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## Data-opolies

*Maurice E. Stucke & Allen P. Grunes\**

### Introduction

In contrast to the European Commission, the U.S. Department of Justice and Federal Trade Commission have not meaningfully prosecuted monopolistic abuses over the past 16 years. The DOJ criminally prosecuted more persons in one year under the Migratory Bird Treaty Act (227 in 2012) than it has civilly and criminally prosecuted monopolies over the past 35 years (13 since 1980). Between 2005 and 2015, the DOJ opened twenty-two monopolization investigations, and brought only one case (in 2011).

The U.S. Supreme Court's view on monopolies has also become forgiving. It surmised in one 2004 decision (and the first time in the Sherman Act's history) that charging monopoly prices is 'an important element of the free-market system,' and that monopoly pricing serves as an inducement to 'attract[] "business acumen" in the first place' and engage in 'risk taking that produces innovation and economic growth'.<sup>1</sup>

There is no empirical support that monopolies—whether in dynamic or static markets—are generally good for society.<sup>2</sup> The richer empirical record rejects the Court's Schumpeterian belief that monopoly rents are necessary 'to safeguard the incentive to innovate'.<sup>3</sup> As Professor Jonathan Baker notes, the claim that monopoly enhances incentives to

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\* Co-founders of The Konkurrenz Group.

<sup>1</sup> *Verizon Commc'ns Inc v Law Offices of Curtis V Trinko, LLP*, 540 U.S. 398, 407 (2004).

<sup>2</sup> Maurice E. Stucke, 'Should the Government Prosecute Monopolies?' 2009 *University of Illinois Law Review* (2009): pp 497, 507-29.

<sup>3</sup> *Trinko*, 540 U.S. at 407.

innovate ignores important ways that greater competition enhances these incentives.<sup>4</sup> Thus firms often increase research and development investment in response to greater investment by their rivals. The claim also ignores the ability of firms exercising market power to restrict, deter, or eliminate new forms of competition through exclusionary conduct.

Yes, one might say. But with the expansion of the data-driven economy, one has less to fear of monopolization. One reason, some claim, is that data-driven markets have low entry barriers. They are not susceptible to network effects. Data is ubiquitous, low cost, and widely available and thus has little, if any, competitive significance. Accordingly, dominant firms cannot exclude smaller rivals' access to key data or use data to gain a competitive advantage. Moreover, it is harder to monopolize markets with free products or services. Consequently, competition will always come from surprising sources. After all, Facebook displaced MySpace, and Google displaced Yahoo.

We debunk these myths in our recent book, *Big Data and Competition Policy* (Oxford University Press 2016). Our aim here is to summarize several reasons why data-driven markets can be monopolized, and identify one recent example of a data-driven exclusionary tactic. Thus, prosecuting monopolistic abuses is even more important in certain online industries.

## **I. Why Online Markets Can Be Monopolized**

### **a. Entry Barriers Can Be Higher Because of Data-Driven Network Effects**

Some argue that data does not lend itself to entry barriers. This at times is true. Others, however, go further in claiming that '[o]nline

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<sup>4</sup> Jonathan B. Baker, 'Taking the Error Out of "Error Cost" Analysis', 80 *Antitrust LJ* (2015): pp 1, 14.

markets are notable for their low entry barriers and typically do not require big data for entry'.<sup>5</sup> Google's Chairman, for example, stated that 'the barriers to entry are negligible, because competition is just one click away'.<sup>6</sup>

There is no empirical support for concluding that entry barriers are invariably low (or, conversely, high) across online markets. The reality is that entry analysis for data-driven markets, as in other markets, will likely be fact-specific.

One problem is that the courts, competition agencies or dominant firms, in relying exclusively on antitrust's traditional entry factors, may erroneously conclude that entry barriers are generally low in online industries. Indeed, under the traditional factors, the entry barriers may seem low, obviating the need for intervention.

For example, many online industries are dynamic and fast-growing. The General Court, in upholding the European Commission's decision to not intervene in Microsoft's acquisition of Skype, observed how the consumer communications sector was 'a recent and fast-growing sector which is characterised by short innovation cycles in which large market shares may turn out to be ephemeral'.<sup>7</sup> In such a dynamic context, the Court noted, 'high market shares are not necessarily indicative of market power and, therefore, of lasting damage to competition which Regulation No 139/2004 seeks to prevent'.<sup>8</sup>

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<sup>5</sup> Darren S Tucker and Hill B Wellford, 'Big Mistakes Regarding Big Data', *Antitrust Source*, December 2014, p 1.

<sup>6</sup> Eric Schmidt, Executive Chairman of Google, 'Why Google Works', *Huffington Post*, 20 January 2015, [http://www.huffingtonpost.com/eric-schmidt/why-google-works\\_b\\_6502132.html](http://www.huffingtonpost.com/eric-schmidt/why-google-works_b_6502132.html).

<sup>7</sup> Case T-79/12 *Cisco Systems Inc v Commission*, ECLI:EU:T:2013:635, 11 December 2013, para 69.

<sup>8</sup> *Ibid.*

Another historical entry factor is any ‘technical or economic constraints which might prevent users from switching providers’.<sup>9</sup> Customers generally are not locked-in if they can easily switch to other free products or services. The General Court did not find any ‘technical or economic constraints’ when users could download several communications applications on their operating device, and the software was free, easy to download, and took up little space on their hard drives.<sup>10</sup>

Finally, launching a competing app may not require a lot of time and investment. And the requisite technology to enter may be standardized.

Focusing on these traditional factors, the agency or court may conclude that entry barriers are low. Take, for example, search engines, like Google, Bing, Yahoo!, and DuckDuckGo. They are free and easy to use. Users can switch easily from one search engine to another. Seemingly users are not locked-in by any data portability issues. Moreover, search engines do not display the classic direct network effects that the courts and agencies have identified. Thus, in chastising the FTC for even investigating Google for monopolization, one U.S. senator claimed that ‘[c]ompared to almost any other market in the history of antitrust regulation, online search has effectively zero barriers to entry’.<sup>11</sup>

If this were true, then the zero (or low) entry barriers and low switching costs should prevent any search engine from intentionally degrading quality (in terms of the relevance of the response to a search inquiry). As the European Commission’s statement of objections

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<sup>9</sup> Ibid.

<sup>10</sup> Ibid.

<sup>11</sup> <https://www.wyden.senate.gov/download/?id=94C57310-59D3-4D6E-84BE-FF957413BCC3&download=1>

involving Google reflects, that is not the case.<sup>12</sup> Moreover, if entry barriers were low, Microsoft would not have spent over ‘\$4.5 billion into developing its algorithms and building the physical capacity necessary to operate Bing’.<sup>13</sup>

So, in focusing on traditional entry barriers, the agency, court, or politician will likely miss other important entry barriers, namely data-driven network effects. Our book explores how data can amplify four potential network effects: first classic network effects; second, network effects arising from the scale of data; third, network effects from the scope of data; and finally, how network effects on one side of a multi-sided platform can spill over to the other side.

This does not mean that markets susceptible to network effects always lead to dominance. As the European Commission aptly stated, ‘[t]he existence of network effects as such does not a priori indicate a competition problem in the market affected by a merger’.<sup>14</sup> Instead, the extent to which network effects have increased entry barriers must ‘be assessed on a case-by-case basis’.<sup>15</sup> Our point is that competition authorities in assessing mergers and monopolistic abuses will have an incomplete picture of the market realities if they consider only the traditional entry barriers and traditional network effects. They must be aware of additional data-driven network effects, which can lead to market concentration and dominance. Thus, even if one devises a better

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<sup>12</sup> European Commission, ‘Fact Sheet: Commission Sends Statement of Objections to Google on Comparison Shopping Service’, 15 April 2015, [http://europa.eu/rapid/press-release\\_MEMO-15-4781\\_en.htm](http://europa.eu/rapid/press-release_MEMO-15-4781_en.htm); Maurice E Stucke and Ariel Ezrachi, ‘When Competition Fails to Optimize Quality: A Look at Search Engines’, 18 *Yale J L & Tech* (2016): p 70, <http://ssrn.com/abstract=2598128>.

<sup>13</sup> The FTC Report on Google’s Business Practices’, *Wall Street Journal*, 8 August 2012, p 76 (‘FTC Staff Report’), <http://graphics.wsj.com/google-ftc-report/>.

<sup>14</sup> *Facebook/WhatsApp* (Case Comp/M.7217), Commission Decision C(2014) 7239 final, 3 October 2014, para 130.

<sup>15</sup> *Ibid.*

search engine or social network, with these data-driven network effects, the innovations of ‘one’ will not immediately convert the many.

#### b. Data-opolies’ Increased Incentive to Engage in Anticompetitive Conduct

The data-driven network effects (traditional, scale of data/trial-by-error, scope of data, and spill-over) can also provide dominant online firms with breathing room to engage in anticompetitive behaviour to illegally maintain their monopoly.

The data-driven network effects in these online markets can amplify the stakes of gaining and losing users, and increase the incentives for both anti-competitive and pro-competitive behaviour. Depending on the network effect, the loss of users can degrade the product’s quality and reduce the likelihood of attracting (and retaining) users, advertisers or sellers. With each user the platform acquires relative to its competitors, a quality gap may emerge. If the quality differences become apparent to users, the feedback loop can accelerate— attracting both new users and users of the competitors’ products.

When the stakes are so great, competition can be fierce, and consumers can benefit. But the incentives also increase for online platforms to resort to anticompetitive practices and mergers to tip the market in their favour.

#### c. The Now-Casting Radar

As the incentives to engage in anticompetitive behaviour increase, the means to punish rivals can also increase. Before the Big Data era, dominant tech firms were less aware of what their customers and rivals were doing (or planning to do). As our book discusses, some platforms have a relative advantage in accessing and analysing data to discern



consumer trends well before others. Companies can nowcast, i.e., ‘predict the present’ by using search inquiries, social network postings, tweets, etc.

Nowcasting can yield a competitive advantage (and, at times, increase overall welfare). In monitoring search queries, Google can predict flu outbreaks well before the government health agencies can. Twitter’s data can help companies identify emerging trends. Google and Apple, in controlling the mobile phone app stores, immediately know when users download rivals’ apps.

Nowcasting also represents a potent data-based weapon, not previously available for monopolies, to monitor new business models in real time. The nowcasting radar can help some dominant firms identify nascent competitive threats. The data-opoly can use its relative advantage in accessing and processing personal data (such as watching for trends in its proprietary data from posts on a social network, search queries, emails, etc) to quickly identify (and squelch) nascent competitive threats. The dominant firm can acquire entrants before they become significant competitive threats or blunt the entrant’s growth (such as by manipulating its search engine results to make it harder to find the company or by removing it from the app store). For example, Facebook warns its investors is that its ‘[p]latform partners may use information shared by our users through the Facebook Platform in order to develop products or features that compete with us’.<sup>16</sup> Thus, it is as if the monopoly invented a radar system to monitor in real time the competitive portals. It can track nascent competitive threats shortly after they take off, and intercept or shoot them down long before they become visible to competition authorities and others.

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<sup>16</sup> Facebook Inc, Annual Report Pursuant to Section 13 or 15(D) of the Securities Exchange Act of 1934 for the fiscal year ended December 31, 2012, p 15, <http://www.sec.gov/Archives/edgar/data/1326801/000132680113000003/fb-12312012x10k.htm>.

Consequently, one cannot conclude that data-driven industries are incapable of being monopolized. Instead the feedback loop from data-driven network effects can reinforce dominance and prevent the sales of a rival's platform from gaining momentum. The strong can use anticompetitive tactics to become even stronger both on the free and advertising sides of the multi-sided market, and use their now-casting radar to squelch any nascent threats to their dominance. The reality is that monopolies are not only possible in data-driven markets, but in some industries, given the network effects, are very likely.

## **II. General Difficulty in Identifying Monopoly Cases that the Government Should Bring**

Although monopolies may exist, not every dominant firm will necessarily abuse its dominant position. In the U.S., the protection goes further: monopolies are not liable for being a monopoly, i.e., charging excessive prices, reducing privacy protections, or otherwise degrading quality.

Anticompetitive behaviour to attain or maintain the monopoly is not always transparent. Usually the complainants involve competitors. The suspicion is that if the competitor complains, the challenged action is pro-competitive, as the competitor's incentives (e.g., concern about a rival's aggressive behaviour and efficiency) are misaligned with the consumers' interests (e.g., lower prices) or society's interest (e.g., allocative and productive efficiency). This suspicion, however, ignores the fact that in many instances a competitor is in a better position than anyone else to detect exclusionary conduct. If a competitor cannot obtain a needed input, cannot obtain discounts from a third party due to an MFN, or cannot efficiently access customers, only the competitor—not the consumer—will be in a position to complain. In fact, the consumer may never see the competing offering.

Moreover, relative to per se or quick look cases, monopolization cases are harder to prove under the rule of reason. The agencies may have even greater difficulties in using their traditional antitrust tools to assess monopoly power in data-driven markets. Defining the relevant market with the SSNIP test may be challenging in multi-side markets where the price on one side is zero. Multi-sided markets can also raise challenges in assessing market share and market power (especially where the company may face more competition on one side of a multi-sided market).

### **III. Unique Case Involving Google**

The FTC Bureau of Competition staff, from the released portions of its inadvertently produced report, recommended in 2012 suing Google for several anticompetitive practices. The FTC Commissioners instead closed the investigation after Google voluntarily agreed to change some practices. The FTC legal staff discussed the competitive significance of data and ‘substantial scale effects’ in the Internet search, search advertising and search syndication markets.<sup>17</sup> One alleged anticompetitive practice was Google’s use of exclusivity provisions to prevent its rival Microsoft from achieving scale, including the volume of search queries its search engine Bing received. Google used contractual restrictions, according to the FTC legal staff, to deny Microsoft critical scale and impair its ability to compete effectively in the markets for general search and search advertising.<sup>18</sup>

One can access a search engine in various ways, such as the browser one uses. Twenty companies (including AOL), the FTC legal staff found, account for 90 per cent of all search query volume in the United States. To steer users to its search engine, a search engine provider (like Google,

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<sup>17</sup> FTC Staff Report, above note 14, p 76.

<sup>18</sup> Ibid, pp 94, 96, 98, 100, 102, 104.

Microsoft, or DuckDuckGo) can enter into distribution agreements with these entry points, namely hardware manufacturers, independent software vendors, and Internet service providers, ‘to distribute toolbars and establish default settings that direct user searches to [its] search engine’.<sup>19</sup> Google, the FTC legal staff reported, had exclusive or restrictive agreements with four of the top five companies, and twelve of the top twenty.<sup>20</sup> Google, for example, is the default engine on Apple’s Safari Internet browser. Google reportedly paid Apple USD 82 million in 2009, and USD 1 billion in 2013 and 2014 for this partnership.<sup>21</sup> Google’s internal documents, the FTC legal staff found, showed that ‘Google’s interest in renewing deals with some of its largest syndication customers may have been, in part, to keep Microsoft from gaining scale’.<sup>22</sup> Interestingly, Amazon decided it was in its long-term interest to funnel some query volume to Microsoft’s Bing, even if it was losing money on each query.<sup>23</sup> One wonders why others did not do this. Perhaps, as the European Commission generally noted from its market investigation, the distributors’ major concern was Google’s bargaining power.<sup>24</sup>

A dominant data-driven company can use exclusionary tactics to prevent rivals from achieving the minimum efficient scale.<sup>25</sup> Scale can

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<sup>19</sup> *Microsoft/Yahoo! Search Business* (Case Comp/M.5727), Commission Decision C(2010) 1077, 18 February 2010, para 50.

<sup>20</sup> FTC Staff Report, above note 14, p 104.

<sup>21</sup> ‘Apple Working on Its Own Search Engine; Aims to Take on Google: Report’, IBN Live, 10 February 2015, <http://ibnlive.in.com/news/apple-working-on-its-own-search-engine-aims-to-take-on-google-report/527597-11.html>; Joel Rosenblatt and Adam Satariano, ‘Google Paid Apple \$1 Billion to Keep Search Bar on iPhone’, Bloomberg Business, 21 January 2016, <http://www.bloomberg.com/news/articles/2016-01-22/google-paid-apple-1-billion-to-keep-search-bar-on-iphone>.

<sup>22</sup> FTC Staff Report, above note 14, p 108.

<sup>23</sup> Ibid, p 112.

<sup>24</sup> *Microsoft/Yahoo! Search*, above note 20, para 246.

<sup>25</sup> Frank Pasquale, *The Black Box Society: The Secret Algorithms That Control Money and Information* (Cambridge MA: Harvard University Press, 2015), p 67.

be especially important in data-driven industries, such as search and search advertising. In unfairly preventing smaller rivals and potential entrants from accessing critical data, the dominant firm can use the network effects (learning-by-doing, scope, and spill-over effects) to widen the quality gap over rivals, attract more users and advertisers, and expand its platform.

The FTC staff did not recommend bringing a case involving search bias by Google. Whatever the merits of such a case, it is worth noting that the FTC legal staff appears to have made a critical error that is best understood in the context of network effects. The staff concluded that Google's conduct in demoting rival offerings was 'anticompetitive' and 'likely helped to entrench Google's monopoly power over search and search advertising'.<sup>26</sup> Apparently relying on language in the *Microsoft* decision,<sup>27</sup> the staff evidently thought that a court would be unwilling to balance procompetitive justifications against anticompetitive harm when the procompetitive justifications included product improvement claims.<sup>28</sup> Yet in markets with data-driven network effects, a dominant firm can almost always claim that its product has been improved by virtue of the network effects that flow from its data advantage. To blindly credit these network effects as evidence of product improvement is to create, in effect, an antitrust exemption in the world of Big Data.

## Conclusion

Many tech firms' business models depend on collecting and monetizing consumer data. Several network effects can enable the company to become so firmly entrenched, so dominant in a given market, that it has both the ability and incentive to squelch competition, including by mavericks who challenge that data-dependent business

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<sup>26</sup> FTC Staff Report, above note 14, p 86.

<sup>27</sup> *United States v Microsoft Corp*, 253 F.3d 34, 81, 82 (D.C. Cir. 2001).

<sup>28</sup> *Ibid*, p 150 n.462.

model. When that happens, the incentive to innovate and take on the data-opoly is diminished. Consumers, even though they continue to get many apps and services for free, are nonetheless harmed, including through the loss of technology and competition that advances their privacy interests.

Competition authorities must respond swiftly to prevent data-opolies from benefitting from unfair data-driven practices. Data-driven network effects can increase firms' incentives to resort to anticompetitive tactics. The opportunities for such conduct also increase, especially for data-opolies with a nowcasting radar. As the benefits from illegality increase, so too must the magnitude and probability of punishment increase to deter the anticompetitive behaviour. Otherwise, monopolization pays.

Monopolization pays today. Although the EU is more active investigating abuse of dominance cases, this cannot be left to one jurisdiction. While running for president Barack Obama criticized the Bush administration for having 'what may be the weakest record of antitrust enforcement of any administration in the last half century'.<sup>29</sup> Obama noted that 'in seven years, the Bush Justice Department has not brought a single monopolization case'.<sup>30</sup> Obama promised to 'reinvigorate antitrust enforcement' and 'step up review of merger activity'.<sup>31</sup> Now the same criticism has been made about his administration.

The reality is that if competition authorities continue to ignore data-driven exclusionary and predatory conduct, we will likely see more industries dominated by a few firms. This we cannot afford.

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<sup>29</sup> Statement of Senator Barack Obama for the American Antitrust Institute, [http://www.antitrustinstitute.org/files/aai-%20Presidential%20campaign%20-%20Obama%209-07\\_092720071759.pdf](http://www.antitrustinstitute.org/files/aai-%20Presidential%20campaign%20-%20Obama%209-07_092720071759.pdf).

<sup>30</sup> Ibid.

<sup>31</sup> Ibid.