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Understanding Online Markets and Antitrust Analysis

D. Daniel Sokol & Jingyuan (Mary) Ma



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Understanding Online Markets and Antitrust Analysis

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ABSTRACT

Antitrust analysis of online markets is a hot topic around the world. In a number of jurisdictions, online markets already have been subject to antitrust review in merger or conduct cases. In other jurisdictions, these issues are in a nascent stage of policy. A number of lessons can be learned from the cases to date involving online markets with regard to optimal antitrust policy. What these cases tend to share are some basic features as to how online markets work. Some jurisdictions understand the particular dynamics of multi-sided online markets. Other competition authorities sometimes may misidentify these markets. This essay outlines five areas in which online markets may be different from traditional markets for antitrust purposes. The essay also explores why such markets require a more careful consideration from antitrust authorities and courts in their respective antitrust analyses.

TABLE OF CONTENTS

I. MARKET DEFINITION IS MORE COMPLICATED AND COMPETITION ONLINE
IS NOT ALWAYS LIKE FOR LIKE 46

II. SUCCESS MAY BE EPHERMERAL BECAUSE ENTRY BARRIERS ARE LOW 48

III. USER MULTI-HOME AND HAVE LOW SWITCHING COSTS 50

IV. THERE IS A NEED TO ANALYZE ALL SIDES OF A MARKET WHEN
EXAMINING A MULTI-SIDED MARKET 51

CONCLUSION..... 52

I. MARKET DEFINITION IS MORE COMPLICATED AND COMPETITION ONLINE IS NOT ALWAYS LIKE FOR LIKE

¶1 Economic analysis helps to explain how to conceptualize competitive effects in online market antitrust cases. Yet, static analytical tools may have limitations when applying to multi-sided models simply because the price mechanism has been changed. Given these dynamics, a proper understanding of economics needs to play a role in online markets to determine any justifications for antitrust legal intervention.¹

¶2 Online markets challenge traditional antitrust analysis because online services are often available to users for free. Instead of money, consumers provide attention and information that is often used to direct relevant advertising to those consumers. The economics literature refers to markets with more than one “side.” A firm (or “platform”) that brings together distinct types of economic actors together to interact (e.g., online auctions, dating, search engines, and payment systems) operates in a multi-sided market.²

¶3 Competition in a multi-sided market may emerge not from one platform but across different types of platforms to attract users. For instance, Facebook competes with Google, Twitter and Apple for ad revenue, but it is also in direct competition with offline advertising such as TV and print ads. In this way, competition is not always like-for-like online. Often the free services being offered to the user may differ, though the advertisers consider these various services to be substitutes.³

¶4 Market definition is the first step of traditional antitrust analysis. In one-sided markets, an increase in price or decrease in output provides guidance on how to undertake antitrust analysis using a traditional SSNIP test. However, market definition is more complicated in a multi-sided market.

¶5 In multi-sided markets, the use of market shares for market definition purposes is something that should be carried out very cautiously. Understanding the multi-sided nature of internet markets is very important to market definition analysis. If an antitrust authority (or court) misidentifies the multi-sided nature of the market, this creates problems in analyzing the competitive effects in such a multi-sided market. Consequently, market definition can be conducted incorrectly as it may focus only on one side of the market or may implicate a free product or service. In such markets where the product or service is free, it is not possible to calculate a traditional market share as in a one-sided market because in a multi-sided market, one side of the market may subsidize the other side of the market.⁴

¹ See David S. Evans, *Attention Rivalry Among Online Platforms and Its Implications for Antitrust Analysis* 35–36 (U. Chi. L. School, Coase-Sandor Inst. L. & Econ., Working Paper No. 627, 2013), http://chicagounbound.uchicago.edu/cgi/viewcontent.cgi?article=1067&context=law_and_economics.

² Jean-Charles Rochet & Jean Tirole, *Platform Competition in Two-Sided Markets*, 1 J. EUR. ECON. ASS'N 990, 991–93 (2003). For an overview of the multi-sided market literature, see David S. Evans & Richard Schmalensee, *The Antitrust Analysis of Multi-Sided Platform Businesses*, in OXFORD HANDBOOK OF INTERNATIONAL ANTITRUST ECONOMICS VOL. 1 (Roger D. Blair & D. Daniel Sokol, eds. 2014.)

³ David S. Evans, *Attention Rivalry Among Online Platforms and Its Implications for Antitrust Analysis*, 9 J. COMPETITION L. & ECON. 313, 316 (2013).

⁴ Elena Argentesi & Lapo Filistrucchi, *Estimating Market Power in a Two-Sided Market: The Case of Newspapers*, 22 J. APPLIED ECONOMETRICS 1247, 1247–48 (2007).

¶6 In such multi-sided markets, services provided through internet platforms are largely based on information.⁵ For example, internet search engines provide a free service to users, but monetize the free service through advertising related to the user query.⁶ How much to value personal attention may be different across users as consumers are not homogenous in their preferences.⁷ Such a focus on calculating market shares and drawing conclusions about competitive effects from only one side of the markets leads to suboptimal outcomes because of inefficiencies that it may create. This may include situations where the competitive analysis does not consider the welfare of all groups on both sides of the market.⁸ The effects may be such that one side of the market might harm the other side of the market. Alternatively, one side of the market might help the other side of the market.⁹ The nature of interdependencies across the multiple sides of the market has implications for traditional antitrust tools for market definition when not modified for a multi-sided market. Thus, a traditional SSNIP test that focuses on only one side of the market leads to the conclusion that market definition and market power analysis will lead to errors in antitrust analysis.¹⁰

¶7 Instead, antitrust authorities and courts need to consider the interdependencies on the multi-sided platform. In doing so, such decision-makers need to provide particular attention to non-price competition when participation in one side of the multi-sided market is free. For example, if a platform would raise its price on one side, this may have an effect not merely on how many customers would leave that side of the platform but could also impact customers on the other side of the platform.¹¹ In markets categorized by dynamic competition, competitive forces on one side of the market can have feedback effects on the other sides of the market. As Evans and Noel explain, “The possibility of obtaining supracompetitive profits through certain business actions depends on the relationship between the two sides due to their interlinked demand and the nature of the competition on both sides. Profits on one side can be dissipated on the other side.”¹² Thus, by not considering the positive feedback effects this may serve to either potentially significantly overstate or understate the size of the market.

¶8 Courts and antitrust authorities around the world have recognized that the antitrust economics of multi-sided markets require a more nuanced market definition. For

⁵ Michael A. Salinger & Robert J. Levinson, *Economics and the FTC's Google Investigation*, 46 REV. INDUSTRIAL ORG. 25, 32-35 (2015).

⁶ See e.g., Geoffrey A. Manne & Joshua D. Wright, *Google and the Limits of Antitrust: The Case Against the Case Against Google*, 34 HARV. J.L. & PUB. POL'Y 171, 192-93 (2011).

⁷ Volker Benndorf, Dorothea Kübler & Hans-Theo Normann, *Privacy Concerns, Voluntary Disclosure of Information, and Unraveling: An Experiment*, 75 EURO. ECON. REV. 43, 52 (2015).

⁸ Evans & Schmalensee *supra* note 2 at 20.

⁹ Minjae Song, *Estimating Platform Market Power in Two-Sided Markets with an Application to Magazine Advertising*, 3-5 (Working Paper, 2013), <http://ssrn.com/abstract=190861>; Ambarish Chandra & Allan Collard-Wexler, *Mergers in Two-Sided Markets: An Application to the Canadian Newspaper Industry*, 18 J. ECON. & MGMT. STRATEGY 1045, 1046 (2009).

¹⁰ David S. Evans, *The Antitrust Economics of Multi-Sided Platform Markets*, 20 YALE J. REG. 325, 357-58 (2003).

¹¹ See Evans, & Schmalensee *supra* note 2, at 3.

¹² David S. Evans & Michael Noel, *Defining Antitrust Markets When Firms Operate Two-Sided Platforms*, 2005 COLUM. BUS. L. REV. 667, 671 (2005).

example, in the *Microsoft/Skype* merger, the General Court of the European Union found that the market share of 90 percent of the combined entity was not likely to create anti-competitive effects.¹³ It did so in part because of the fast moving nature of the market and the fact that there was no exclusion of competitors. Similarly, in *Qihoo 360 v. Tencent*,¹⁴ China's Supreme People's Court rejected a SSNIP analysis (where Tencent possessed a market share of over 85 percent) because an increase in price to the free side of the platform would mean a fundamental change to the business model of Tencent. A number of mergers that antitrust agencies have approved such as *Facebook/WhatsApp*¹⁵ and *Microsoft/Skype*¹⁶ also suggest that high market share in a multi-sided market setting is not indicative of market power.

¶9 The lesson from multi-sided market cases around the world is that antitrust authorities and courts should proceed cautiously with the use of market definition and market shares in the assessment of multi-sided platforms.¹⁷

II. SUCCESS MAY BE EPHEMERAL BECAUSE ENTRY BARRIERS ARE LOW

¶10 Online markets are constantly transforming. Indeed, online markets typically have innovative challengers against incumbents. Challengers may overtake incumbent firms through new ideas and technologies. In such settings, there are low entry barriers. Digital competition offers many examples, like Facebook, Snapchat, and Tinder, where a simple insight into customer needs enabled entry and rapid success.¹⁸ Other examples include WhatsApp, Snapchat and Instagram. They were far behind Facebook, but made inroads without a large user base. In addition, Yahoo leapfrogged AltaVista and Google leapfrogged Yahoo. Each search engines had separately been declared the "winner" of search at one time.¹⁹

¹³ 8 Judgment in Case T-79/12, *Cisco Systems Inc. and Messagenet SpA v Commission*, 11 December 2013 at ¶52, available at <http://curia.europa.eu/juris/liste.jsf?num=T-79/12>.

¹⁴ *Beijing Qihoo Technology Co. Ltd. v. Tencent Technology (Shenzhen) Co. Ltd. & Shenzhen Tencent Computer System Co., Ltd.*, Civil Judgment of Supreme People's Court of China, 2013 Min San Zhong No. 4, entered October 8, 2014.

¹⁵ Eur. Comm'n Case No COMP/M.7217 – Facebook/WhatsApp (2014), http://ec.europa.eu/competition/mergers/cases/decisions/m7217_20141003_20310_3962132_EN.pdf.

¹⁶ Eur. Comm'n Case No Comp/M.6281 - Microsoft/Skype, (2011) http://ec.europa.eu/competition/mergers/cases/decisions/m6281_924_2.pdf.

¹⁷ Florian Wagner-von Papp, *Should Google's Secret Sauce Be Organic*, 16 MELBOURNE J. INT'L L. 609 (2015); David S. Evans, *Multisided Platforms, Dynamic Competition, and the Assessment of Market Power for Internet-Based Firms* (Working Paper, 2016), <http://ssrn.com/abstract=2746095>.

¹⁸ Anja Lambrecht & Catherine Tucker, *Can Big Data Protect a Firm from Competition?*, 11-14 (working paper 2015), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2705530.

¹⁹ Old press releases calling winners in one area or the other demonstrate how hard it is to pick winners in digital. For example, Fortune declared in a 1998 article, "This much is clear: Yahoo! has won the search-engine wars and is poised for much bigger things." Randall E. Stross, *How Yahoo! Won the Search Wars*, FORTUNE (March 2, 1998), http://archive.fortune.com/magazines/fortune/fortune_archive/1998/03/02/238576/index.htm [<https://perma.cc/N8GY-CR6H>].

¶11 We see low barriers to entry in a number of markets. For example, Facebook has become a major competitor to YouTube in video visualizations in a very short period of time.²⁰ Even one year ago, such an outcome seemed unlikely. This type of competition with low entry barriers is not unique. Another set of markets with low entry barriers often involve those that utilize so-called “Big Data.” Tinder, a company so new it had less data than competing dating websites, overtook its competitors with an innovation of swiping left or right to connect people. This was a simple innovation in the user interface. Tinder succeeded despite having less data than its rivals because it developed a product that attracted users who shared their information with the company.

¶12 Consumers can share information with as many services as they like, but firms must develop valuable products and services in order to attract consumers. In some cases, more data does not translate into a better product as data is most relevant when it is about how a company and its consumers use its own product. Netflix was able to overtake Blockbuster even though Blockbuster had more customer data initially. Netflix used its data more effectively because Blockbuster operated each of its stores independently and did not focus its data efforts on collection of customer preferences. As such, Blockbuster could not effectively use customer preferences and information (because for example, even with all of its data, it did not have a good sense of what a customer’s first choice was if a movie was out, merely the choice of what the customer would ultimately rent). These are but a few examples of how competition may emerge quickly and in doing so displace incumbents. For all these companies, it was not the quantity of data that was relevant, rather the insights that they derived from the data they had and their ability to innovate.

¶13 The examples above suggest an important policy lesson—low entry barriers are a common attribute in online data markets.²¹ The data requirements of new competitors are far more modest and qualitatively different than those of more established markets.²² Little, if any, user data is required as a starting point for most online services. Instead, firms may enter with innovative new products that skillfully address customer needs, and quickly collect data from users, which can then be used towards further product improvement and success.²³ As such, new entrants are unlikely to be at a significant competitive disadvantage relative to incumbents in terms of data collection or analysis.²⁴

²⁰ See Amy Gesenhues, *Facebook, Helped by Autoplay, Passes YouTube for Desktop Video Views for First Time*, MARKETING LAND (Oct. 14, 2014), <http://marketingland.com/facebook-delivered-a-billion-more-desktop-video-views-than-facebook-103778> [https://perma.cc/QG8Z-9T5N].

²¹ D. Daniel Sokol & Roisin Comerford, *Does Antitrust Have a Role to Play in Regulating Big Data?*, in CAMBRIDGE HANDBOOK OF ANTITRUST, INTELLECTUAL PROPERTY AND HIGH TECH (Roger D. Blair & D. Daniel Sokol eds.) (forthcoming Apr. 2017) (manuscript at 5) http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2723693 (“[T]he unique economic characteristics of data mean that its accumulation does not, by itself, create a barrier to entry, and does not automatically endow a firm with either the incentive or the ability to foreclose rivals, expand or sustain its own monopoly, or harm competition in other ways.”).

²² Darren S. Tucker & Hill B. Wellford, *Big Mistakes Regarding Big Data*, ANTITRUST SOURCE, 1, 6–9 (Dec. 2014), http://www.americanbar.org/content/dam/aba/publishing/antitrust_source/dec14_tucker_12_16f.authcheckedam.pdf.

²³ *Id.*

²⁴ *Id.*

For example, in *Facebook/WhatsApp*, the European Commission noted that data sets should not have an impact in a market for online advertising because there are so many different sources of user data available on the web.²⁵

¶14 Low entry barriers are not limited to the most developed high tech markets. Evans and co-authors have noted the importance of the development of smart apps in the developing world context because of poor telecom and cable infrastructure. In India they identify that the development of smart apps create significant market disruptions against more established internet companies, which in turn have disrupted traditional brick and mortar companies.²⁶

¶15 Changes in technology such as cloud computing and the low cost to develop apps also decrease barriers to entry.²⁷ These technological changes reflect that new competitors spring up all of the time across a number of different platforms—social media, instant messaging, general and vertical search to name just a few. The overall enforcement takeaway regarding barriers to entry is that they appear to be low in many online markets. Further, barriers differ from market to market. Thus, any generalization about barriers to entry across online markets may lead to mistaken inferences that may lead to over-enforcement and quash innovation.

III. USER MULTI-HOME AND HAVE LOW SWITCHING COSTS

¶16 Traditionally, antitrust analysis is concerned about switching costs from one platform to another. However, in online markets, switching costs are often low because of multi-homing. That is, consumers use multiple search methods online in undertaking web searching.²⁸ In doing so consumers switch easily from a general search engine to specialized vertical search engines and apps. As Wagner von Papp explains, “A significant proportion of searches are done on vertical search sites or apps (such as Amazon, Booking.com, eBay, Expedia, Kayak, TripAdvisor etc) or social networks (especially Facebook)—either *instead of* using general web search or *in addition to* it (multi-homing).”²⁹

¶17 Take the example of someone who needs to book a flight from Hong Kong to Madras. A consumer can easily switch from a general search engine (e.g., Baidu) to another search engine (e.g., Google or Bing), a social network (Facebook or Tencent), a

²⁵ *Facebook/WhatsApp*, *supra* note 15.

²⁶ Hemant K. Bhargava, David S. Evans, and Deepa Mani, *The Move to Smart Mobile and its Implications for Antitrust Analysis of Online Markets*, 16 U.C. DAVIS BUS. L. REV. 157, 172 (2016) (“These changes in consumer shopping behavior are resulting in a revolution in retail. Retail stores are developing ‘omnichannel’ approaches that integrate physical stores, mobile apps, and websites to provide consumers with multiple choices of how to shop and buy.”).

²⁷ Small and medium businesses using cloud technology to overcome their growth challenges grow 26% faster and deliver 21% higher gross profits. 85% believe that cloud enables their business to scale and grow faster. *Small Business, Big Technology: How the Cloud Enables Rapid Growth in SMBs*, Deloitte, 1 (Sept. 2014), <https://www2.deloitte.com/content/dam/Deloitte/global/Documents/Technology-Media-Telecommunications/gx-tmt-small-business-big-technology.pdf>.

²⁸ Aaron S. Edlin & Robert G. Harris, *The Role of Switching Costs in Antitrust Analysis: A Comparison of Microsoft and Google*, 15 YALE J.L. & TECH. 169, 194 (2013).

²⁹ Wagner-von Papp, *supra* note 17, at 631.

specialized travel search engine (Ctrip, Expedia, or Kayak), via website and/or app. Thus, any incentive that a firm may have to bias its search results would be significantly limited.³⁰

IV. THERE IS A NEED TO ANALYZE ALL SIDES OF A MARKET WHEN EXAMINING A MULTI-SIDED MARKET

¶18 Enforcing antitrust law in high-tech industries and online markets has become one of the most challenging legal tasks today.³¹ Distinct from traditional markets, online markets bring together multiple groups of users who can interact with each other within the platform. The platform is often multi-sided because the value to one group of consumers often depends on another group of users.

¶19 Online markets may have different network effects—direct and indirect network effects. Each type of network effect has its own attributes. Direct network effects may matter for purposes of scaling up, such as Facebook or Skype where more users create bigger scale.³² However, indirect network effects work differently. Indirect network effects take place in situations where additional users improve the use of a product or service better, though not due to direct interaction across users. Rather, additional users allow a platform to determine what its users want via trial and error in search results. This in turn improves the quality of search results.³³ Understanding the difference between direct and indirect effects helps antitrust enforcers to better understand a multi-sided market.

¶20 In a multi-sided market, all sides of the market need to be analyzed because the benefits of indirect network effects can only be achieved when multiple agents are coordinated, and participation of each agent is ensured.³⁴ For example, in a one-sided market, consumers and producers are often considered as a whole, whereas in multi-sided platforms consumers with different preferences could be separated and treated as independent groups. The increasing use of the platform of one consumer group would create an externality to other groups; therefore, particular attention has to be paid to the *indirect network externality* at the demand side. Multi-sided platforms could substantially reduce transaction costs. Without a multi-sided platform, the “value-creating” interaction

³⁰ Robert H. Bork & J. Gregory Sidak, *What Does the Chicago School Teach About Internet Search and the Antitrust Treatment of Google?*, 8 J. COMPETITION L. & ECON. 663, 676 (2012).

³¹ J. Thomas Rosch, Commissioner, Fed. Trade Comm’n, Address Before the ABA Antitrust Section Fall Forum: Intel, Apple, Google, Microsoft, and Facebook: Observations on Antitrust and the High-Tech Sector 4-6, 8-10, 16-17 (November 18, 2010) https://www.ftc.gov/sites/default/files/documents/public_statements/intel-apple-google-microsoft-and-facebook-observations-antitrust-and-high-tech-sector/101118fallforum.pdf

³² Even with direct network effects, such effects do not always prevent successful entry as Facebook was challenged by Instagram, WhatsApp and Snapchat.

³³ Andres V. Lerner, *The Role of ‘Big Data’ in Online Platform Competition* 10-11 (working paper 2014), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2482780.

³⁴ Evans & Schmalensee, *supra* note 2, at 2.

among multiple agencies could be extremely costly.³⁵ Such effects do not create consumer lock-in in the presence of multi-homing and low switching costs.

CONCLUSION

¶21 The case for antitrust intervention in online markets requires great caution because of a number of factors: proper market definition, accounting for possible low entry barriers, multi-homing and low switching costs, and the need for a proper analysis of all sides of a market. Often, multi-sided markets produce significant benefits to consumer welfare in what are dynamic and fast moving markets. Mistaken antitrust intervention in such markets threatens innovation. Given these significant concerns, antitrust authorities and courts should closely examine the facts of a particular case to ensure that facts and economic analysis align well with legal theories in multi-sided markets before bringing such cases. Further, the nature of multi-sided markets suggest that before deciding on potential remedies, an antitrust authority should reexamine the market to see if its particular dynamics have already changed.

³⁵ David S. Evans & Richard Schmalensee, *The Industrial Organization of Markets with Two-Sided Platforms*, 3 COMPETITION POL'Y INT'L 151, 158 (2007).