DIGITAL MARKETS GUIDE

Editors
Claire Jeffs, Danny Sokol and Susan Ning

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Publisher's Note

The digital economy is transforming day-to-day lives, with an exponential rise in connectivity not only between people but also between vehicles, sensors, meters and other aspects of the Internet of Things. Yet, as noted by Claire Jeff and Nele Dhondt in their introduction, even as the Fourth Industrial Revolution accelerates, traditional concerns are keeping pace and the digital economy has also been a powerful force, increasing competition across a broad sweep of products and services. Practical and timely guidance for both practitioners and enforcers trying to navigate this fast-moving environment is thus critical.

The first edition of the *Digital Markets Guide* – published by Global Competition Review – provides just such detailed guidance and analysis. It examines both the current state of law and the direction of travel for the most important jurisdictions in which international businesses operate. The *Guide* draws on the wisdom and expertise of distinguished practitioners globally, and brings together unparalleled proficiency in the field to provide essential guidance on subjects as diverse as how pricing algorithms intersect with competition law and antitrust enforcement in certain tech mergers – for all competition professionals.

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United States: Platform Economics and Mergers

Juliette Caminade and Emily Cotton[1]

Introduction

Following two decades of rapid proliferation and growth, two-sided and multi-sided digital platforms[2] have come under increased antitrust scrutiny, first by lawmakers and regulators in the European Union and United Kingdom, and more recently by those in the United States who voice concerns with the perceived dominance of these technology companies.

The acquisition strategies of the largest technology platforms have become a particular focus in the US. For example, on 9 July 2021, President Biden issued a sweeping 'Executive Order on Promoting Competition in the American Economy',[3] which, according to the White House press release, included a call to the Department of Justice (DOJ) and the Federal Trade

1 Juliette Caminade and Emily Cotton are vice presidents at Analysis Group, Inc. The authors would like to thank David W Owens, Juan Carvajal, Nandita Krishnaswamy and Henrik Palmer for their assistance. The opinions expressed are those of the authors and do not necessarily reflect the views of Analysis Group, its affiliates or its clients.

2 We refer to two-sided platforms generically in the remainder of this Chapter, including also multi-sided platforms (i.e., digital platforms with more than two sides of users).

3 The White House, 'Executive Order on Promoting Competition in the American Economy', 9 July 2021, www.whitehouse.gov/briefing-room/presidential-actions/2021/07/09/executive-order-on-promoting-competition-in-the-american-economy/.

Commission (FTC) to 'enforce the antitrust laws vigorously and [recognise] that the law allows them to challenge prior bad mergers that past Administrations did not previously challenge'.[4]

The Executive Order singled out 'internet platforms', many of which are large digital two-sided platforms, and their acquisition strategies, announcing 'an Administration policy of greater scrutiny of mergers, especially by dominant internet platforms, with particular attention to the acquisition of nascent competitors, serial mergers, the accumulation of data, competition by "free" products, and the effect on user privacy'.[5] The Executive Order's list of issues requiring 'particular attention' suggests an underlying assumption that digital two-sided platforms have distinctive features that make the competitive dynamics of platforms different.

Economists widely agree that some characteristics specific to two-sided platforms warrant special consideration. For example, economists generally agree that indirect network effects – which refer to the effect that the speed and nature of the uptake on one side of the platform have on the other side of the platform – play a central role in shaping the business models of digital platforms and affect pricing structures and competition.[6] However, there is far less agreement on whether the same tools that have been used to gauge competitive effects for traditional businesses can be successfully and effectively adapted for digital two-sided platform business models, given those specific characteristics.

This rift is visible even within the DOJ and the FTC, the two US bodies authorised to conduct merger reviews. Throughout 2021, a narrow 3:2 majority of FTC Commissioners voted to rescind policies that they believed no longer reflected the new 'market realities' of digital businesses, including the recent unilateral withdrawing of the Vertical Merger Guidelines, issued jointly with the DOJ in 2020.[7] This majority has been led by the newly installed Chair Lina

4 The White House, 'FACT SHEET: Executive Order on Promoting Competition in the American Economy', 9 July 2021, www.whitehouse.gov/briefing-room/statements-releases/2021/07/09/fact-sheet-executive-order-on-promoting-competition-in-the-american-economy/.

5 The White House, 'Executive Order on Promoting Competition in the American Economy'.

6 See, for example, Federal Trade Commission, 'Transcript of FTC Hearing 3: Oct. 15, Panel 1: The Current Economic Understanding of Multi-Sided Platforms', 15 October 2018, www.ftc.gov/system/files/documents/public_events/1413712/ftc_hearings_session_3_transcript_day_1_10-15-18_0.pdf, pp. 21–23.

7 In November 2020, the FTC and the DOJ under the Trump administration had jointly issued an update to the 1994 Vertical Merger Guidelines.

M Khan, with the two dissenting Commissioners – Noah Joshua Phillips and Christine S Wilson – often releasing strongly worded statements critiquing the majority's stated economic rationales for the rescissions.[8]

For example, in their formal statement announcing the FTC's withdrawal of the Vertical Merger Guidelines,[9] the majority (with Commissioners Rohit Chopra and Rebecca Kelly Slaughter joining Chair Khan) wrote forcefully against the common argument that pro-competitive merger efficiencies could outweigh an apparent reduction in competition in a vertical merger:

> *efficiencies are only relevant insofar as they shed light on the level of post-merger competition, which must be considered across many dimensions – price, quality, innovation, variety, service, and more.*[10]

Consequently, the FTC majority stated: 'Until new guidance is issued, the FTC will analyze mergers in accordance with its statutory mandate, which does not presume efficiencies for any category of mergers.'[11]

The FTC majority argued for establishing 'bright-line rules' for vertical merger reviews that 'focus judicial attention on readily observable market characteristics rather than complex economic modeling and self-interested testimony about future business plans'.[12] In particular, they wrote, 'Our merger policy review will expand on the work done in 2020 to consider various features that often characterize firms in the modern economy, including in digital markets.'[13]

In contrast, in their minority dissent, Commissioners Phillips and Wilson argued that the majority 'ignore the burden shifting framework adopted by the circuit courts recognizing that procompetitive effects may render a

8 See, for example, Federal Trade Commission, 'Dissenting Statement of Commissioners Noah Joshua Phillips and Christine S. Wilson', 15 September 2021; Federal Trade Commission, 'Dissenting Statement of Commissioners Noah Joshua Phillips and Christine S. Wilson on the Statement of the Commission on the Withdrawal of the Statement of Enforcement Principles Regarding "Unfair Methods of Competition" Under Section 5 of the FTC Act', 9 July 2021.

9 Federal Trade Commission, 'Statement of Chair Lina M. Khan, Commissioner Rohit Chopra, and Commissioner Rebecca Kelly Slaughter on the Withdrawal of the Vertical Merger Guidelines', 15 September 2021.

10 ibid., p. 4.

11 ibid., p. 2.

12 ibid., p. 5.

13 ibid., p. 7.

competition-eliminating merger procompetitive on the whole'[14] and that 'the 2020 Guidelines . . . are well founded, based on accepted economic principles, reflect precedent from courts and the agencies, and were the result of robust public comment'.[15]

Previously, in their dissent to another majority decision, Commissioners Phillips and Wilson shed more light on their position:

> *We are concerned that the majority's hostility to the rule of reason signals a desire to exclude consideration of business justifications and efficiencies when assessing the legality of scrutinized conduct. Failing to take into account the benefits of conduct to consumers (and denying businesses the opportunity to defend themselves) opens the door to condemning procompetitive conduct to the detriment of everyday Americans . . .*
>
> *The consumer welfare standard has long been the lodestar of our antitrust laws, embraced and explained by courts and the antitrust enforcement agencies alike. And for good reason: it is administrable and promotes predictable outcomes that seek to permit procompetitive (and condemn anticompetitive) conduct . . .*
>
> *In reality, the [consumer welfare] standard is not narrowly focused on price to the exclusion of other factors that benefit consumers. Antitrust enforcement based on consumer welfare considers product quality, product variety, service, and innovation.*[16]

The fundamentally opposing views of the two factions within the FTC are representative of the wider debate over the competitive dynamics of digital platforms. The debate extends far beyond whether the consumer welfare standard should remain the yardstick by which anticompetitive conduct is measured. It points instead to a fundamental disagreement over what the standard itself is measuring and how it should be used.

Overall, both sides in this debate may agree that the unique characteristics of digital markets raise challenges in the assessment of potential competitive concerns. Where the positions diverge is on whether these challenges can be addressed using modified but standard economics-based merger review tools, or require an entirely new set of tools instead.

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14 Federal Trade Commission, 'Dissenting Statement of Commissioners Noah Joshua Phillips and Christine S. Wilson', p. 3.

15 ibid., p. 4.

16 Federal Trade Commission, 'Dissenting Statement of Commissioners Noah Joshua Phillips and Christine S. Wilson on the Statement of the Commission on the Withdrawal of the Statement of Enforcement Principles Regarding "Unfair Methods of Competition" Under Section 5 of the FTC Act', pp. 6–7, footnotes excluded.

In this Chapter, we explore the key economic features of two-sided digital platforms that underlie this debate. We begin by briefly explaining the core characteristics of two-sided platforms and the concept of indirect network effects, and then discuss ways in which the characteristics of two-sided platforms inform the analysis of several topics central to merger reviews, including barriers to entry; pricing structures; market definition; competitive effects; nascent competition; and challenges in structuring effective remedies. In each section, we provide excerpts from case rulings, policy statements and academic literature to illustrate the different sides of the debate over which types of analytical tools are appropriate to gauge competition in a two-sided digital market.

Two-sided platforms and indirect network effects

What makes digital two-sided platforms different? Economists have coined the term 'two-sided platform' to characterise a business that acts as an intermediary to encourage and facilitate interactions between two distinct sets of users.[17] The platform could be a physical location, such as a farmers' market that brings together producers and consumers; or it could be a digital infrastructure, such as a ridesharing app, that connects both sides.

In all cases, the platform serves as a 'matchmaker', bringing together two (and sometimes more) types of users from the different sides and facilitating their interactions, primarily by reducing the costs for users to find the best matches (search costs) and lowering the costs to interact after the match is made (transaction costs).[18]

Two-sided digital platforms are characterised by strong indirect network effects. As the number of users grows on either side of the platform, the value of the platform increases for users on the other side. This creates a feedback loop: an increase in users on one side spurs an increase on the other, which in turn attracts more users on the first side, and so forth.[19]

For example, passengers generally find a ridesharing platform more valuable when more drivers are available, because the passengers can obtain rides faster. Similarly, drivers find the platform more valuable when more passengers are available, because they can then provide more rides per hour.

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17 David S Evans and Richard Schmalensee, *Matchmakers: The New Economics of Multisided Platforms* (Brighton, MA: Harvard Business Review Press, 24 May 2016), p. 210.

18 Andrei Hagiu, 'Strategic Decisions for Multisided Platforms', *MIT Sloan Management Review*, 19 December 2013, pp. 1–2.

19 Kate Collyer, Hugh Mullan and Natalie Timan, 'Measuring Market Power in Multi-Sided Markets', OECD Rethinking Antitrust Tools for Multi-Sided Platforms, 2018, p. 2.

As the network grows, the value of the platform increases as it further reduces search and transaction costs for both sides. In the ride-sharing example, the platform reduces search costs because the process of matching drivers and riders becomes more efficient.[20]

Ultimately, the success of these businesses depends on the platform's ability to coordinate the presence of users on each side of the platform and unlock the value of the resulting indirect network effects. Neither side can exist on its own because there are no interactions unless both sets of users connect through the platform.[21]

How the interdependence of the two sides of a platform and associated indirect network effects affect factors such as entry barriers, pricing, market definition and the nature of current and future competition is important for merger review.

Network effects and potential barriers to entry

While the existence of indirect network effects in digital marketplaces is widely agreed on, there is considerable divergence over the potential for such dynamics to create durable barriers to entry. On the one hand, FTC Chair Khan has argued that they do. In her 2017 article 'Amazon's Antitrust Paradox', she wrote that 'the practical barriers to successful and sustained entry as an online platform are very high, given the huge first-mover advantages stemming from data collection and network effects.'[22] In its August 2021 first amended complaint for injunctive relief against Facebook, the FTC also argued that Facebook had achieved a 'dominant position in the U.S. personal social networking market due to significant entry barriers, including direct network effects and high switching costs'.[23]

However, others maintain that this view is not nuanced enough, and that recent economic research points out that simply having many users is not sufficient for a modern platform to enjoy sustainable market power. For instance, platform economists Andrei Hagiu and Julian Wright have the following words of caution:

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20 Geoffrey G Parker, Marshall W Van Alstyne and Sangeet Paul Choudary, *Platform Revolution: How Networked Markets Are Transforming the Economy and How to Make Them Work for You* (New York: W. W. Norton & Company, 2016), p. 95; *Uber Technologies, Inc.*, Form S-1, filed 11 April 2019, p. 9.

21 David S Evans and Michael D Noel, 'Defining Markets that Involve Multi-Sided Platform Business: An Empirical Framework with an Application to Google's Purchase of DoubleClick' (working paper No. 07-18, Reg-Markets Center November 2007), p. 3.

22 Lina M Khan, 'Amazon's Antitrust Paradox', *The Yale Law Journal* 126 (2017), p. 772.

23 Complaint, *Federal Trade Commission v. Facebook, Inc.*, No. 1:20-cv-03590 (D.D.C., 19 August 2021), ¶ 211.

> *By now, every investor and entrepreneur on the planet is aware that network effects, when present, can be a great source of defensibility and unfair competitive advantage. However, many investors and entrepreneurs don't go beyond superficial statements such as 'startup X has compelling long-term defensibility via marketplace network effects' (actual quote). That's a problem because there is huge variance in terms of how weak or how strong network effects are, and that ultimately determines whether or not they create a defensible moat.*[24]

Proponents of this position often observe, first, the extent to which users 'multi-home' – that is, use competing platforms concurrently – acts as a constraint on indirect network effects.[25] For example, shoppers typically carry multiple credit cards, and merchants almost always accept multiple types of credit cards. Consequently, the different card issuers compete to entice cardholders to use their cards over others, for instance by offering rewards. A similar argument can be made that ad-supported digital platforms compete for users' attention, which is distributed across different platforms, resulting in competition across the platforms.[26]

These economists typically point out that multi-homing is greatly facilitated by the cloud-based nature of new digital platforms, which are not locked in to any one technology or hardware. For example, the advent of cloud computing has made it possible for users to easily share documents across different operating systems, or to download multiple competing apps, such as for messaging or ride-sharing, on a single device.

Second, some economists note that indirect network effects can contribute not only to the fast rise, but also to the fast decline of platforms, leading to 'rapid instability' rather than 'entrenchment'.[27] They show that the same feedback loop that can generate network growth also works in reverse. If users start to leave

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24 Andrei Hagiu and Julian Wright, 'Seven Questions to Evaluate Network Effect Moats', Platform Chronicles (blog), 1 December 2020, https://platformchronicles.substack.com/p/network-effects-and-defensibility.

25 See, for example, Catherine Tucker, 'Network Effects and Market Power: What Have We Learned in the Last Decade?', Antitrust 32, No. 2 (Spring 2018). See also Andrei Hagiu and Julian Wright, 'How Defensible Are Zoom's Network Effects?', Platform Chronicles (blog), 15 December 2020, https://platformchronicles.substack.com/p/how-defensible-are-zooms-network.

26 See, for example, David S Evans, 'Attention to Rivalry among Online Platforms and Its Implications for Antitrust Analysis' (Coase-Sandor Institute for Law & Economics Working Paper No. 627, 2013).

27 Tucker, 'Network Effects and Market Power', pp. 73–76.

one side, attracted by what they perceive to be better options or driven away by declining quality and utility, the value of the network to the other side decreases and drives those users away, and so on. The rapid development of instability also complicates the analysis of both near-term and longer-term market shares.

Third, advances in technology have lowered start-up costs for digital firms, accelerating the speed at which the competitive landscape can change.[28]

This perspective leads some to conclude that a dynamic and fast-changing competitive landscape makes it harder to predict even near-term changes in market share and competitive harm, as small entrants may apply competitive pressure. For instance, in an article on 'Antitrust Mergers Analysis in High-Technology Markets', Ilene Knable Gotts and co-authors note 'the possibility of radical technological innovation calls into question the accuracy of existing market share as a means of determining market power and future market performance'.[29] This uncertainty would make current market shares not indicative of competitive significance or market power, and profitability metrics may be less relevant, if at all. As in all industries, nascent competition must be carefully considered, and the form and nature of the competitive threat in the digital world may be less evident if the technology and the landscape are quickly going through dramatic changes.

Pricing structures for two-sided platforms

Pricing, both actual and predicted, is often a key factor in merger review, as articulated in the Horizontal Merger Guidelines.[30] However, traditional pricing analysis is focused on a price charged to a unique set of customers and generally is concerned with price levels. Pricing in the context of two-sided platforms is different from what is typically observed in more standard settings and often includes multiple prices, multiple parties and a pricing structure that is purposefully designed to promote transactions on the platform.

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28 ibid.

29 Ilene Knable Gotts, Scott Sher and Michelle Lee, 'Antitrust Merger Analysis in High-Technology Markets', *European Competition Journal* 4, No. 2 (December 2008), p. 463. See also Elena Argentesi, Paolo Buccirossi, Emilio Calvano, Tomaso Duso, Alessia Marrazzo and Salvatore Nava, 'Merger Policy in Digital Markets: An Ex-Post Assessment' (Deutsches Institut für Wirtschaftsforschung Discussion Papers No. 1836, 2019).

30 US Department of Justice and the Federal Trade Commission, 'Horizontal Merger Guidelines', 19 August 2010.

First, because two-sided platforms have to balance demand across both sides of the platform, economists have long recognised that pricing can often be asymmetric.[31] Academics have documented how two-sided platforms have relied on a variety of pricing mechanisms or structures to generate revenue, depending on the platform's business model and the characteristics of users on each side.[32] For instance, the restaurant reservation platform OpenTable charges fees to restaurants, while diners can use it for free and even benefit from rewards.[33]

Similarly, payment processing services such as credit cards companies often charge fees to merchants while enticing some customers to use their credit cards through rewards programmes. The US Supreme Court, in its June 2018 decision in *Ohio et al. v. American Express Co. et al.* (*Amex*), distinguished such platforms from ad-supported (and non-digital) platforms like newspapers:

> *Because the interaction between the two groups is a transaction, credit-card networks are a special type of two-sided platform known as a 'transaction' platform. The key feature of transaction platforms is that they cannot make a sale to one side of the platform without simultaneously making a sale to the other.*[34]

This was the first matter in which the Supreme Court considered the factors defining anticompetitive conduct for a two-sided digital platform. The Court went on to highlight the importance of indirect network effects for evaluating competitive pricing practices:

> *Unlike traditional markets, two-sided platforms exhibit 'indirect network effects' which exist where the value of the platform to one group depends on how many members of another group participate. Two-sided platforms must take these effects into account before making a change in price on either side, or they risk creating a feedback loop of declining demand. Thus, striking the optimal balance of the prices charged on each side of the platform is essential for two-sided platforms to maximize the value of their services and to compete with their rivals.*[35]

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31 David Evans, 'Policy Roundtables: Two-Sided Markets', *OECD Journal of Competition Law and Policy* 20 (2009), p. 24.

32 See, for example, Parker et al., *Platform Revolution*, pp. 106–127.

33 *OpenTable, Inc.*, Form 10-K, filed 21 February 2014.

34 *Ohio et al. v. American Express Co.*, 138 S. Ct. 2274 (2018), p. 1.

35 ibid., p. 1.

The Court acknowledged that credit card companies employ asymmetric pricing structures to build up and maintain both sides of the platform. The two sides (in this case, cardholders and merchants) have different incentives to join the network, and so the price of participation may be higher on one side than on the other. For example, credit card holders are charged interest fees on monthly balances, but these interest charges may be waived, and in fact cardholders often are offered rewards (cash back, airline miles, etc.) that result in a negative pricing model. The merchants on the other side are incentivised to accept a particular card when a large enough group of consumers use that card; the merchants are then charged processing fees for each transaction.

In other sectors, economists have pointed out that asymmetric pricing is the foundation of business models for ad-supported digital platforms, which provide free content to one set of users to attract paying advertisers on the other side that seek access to users' 'eyeballs'.[36] These types of businesses include social and professional networking platforms such as Facebook, Twitter, Instagram, TikTok and LinkedIn, as well as internet search (Google) and mapping (Google Maps, Waze).[37]

Pricing asymmetry raises complex questions when attempting to predict price changes in the context of a merger review. In the most obvious case, for ad-supported platforms, the existence of 'zero-price' products provided to one set of customers makes a traditional pricing analysis of only that side impractical.[38] In this context, measures other than price, such as quality or innovation, often are invoked to gauge competitive effects of proposed mergers.[39] More generally, the existence of two sets of prices can make the already difficult task of predicting how a merger will affect prices more complex.

Another complicating factor is that current or near-term profitability may not be a primary competitive driver in digital markets, especially for start-ups or newer entrants. This creates challenges for merger reviews, which typically focus on pricing or profits as a proxy for competition.[40] Specifically, revenue for

36 See, for example, Evans, 'Attention to Rivalry'.

37 ibid.

38 The World Bank, 'Approach to Market Definition in a Digital Platform Environment', *Digital Regulation Platform*, 26 August 2020.

39 John M Newman, 'Antitrust in Zero-Price Markets: Foundations', *University of Pennsylvania Law Review* 164, No. 149 (2015), p. 198.

40 See, for example, Abdo Riani, 'Is Sacrificing Profitability in Favor of Growth a Good Idea for All Startups?', *Forbes*, 3 August 2021, www.forbes.com/sites/abdoriani/2021/08/03/is-sacrificing-profitability-in-favor-of-growth-a-good-idea-for-all-startups/?sh=2cbf61ab5c49.

two-sided platforms depends on their ability to effectively facilitate interactions between the two sides of users.[41] This is only possible after the platform has achieved critical mass on both sides. For this reason, a two-sided platform's initial focus may not be on revenue at all, but rather on attracting enough users on both sides.[42] For example, the ridesharing platform Uber initially relied on heavy subsidies until it had attracted enough riders and drivers to generate adequate revenue streams.[43]

Platform economists often emphasise the importance of understanding pricing in two-sided platforms as part of a dynamic platform development strategy that may both set lower prices initially to grow the platform and set different prices on the two sides of the platform. As a result, while engaged in the evolving debate, many economists recognise that pricing may be less informative than in more traditional settings and that if pricing is to be used as a proxy for competitive pressure, it must be done considering both sides of the platform (as articulated in *Amex*) and with the life cycle of the platform in mind.

Market definition after *Amex*

Although not a merger case, *Amex* offered the US Supreme Court an opportunity to lay out their reasoning behind the core issue of market definition in competition analyses of two-sided markets:

> *Applying the rule of reason generally requires an accurate definition of the relevant market. In this case, both sides of the two-sided credit-card market – cardholders and merchants – must be considered. Only a company with both cardholders and merchants willing to use its network could sell transactions and compete in the credit-card market. And because credit-card networks cannot make a sale unless both sides of the platform simultaneously agree to use their services, they exhibit more pronounced indirect network effects and interconnected pricing and demand. Indeed, credit-card networks are best understood as supplying only one product – the transaction – that is jointly consumed by a cardholder and a merchant. Accordingly, the two-sided market for credit-card transactions should be analyzed as a whole.*[44]

41 Evans and Schmalensee, *Matchmakers*, p. 58.

42 Riani, 'Is Sacrificing Profitability in Favor of Growth a Good Idea for All Startups?'

43 Kevin Roose, 'Farewell, Millennial Lifestyle Subsidy', *The New York Times*, 8 June 2021, www.nytimes.com/2021/06/08/technology/farewell-millennial-lifestyle-subsidy.html; CB Insights, 'How Uber Makes Money Now', 19 November 2020, www.cbinsights.com/research/report/how-uber-makes-money/.

44 *Ohio et al. v. American Express Co.*, 138 S. Ct. 2274 (2018), p. 2.

The *Amex* decision posited that for transaction markets both sides of a two-sided transaction platform should be considered simultaneously when defining relevant markets. Assessing just one side (e.g., merchants) or the other (e.g., cardholders) in isolation would lead to incorrect conclusions.

Economists and antitrust practitioners alike have noted that a narrow approach to market definition focused exclusively on the platform may ignore some commercial realities.[45] For example, firms that are not two-sided platforms may put competitive pressure on two-sided platforms.[46] For instance, an electric scooter rental firm could constrain a ride-sharing platform (on the rider side), even though the scooter rental firm is not two-sided.

The *Amex* decision has informed other courts' reasoning in subsequent antitrust investigations of two-sided platforms, including merger reviews, but in some cases the application of *Amex* has been stretched beyond the narrow definition of two-sided transaction markets, which were the sole focus of the Supreme Court's deliberations. How this decision may be applied going forward continues to be debated. For example, in the proposed merger between Sabre and Farelogix, the US District Court for the District of Delaware ultimately decided that Sabre was a two-sided platform, and although Farelogix provided competing services on one side of that platform because it was not two-sided, it was not included in the same relevant market under *Amex*.[47]

Competitive effects

Although the two sides of a platform are interdependent when defining the relevant market, the two sets of users may not value the platform similarly, and the potential competitive effects on the consumer experience may differ on each side.

Over the past 30 years, regulators have assessed market power primarily using proxies for competitive effects, such as setting thresholds for market share and equating pricing power and large margins with market power. However, because two-sided platforms facilitate interactions in a dynamic digital world characterised

45 See, for example, Michael L Katz and A Douglas Melamed, 'Competition Law as Common Law: *American Express* and the Evolution of Antitrust', *University of Pennsylvania Law Review* 168, No. 2061 (2020): pp. 2087–2088, 2102.

46 ibid., p. 2102.

47 *United States v. Sabre Corp., Sabre Glbl Inc., Farelogix Inc., and Sandler Capital Partners V, L.P.*, 452 F. Supp. 3d 97 (D. Del., 8 March 2020).

by indirect network effects, evidence of market power may not exclusively reside in measures of market share, price and mark-up, particularly for platforms that offer 'zero-price' services to one side of users.[48]

Typically, the cost structure of two-sided platforms differs from that of traditional 'linear' businesses because they are not resellers that purchase and transform goods or services that they then resell.[49] As discussed above, completing a transaction over a digital infrastructure is the 'product'. As such, two-sided platforms may have lower marginal costs and higher mark-ups compared to traditional businesses.[50]

For platforms with free services, competition for the free side of the platform must be on non-financial attributes such as service quality and innovation, thereby making it difficult to use traditional tools for assessing competitive effects, such as an SSNIP test. For this reason, anti- or pro-competitive effects of mergers may result from non-price dimensions.

Measuring changes in quality or innovation then becomes a key determinant of competitive effects. For example, in the proposed acquisition of the online food delivery service Postmates by Uber (completed in December 2020), both companies claimed that all users of the multisided platform (consumers, restaurants and drivers) would benefit from an improved platform with an expanded list of restaurants.[51] The benefits from improved search and transaction efficiencies were favourably weighted against the reduction in the number of competing platforms in any of the localised markets.[52]

On the other hand, in its November 2020 challenge of the proposed merger of CoStar and RentPath – two internet listing service (ILS) platform businesses that match owners of large residential apartment complexes with qualified renters – the FTC noted that they:

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48 Gotts et al., 'Antitrust Merger Analysis in High-Technology Markets', p. 463; Argentesi et al., 'Merger Policy in Digital Markets'; Newman, 'Antitrust in Zero-Price Markets', p. 198.

49 See, for example, Parker et al., *Platform Revolution*, pp. 6–7.

50 David S Evans and Michael Noel, 'Defining Antitrust Markets When Firms Operate Two-Sided Platforms', *Columbia Business Law Review* 2005, No. 3 (2005).

51 Uber Technologies, Inc., 'Uber to Acquire Postmates', 6 July 2020, https://investor.uber.com/news-events/news/press-release-details/2020/Uber-to-Acquire-Postmates/default.aspx.

52 Federal Trade Commission, '20201244: Uber Technologies, Inc.; Postmates Inc.', 9 November 2020; Competition Policy International, 'DOJ Clears Uber-Postmates $2.65B Deal', 10 November 2020, www.competitionpolicyinternational.com/doj-clears-uber-postmates-deal/.

> *compete fiercely to attract prospective renters through their marketing efforts and by improving their ILS websites' features, ease of use, and quality of information. The Acquisition will eliminate this head-to-head rivalry and reduce competitive pressure on the ILSs to improve their offerings to renters, leading to lower quality and forgone innovation.*[53]

Here, too, the debate continues. On one side are concerns that traditional tools and approaches may overly focus on reduced costs and future competition, and fail to protect current competition. Economists on the other side highlight the dynamic nature of innovation in digital markets and the unintended consequences of a shift in the tools used for merger review.

The acquisition of nascent or potential competitors

The fast-changing nature of competition in the digital world has also led to concerns by certain economists and antitrust practitioners that purchases of start-ups by 'dominant' digital platforms would fly under the reporting thresholds or not be assessed properly.[54] In this view, in a dynamic industry often characterised by large losses in earlier stages of a firm but rapid growth from strong indirect network effects, market shares and profitability indicators may not be good indicators of future competitive effects.[55]

For this reason, some US regulators and lawmakers have followed the lead of regulators and courts in Europe and have begun focusing on 'killer acquisitions'.[56] For instance, in its review of the now-abandoned proposed merger between Visa and Plaid (a company that connects consumers' online bank accounts with merchants' banks to make payments directly), the FTC raised concerns over the incentive it alleged Visa would have to degrade the quality of Plaid's offering following the acquisition, or even kill it entirely.[57]

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53 Complaint, *In the Matter of CoStar Group, Inc., a corporation and RentPath Holdings, Inc., a corporation*, No. 9398 (Federal Trade Commission, 30 November 2020), ¶ 53.

54 See, for example, Khan, 'Amazon's Antitrust Paradox', p. 792; Argentesi et al., 'Merger Policy in Digital Markets', p. 2.

55 Gotts et al., 'Antitrust Merger Analysis in High-Technology Markets', p. 463.

56 See, for example, The White House, 'Executive Order on Promoting Competition in the American Economy'.

57 Complaint, *United States v. Visa Inc. and Plaid Inc.*, No. 3:20-cv-07810 (N.D. Cal., 5 November 2020).

In addition, as noted in this Chapter's introduction, US authorities have called for retroactive review of previously approved mergers involving 'dominant' digital platforms, on the grounds that they were undertaken primarily to foreclose entry from developing competitors.

Even when mergers result in successful products, large platforms have been accused of purchasing new, small and unprofitable players that threaten future competition. For example, on 19 August 2021, the FTC refiled a complaint seeking to unwind Facebook's acquisitions of Instagram and WhatsApp on the grounds that they were anticompetitive acquisitions, even though the agency had originally allowed them to proceed in 2012 and 2014, respectively.[58]

In February 2020, the FTC ordered Google, Amazon, Facebook, Apple and Microsoft to provide information about acquisitions they made between 2010 and 2020 that were below the reporting thresholds. The stated goal of these orders is to:

> *help the FTC deepen its understanding of large technology firms' acquisition activity . . . and whether large tech companies are making potentially anticompetitive acquisitions of nascent or potential competitors that fall below HSR filing thresholds and therefore do not need to be reported to the antitrust agencies.*[59]

However, some economists, such as Will Rinehart of the Center for Growth and Opportunity, as well as some regulators, emphasise that an *ex post* analysis of the failure or success of an acquired product may be misleading since many products simply will fail on their own, while the success of other acquired products may, in fact, be owing to the merger itself.[60] For instance, an article from the Information Technology and Innovation Foundation argued that 'the large majority of acquisitions are motivated by the desire to purchase either the technology or the talent of the specific firm, rather than to stifle a potential rival' and that 'these acquisitions also often benefit both parties by integrating new technology into a broader network and helping the new firm scale up. They also benefit consumers

58 Complaint, *Federal Trade Commission v. Facebook, Inc.*, No. 1:20-cv-03590 (D.D.C., 19 August 2021).

59 Federal Trade Commission, 'FTC to Examine Past Acquisitions by Large Technology Companies', 11 February 2020.

60 See, for example, CB Insights, 'The Top 12 Reasons Startups Fail', 2021.

by disseminating innovations more broadly.'[61] For example, some proponents of this view maintain that Instagram's success was owing to its integration with Facebook.[62]

The recent warnings by Shapiro and Hovenkamp[63] and by Blair, et al. made in the context of the debate about vertical mergers, highlight the risk of a blanket policy on the part of regulators of systematically blocking mergers simply because they are made by large technology platforms: 'The best way for antitrust law and policy to distinguish potentially anticompetitive vertical mergers from potentially procompetitive or completely benign ones is not, as some populists have argued, to simply ban all such mergers.'[64] Instead, they recommend the use of 'careful case-by-case analysis using existing empirical tools . . . to assess the likely economic effects of a given vertical merger.'

Remedies

The greater unpredictability of the digital world and the greater degree of complexity involved with defining relevant markets and assessing competitive effects for digital two-sided platforms also pose challenges for defining appropriate potential remedies.

For instance, recently, FTC Chair Khan advocated blocking mergers of nascent competitors outright rather than attempting to impose, in her view, unwieldy and unworkable structural or behavioural remedies.[65] Although historically the DOJ and the FTC have preferred to rely on structural remedies such as asset or line of business divestitures,[66] divestitures make little sense if competition

61 Joe Kennedy, 'Monopoly Myths: Is Big Tech Creating "Kill Zones"?', Information Technology and Innovation Foundation, 9 November 2020, www.itif.org/publications/2020/11/09/monopoly-myths-big-tech-creating-kill-zones.

62 See, for example, Jonathan Jacobson and Christopher Mufarrige, 'Acquisitions of "Nascent" Competitors', *The Antitrust Source*, August 2020, pp. 6–7.

63 Carl Shapiro and Herbert Hovenkamp, 'How Will the FTC Evaluate Vertical Mergers?', *ProMarket*, 23 September 2021, https://promarket.org/2021/09/23/ftc-vertical-mergers-antitrust-shapiro-hovenkamp/.

64 Roger D Blair, Christine S Wilson, D Daniel Sokol, Keith Klovers and Jeremy A Sandford, 'Analyzing Vertical Mergers: Accounting for the Unilateral Effects Tradeoff and Thinking Holistically About Efficiencies' (research paper, University of Florida Levin College of Law Legal Studies 27, No. 20–35, 7 July 2020), p. 764.

65 Federal Trade Commission, 'Chair Lina M. Khan's Response to Senator Elizabeth Warren on Behavioral Remedies', 6 August 2021, www.warren.senate.gov/imo/media/doc/chair_khan_response_on_behavioral_remedies.pdf.

66 Bureau of Competition of the Federal Trade Commission, 'Negotiating Merger Remedies: Statement of the Bureau of Competition of the Federal Trade Commission', January 2012,

is not localised in geographic markets, or if the value to both sides depends on maintaining a critical mass of users on both sides of the platform to preserve or create indirect network effects.[67]

The US regulatory agencies have acknowledged this dilemma in the relatively few remedies they have imposed on mergers of two-sided digital platforms. For example, in 2011, Google sought approval for its acquisition of ITA Software. ITA had developed a leading airfare pricing and shopping system called QPX, which collected and organised airline flight schedules, pricing and seat availability. QPX underlay the pricing and shopping capabilities of a range of online travel service providers, including the airlines themselves.[68]

The DOJ was concerned that Google's acquisition threatened to foreclose access to an 'essential input' for potential competitors in the travel search market. (Google had not launched its own dedicated travel search capability, but was planning to do so.) Consequently, the consent decree required the merged entity to continue to invest in research and development for improving QPX, to prevent Google from foreclosing others from the competitive advantage of innovation. The DOJ also required *Google/ITA* to continue to renew existing contracts and enter into new contracts with other travel service providers at fair and reasonable terms.

The *Google/ITA* consent decree is an early example of authorities' emerging view of data as a competitive asset and a dimension to consider during merger reviews. ITA had been doing business with many different competitors, and so had amassed a good deal of pricing, financial and even strategic data on individual companies. The DOJ required Google to build a firewall around the competitor data it acquired through ITA and prevent it from being used by Google's own team developing flight search capabilities. Since then, the European Commission has been more active in considering data-related remedies, as, for example, in the *Google/Fitbit* merger.[69]

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www.ftc.gov/system/files/attachments/negotiating-merger-remedies/merger-remediesstmt.pdf.

67 Michael R Baye and Jeffrey Prince, 'The Economics of Digital Platforms: A Guide for Regulators', *The Global Antitrust Institute Report on the Digital Economy* 34 (11 November 2020), pp. 1279–1280.

68 *United States v. Google Inc.*, No. 1:11-cv-00688 (D.D.C., 5 October 2011).

69 Aoife White, 'EU's Vestager Hits Back at Critics of Google Deal Approval', *Bloomberg*, 24 June 2021, www.bloomberg.com/news/articles/2021-06-24/eu-s-vestager-hits-back-at-critics-of-google-deal-approval.

In June 2021, Margrethe Vestager, the European Commission's joint competition and digital commissioner, remarked that she expected such remedies to become more common, noting the similarities to traditional structural remedies involving physical assets.[70] In the US, a similar view is found in President Biden's July 2021 Executive Order that, among other things, encourages antitrust agencies to pay particular attention to data accumulation during merger reviews.[71]

If structural remedies are impractical, regulators may turn more often to behavioural remedies, such as those used in the acquisition of Postmates by Uber in 2020. There, the DOJ required that Uber waive exclusivity provisions between Postmates and about 800 restaurants in certain regions for a period of six months after the merger.[72]

Conclusion

Digital platforms have changed the ways we work, communicate, make purchases, get our news and information and socialise. They also have raised debates over the most effective ways to evaluate competition and enforce antitrust policies to account for complicating factors like indirect network effects, 'zero-price' services and the speed of change in digital markets.

In merger reviews, regulators historically aimed to protect competition to ensure consumer welfare. The debate now is primarily over whether the drivers of competition in digital markets require the regulators to use different tools to assess competition.

The ongoing debate will not be over soon, as economists and regulators line up to either support or oppose the use of traditional merger review processes and methodologies in the context of digital platforms. As they do so, it is important to keep in mind that many of the questions being raised in 2021 have also been raised before, as traditional software and point-of-sale payment solutions arose in the 1980s–90s.

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70 Margrethe Vestager, 'Defending competition in a digital age' (speech, Florence Competition Summer Conference, Florence, Italy, 24 June 2021), https://ec.europa.eu/commission/commissioners/2019-2024/vestager/announcements/defending-competition-digital-age_en.

71 The White House, 'Executive Order on Promoting Competition in the American Economy'.

72 Uber Technologies, Inc., 'Letter from Senior Vice President, Chief Legal Officer, and Corporate Secretary Tony West to Hon. Makan Delrahim Assistant Attorney General', 6 November 2020, http://edgar.secdatabase.com/2766/155278120000556/e20565_ex99-1.htm.

What we can say with more confidence is that continued innovation in the marketplace, as well as in economic analyses and thinking, are certain to keep this discussion lively for years to come.

APPENDIX 1

About the Authors

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Juliette Caminade specialises in the economic analysis of US and EU competition issues, as well as economic impact and policy studies. Caminade's experience includes Federal Trade Commission merger reviews and US Department of Justice antitrust investigations, as well as private litigation matters; and has covered multiple industries, with a focus on technology markets and healthcare markets (including healthcare provider markets, insurance, and pharmaceuticals). Additionally, she has conducted or supervised dozens of economic impact studies and authored multiple white papers on matters pertaining to economic and industrial policy in technology markets. Caminade's articles have appeared in publications such as the *Journal of Competition Law & Economics* and *The Antitrust Source*. She has taught competition economics at the undergraduate level in the economics department at Dartmouth College.

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Emily Cotton has extensive experience conducting complex quantitative and qualitative analyses of data in both mergers and litigation matters. She has supported experts from leading universities and managed case teams in a broad range of industries on matters including antitrust, bankruptcy, class certification, intellectual property, securities, survey design, tax and transfer pricing. Her recent case work has included the assessment of competitive effects in major antitrust matters and mergers in front of the Federal Trade Commission, the US Department of Justice and the Canadian Competition Bureau. Cotton also has substantial experience evaluating questions of commonality and typicality in the context of privacy, technology, data breach and overcharge class actions. She has

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The digital economy is transforming day-to-day lives, with a rise in connectivity not only between people but also between vehicles, sensors, meters and other aspects of the Internet of Things. Yet, even as the Fourth Industrial Revolution accelerates, traditional concerns are keeping pace and the digital economy has also been a powerful force, increasing competition across a broad sweep of products and services. Practical and timely guidance for both practitioners and enforcers trying to navigate this fast-moving environment is thus critical.

The *Digital Markets Guide* provides just such detailed guidance and analysis. It examines both the current state of law and the direction of travel for the most important jurisdictions in which international businesses operate. The *Guide* draws on the wisdom and expertise of distinguished practitioners globally, and brings together unparalleled proficiency in the field to provide essential guidance on subjects as diverse as how pricing algorithms intersect with competition law and antitrust enforcement in certain tech mergers – for all competition professionals.

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