand in multi-sided markets and could provide a basis for measuring margins or profits. However, these models are complex and may not be practical to implement.

Following the sequential approach described above, it may be more pragmatic to measure margins or profits to each group of consumers and then take account of the strength of feedback loops and the implications for inferences regarding market power. This would need to be done carefully and recognizing that examining margins on one side of the market alone could give false indications of market power.

It may also be informative to consider changes in margins or profits over time. For example, it may be possible to examine whether commission levels have increased with concentration in the market, while service or quality levels, or marketing to the other side of the market, has not increased concurrently. This might provide an indication of market power.

C. Single-Homing vs Multi-Homing

The extent to which customers on one side of the market single- or multi-home affects the single- or multi-homing choice of customers on the other side of the market. Examining the extent of single- or multi-homing on each side can provide an indication of likely market power on each side.

Businesses will benefit from listing on more than one platform if they can play-off the platforms against each other or if listing on more than one platform expands the number of consumers in the aggregate. For example, a platform may be good at bringing consumers to the market who would otherwise not participate. If, on the other hand, some consumers single-home to platform A and others single-home to platform B, then businesses will find it necessary to use both platforms to reach both sets of consumers). However, single-homing by different groups of consumers, and multi-homing by none, can lead to market power for each platform.⁹

In markets where INE are strong it will be important to measure the extent of single- or multi-homing on each side of the market before considering any feedback loops. In practice, this can be done by gathering information on the following questions:

Competition in the Paid Side of the Market

- **What proportion of customers on the free side of the market single-home?** This will partially determine the extent of multi-homing on the paid-for-side. If there is single-homing by at least some consumers, then businesses have a strong incentive to list on that platform. Therefore, single-homing may give rise to the platform having market power.

- **What proportion of customers on the paid-for-side of the market single-home?** If all businesses single-home on one platform, it may be an indication of market power. However, multi-homing by the paid-for-side of the market does not imply the absence of market power if consumers single-home. This is because businesses may need to list on more than one platform to attract single-homing consumers.

- **How important is the platform for attracting customers to the paid side?** If a business on one side of the platform could attract consumers directly, without listing on the platform, then the platform is less likely to have market power.

⁹ There is an open question as to whether it makes sense to find all platforms as having market power. Furthermore, do they have market power in the supply of services to businesses (on one side of that platform) due to the single-homing of the consumers (on the other side of that particular platform); or do they have market power in the supply of services to the single-homing consumers? Finally, potential market power due to consumers single-homing on platforms may not arise if some/many consumers use tools to search across platforms – effectively multi-homing without necessarily visiting each platform. For example, metasearch sites used in the online travel industry would appear to support this form of multi-homing (although they appear to account for a rather small proportion of bookings).

- **How important is the platform for a consumer when choosing the product it wishes to purchase and the supplier it uses?** A platform is less likely to have market power if consumers can easily find and purchase their preferred product through other channels.

- **How loyal are consumers to one platform?** A platform is more likely to have market power if it has a loyal set of customers who are less willing to switch away from it.

- **How easy is it for consumers to search across competing platforms?** A platform is more likely to have market power the harder it is for consumers to search and compare deals across competing platforms.

Information on customer behavior and the extent of single- or multi-homing can be obtained from several sources:

- **Membership data** from market participants can be used to measure the extent of overlap of consumers, or businesses, between the different platforms.

- **Transaction data** from market participation can be used to measure the extent of overlap and the volume of transactions involved.

- **A survey** may provide a better understanding of customer behavior on all sides of the market and may provide insights into how they use the platforms to search for products and therefore the true extent of multi-homing. It may also provide insights into out of market constraints, where data may be unavailable.

- **Web server data** might be used to analyze user behavior within a specific domain or how consumers search across platforms. This could help the agency to understand:¹⁰ how many platforms a consumer visits and how often; whether the consumer considers direct sales from businesses, and their websites, and in what order this search occurs; how much time the consumer spends on the search and whether the level of engagement indicates more or less market power.

- **Search engine optimization** (“SEO”). For online platforms, a good understanding of the platforms’ SEO strategy may help assess market power. This might include the use of keywords and search terms and how they affect activity on the platform. In theory, the greater the overlap in search terms, the more likely the platforms are to target the same customers, and therefore the more likely they are to be competing closely.

D. Conduct

Sometimes the ability to engage in the conduct may be seen as an indicator of market power, particularly for conduct that would be unachievable or unprofitable in the absence of market power.¹¹

Clearly an important factor to consider is how the conduct may lead a market to tip when a market is already prone to tipping due to the INE.

E. Barriers to Entry and Expansion, Including Switching Costs as a Source of Market Power

As a final comment on measures of market power, we note that any assessment of market power should include an analysis of barriers to entry and expansion. A firm is unlikely to have market power in the absence of material/substantial barriers to entry, and barriers to large-scale expansion by fringe competitors.

The relevant types and extent of barriers to entry may depend on the context, but these are fairly well established. For example, one may consider the costs of entry and the extent to which these costs are likely to be sunk following entry. One may also consider how the costs of entry compare to the likely benefits of entry and how risky profitable entry would be. Profitable entry may be risky due to exogenous demand and supply shocks and/or due to strategic responses to entry by incumbents. None of these factors are unusual to multi-sided markets, but are likely to be relevant to them.

A consideration in multi-sided markets is the need for platforms to establish and market themselves to all sides of the market. The importance of this will depend on the strength of INE on the different sides of the market. The platform will need to attract all groups of customers and entry costs may differ for each side of the market. For example, it may be relatively easy to get

¹⁰ We would expect platforms to collect an array of data internally to monitor how it is performing against internal targets and against rivals. Therefore, internal documents and management information collected during the normal course of business are likely to provide useful insights.

¹¹ For example, the use of wide most favored nation clauses (“MFNs”) by some platforms might provide some indication of market power. Wide MFNs (also known as wide price parity clauses) state that the business’s price in all other sales channels (including other platforms) will never be lower than the price on the platform with which the business is contracting. This contrasts with narrow MFNs which state that the business’s price on its own website (or retail outlet) will never be lower than the price quoted on the platform. On the other hand, it may be that the conduct itself impacts upon other measures of market power. For example, a wide MFN reduces the incentive of businesses to pass-through a commission increase into their prices on that platform and, to the extent that it is passed through, it will be matched on other platforms. This means that the initial ‘feedback loop’, which one might consider in assessing market power, is no longer operational due to the wide MFN.

businesses to join a new platform when they only pay usage fees and so are willing to multi-home. However, the platform may need to make significant sunk investments in advertising and content in order to attract consumers to the platform.

Switching costs may also be important in multi-sided markets. Switching costs can create barriers to entry and expansion and, if there is a first-mover-advantage, can establish and strengthen a position of market power.

Switching costs may arise between platforms, or between platforms and direct sales, due to customer habits and convenience. For example, cookies used by the platform may mean that it is likely to show a consumer a selection closer to the consumer's preferences. The platform may hold the consumer's payment card details, meaning that these do not need to be re-entered every time a purchase is made. The platform has the contact details of the consumer and knows other personal information, so that the platform can contact the consumer with targeted promotions. Also, the nature of platforms is to reduce search costs and aid comparability. Therefore, consumers may be expected to prefer this to direct search across businesses' own websites.

Technological developments may weaken switching costs as they may lead to periods of intense innovation and businesses responding to technological changes, which can be destabilizing to established market power. On the other hand, technological developments may also enhance market power. For example, consumers may be less willing to shop around through organic browser searches when they have a convenient app on their phone. Moreover, consumers may not be willing to have numerous apps on their phones supporting similar services.

V. ASSESSING THE STRENGTH AND IMPACT OF INE AND FEEDBACK LOOPS

In this final section, we provide practical suggestions for assessing the strength and impact of INE and feedback loops. We have proposed a sequential approach, looking first at the market power on each side of the market separately, and second looking at constraints from the other side via the feedback loops. This second step requires us to assess the strength of feedback loops to examine whether competition from one side of the market constrains the platform in its price setting to the other side of the market. This will help establish whether market power on one side of the market exacerbates market power on another side or whether competition from one side might constrain the other.

This second step is important because, in the presence of strong

INE, simple one-sided measures of market power potentially underestimate the market power of the platform. For example, if the conduct in question undermined the ability of other platforms to compete effectively, then the presence of strong INE could lead to rapid concentration of the market and the exclusion of rivals. In this example, if the conduct leads to single-homing customers on one side of the market switching, the INE may simultaneously act to strengthen one competitor rapidly and weaken another rapidly. This could be the case even though static market shares, or other measures, may not indicate a position of significant market power or dominance.

It is also important to recognize that the potential benefits that a platform may gain from additional customers on one (or more) side(s) of the market may not always be large. The incremental value of gaining an additional customer is likely to vary depending on the number of customers already on the platform. Where a platform already has many potential members of the market on board, adding one additional business will not increase the value of the platform to the consumer as much as when the platform had fewer businesses on board. A platform might therefore put less effort into recruiting customers once it is more mature. This implies that the pricing structure on the platform is likely to evolve to reflect the benefit to the platform of additional customers and how this may change with the total number of customers on the platform.¹²

There are two key elements of an assessment of the strength and impact of INE and feedback loops. The first is the elasticity of demand (on all sides), which provides an indication of the sensitivity of that group of customers to a change in the relative price. The stronger the reaction to a change in price, the greater the impact the feedback loop can have. The second element is the responsiveness of demand (on all sides) to participation rates on the other side(s), which provides an indication of how a response from one side of the market to a change in price will affect demand on the other side of the market.

In some circumstances, it may be possible to assess the strength of the INE by simply looking at the rate of growth of the platform and considering how growth in one side of the market appears to give rise to growth in the other side of the market.

In practice, it may be difficult to measure these elements directly. However, the following are three potential sources of evidence that may provide information on the strength and impact of the INE and feedback loops:

- **Customer data.** If it is possible to collect transaction data

¹² In other words, at the margin, the strength of the INE is unlikely to remain constant.

for market participants, it may be possible to use econometric techniques to examine past customer responses to changes in, for example, platform prices that reveal their preferences. This data would allow for the direct measurement of both the elasticity of demand and the responsiveness of demand to participation rates on the other sides. There are a number of challenges with using such evidence, one being that it may be hard to ascertain the extent to which customers respond by choosing an off-platform “outside option.”

- **Econometric techniques.** A combination of evidence on revealed and stated preference could be used to model choice or estimate demand econometrically. It may also be possible to measure INE directly using econometric techniques.¹³ At present, the theoretical models we are aware of appear to make several simplifying assumptions and we do not know of any attempts by any competition authorities to do this.¹⁴

- **Survey evidence.** Surveys provide a promising source of information on the strength and impact of feedback loops. Although surveys suffer from the drawback of using stated preferences, they may have the benefit of not only providing useful insights into both elasticity of demand and responsiveness of demand to participation rates, they may also allow for the assessment of preferences for off-platform options. A survey of businesses, or customers on the paid side of the market, would allow an authority to gather information on a range of questions, including: the extent to which the businesses would pass through increases in the cost of transacting on the platform in the form of higher prices to consumers on the platform; the value to businesses of consumer participation and willingness to pay for different rates of participation; the availability of alternatives and the existence of any switching costs. This could be complemented with a survey of customers on the other side(s) of the market (i.e. consumers), which could include questions on how they would react to changes in the relative price of transactions on the platform, the value to these consumers of business participation and how different business participation rates would affect their willingness to use the platform.

These sources of information are unlikely to provide all the evidence required to assess the strength and impact of INE and feedback loops. The authority will need to make an assessment in the round and using multiple sources of evidence, including internal business documents.

VI. CONCLUSION

The advent of the digital economy and the prominence of on-line platforms makes understanding the nature of competition in multi-sided markets crucial. This article has sought to give pragmatic suggestions for practitioners seeking to measure market power in multi-sided markets.

As a first step, it is necessary to assess the importance of INE. Where these are strong, the multi-sided nature of the market will be relevant to the conduct under investigation. As a second step, the pragmatic approach of assessing market power in each side of the market and then taking into account feedback loops will capture the multi-sided nature of the market and its relevance to the conduct under investigation.

We have suggested several practical ways of measuring market power in the different sides of the market, taking account of the added complexity and potential biases that arise in using these measures in multi-sided markets. We have also suggested ways of directly measuring the indirect feedback loops. We recognize that it will not always be possible to measure the feedback loops directly. Where this is not possible, thinking through how these loops are likely to work in practice will provide a good qualitative way of capturing the impact INE will have on market power. ■

¹³ Through simultaneous demand estimation it may be possible to model demand on all sides of the market and back out the cross elasticities in order to measure the INE.

¹⁴ See, for example, Song, 2015, “Estimating platform market power in two-sided markets with an application to magazine advertising.” Working Paper.

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