ESSENTIAL FACILITIES FALLACY: BIG TECH, WINNER-TAKE-ALL MARKETS, AND ANTICOMPETITIVE EFFECTS

BY JOHN PECMAN, PAUL A. JOHNSON & JUSTINE REISLER[1]

1 John Pecman is a Senior Business Advisor in the Antitrust/Competition & Marketing group at Fasken. Paul A. Johnson is Owner at Rideau Economics. Justine Reisler is an associate in Fasken's Antitrust/Competition & Marketing Group. The opinions expressed in this article are our own.

Visit **www.competitionpolicyinternational.com** for access to these articles and more!

I. INTRODUCTION

The Big Tech superstar firms, which is a term used by many to refer to Google, Amazon, Facebook, Apple, and sometimes Microsoft, have grown to be among the largest companies in the world principally through innovation, data harvesting and the popularity of their products. Over the past few years, there have been calls for action by populists, the press and politicians to reduce the power of the so-called "dataopolies."[2]

The business models of Google and Facebook, for example, operate through multi-sided platforms. They offer products to consumers on one side of the platform for free and receive the consumers' attention and data, which they monetize on the other side of the platform by selling targeted advertising. These business models attract a large number of users which enables the companies to build banks of data. Data in this business model is an important input for value creation. Thus, as with anything that is used to create value, data can constitute a barrier to entry if its creation, acquisition, or maintenance is costly.

A firm that uses data may benefit from a "user feedback loop" to outcompete rivals. User feedback loops occur when firms use data collected from their users to improve the quality of their product, in turn attracting more users, which leads to further quality improvements and yet more users. This user feedback loop can tip markets in favor of winner-take-all outcomes that may appear stable. In other words, there may be a danger that markets do not self-correct through the competitive process as in "natural monopolies."

This view, that the Big Tech superstar firms have durable and significant market power, has been articulated by four recently published reports: the European Union's ("EU") *Competition for the digital era*, final report,[3] the United Kingdom's ("UK") *Unlocking Digital Competition: Report of the Digital Competition Expert Panel* (the "Furman Report"),[4] Australia's

---

2 Franklin Foer, *World Without Mind: The Existential Threat of Big Tech* (New York: Penguin Press, 2017); Lina M. Khan, "Amazon's Antitrust Paradox," *The Yale Law Journal* 126:3 (January 2017), available at https://www.yalelawjournal.org/note/amazons-antitrust-paradox; Nick Srnicek, "The only way to rein in big tech is to treat them as a public service," *The Guardian* (April 23, 2019) , available at https://www.theguardian.com/commentisfree/2019/apr/23/big-tech-google-facebook-unions-public-ownership; David McCabe, "Lawmakers Urge Aggressive Action from Regulators on Big Tech," *The New York Times* (September 17, 2019), available at https://www.nytimes.com/2019/09/17/technology/senate-antitrust-tech-hearing.html; Elizabeth Warren, "Here's how we can break up Big Tech," *Medium* (March 8, 2019), available at https://medium.com/@teamwarren/hereshow-we-can-break-up-big-tech-9ad9e0da324c.

3 Jacques Crémer, Yves-Alexandre de Montjoye & Heike Schweitzer, *Competition Policy for the digital era*, Final Report, European Commission, Directorate-General for Competition (2019), available at https://ec.europa.eu/competition/publications/reports/kd0419345enn.pdf at pgs. 70-72.

4 United Kingdom, *Unlocking Digital Competition: Report of the Digital Competition Expert Panel,* also known as the 'Furman Report' (March 2019), available at https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/785547/unlocking_digital_competition_furman_review_web.pdf at paras. 1.112 - 1.117, 2.109, 2.116 & 3.26.

Digital platforms inquiry, final report[5] and the University of Chicago's *Stigler Committee on Digital Platforms*, final report (the "Stigler Report").[6] The Furman report called for a market study, which is currently being carried out, into the UK's digital advertising market encompassing the entire value chain, using its investigatory powers to examine whether competition is working effectively.[7]

This is the context in which calls have been made to treat data, more or less, as an essential facility.[8] That is, there have been calls to impose data sharing regulations on companies that have, use, or collect data to prevent them from exercising market power and to reduce barriers to entry. For instance, the UK's Competition and Markets Authority ("CMA") in its interim report on online platforms and digital advertising, considers a number of interventions to regulate the activities of online platforms funded by digital advertising, such as "a requirement that Google provide click-and-query data to rival search engines."[9] The CMA has taken the view that a lack of comparable scale in click-and-query data is likely to be a key factor that limits the ability of other search engines to compete with Google. The CMA proposal would essentially make click-and-query data an essential facility and impose a duty to deal on it.

The imposition of a duty to deal on an essential facility prevents the *exercise* of market power. Such a prohibition on exercising market power is distinct from a prohibition on *creating, protecting, or enhancing* market power by anticompetitive acts, which is the object of traditional antitrust enforcement. One reason that antitrust law is not normally designed to regulate the exercise of market power is because it would require competition agencies to become sector regulators, a function they are not equipped to perform. Another reason is that mandating a duty to deal can chill incentives to innovate. But whatever the intervention considered, it would seem to be uncontroversial to insist on careful consideration of how the intervention may affect consumers and competition more broadly. This consideration is particularly important with Big Tech companies that have popular products with a significant presence in the economy and in people's lives.

II. IT IS IMPORTANT TO CONSIDER DYNAMIC COMPETITION BEFORE MANDATING A DUTY TO DEAL

Contrary to some of the findings in certain recently published reports,[10] there are reasons to question whether industries where data is important are natural monopolies or that barriers to entry are durable beyond the short term. Generic calls to treat companies with large-scale data sets as natural monopolies or blanket claims that "data is the new oil" coarsely lump all data together. However, data plays very different roles in different markets. For example, data can be collected from retail commerce (e.g. Walmart has had one of the largest databases in the world[11]), from search engines, or from the "Internet of Things." Data may also be bought and sold through data brokers[12] or kept as proprietary information to be sold

5 Australian Competition & Consumer Commission, *Digital platforms inquiry,* final report (July 26, 2019), available at https://www.accc.gov.au/focus-areas/inquiries-ongoing/digital-platforms-inquiry/final-report-executive-summary: pgs. 7-10 and 57-105.

6 University of Chicago, Stigler Center, *Stigler Committee on Digital Platforms,* Final Report (September 2019), available at https://research.chicagobooth.edu/stigler/events/single-events/antitrust-competition-conference/digital-platforms-committee at pgs. 78, 119-121.

7 United Kingdom, Competition & Markets Authority, *Online platforms and digital advertising,* Market study interim report (December 2019): at para. 1.112, available at https://assets.publishing.service.gov.uk/media/5dfa0580ed915d0933009761/Interim_report.pdf.

8 Zachary Abramson, "Essential Data" *The Yale Law Journal* 124:867 (2014); Nick Srnicek, "The only way to rein in big tech is to treat them as a public service," *The Guardian* (April 23, 2019) , available at https://www.theguardian.com/commentisfree/2019/apr/23/big-tech-google-facebook-unions-public-ownership; Inge Graef, "Rethinking the Essential Facilities Doctrine for the EU Digital Economy," *Revue Juridique Themis* 53:1 (2019).

9 United Kingdom, Competition & Markets Authority, *Online platforms and digital advertising,* Market study interim report (December 2019) at para. 79, available at https://assets.publishing.service.gov.uk/media/5dfa0580ed915d0933009761/Interim_report.pdf.

10 Jacques Crémer, Yves-Alexandre de Montjoye & Heike Schweitzer, *Competition Policy for the digital era*, Final Report, European Commission, Directorate-General for Competition (2019) at pg. 112, available at https://ec.europa.eu/competition/publications/reports/kd0419345enn.pdf; United Kingdom, *Unlocking Digital Competition: Report of the Digital Competition Expert Panel,* also known as the 'Furman Report' (March 2019) at paras. 1.65-1.92, available at https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/785547/unlocking_digital_competition_furman_review_web.pdf; Australian Competition & Consumer Commission, *Digital platforms inquiry,* final report (July 26, 2019) pg. 58, available at https://www.accc.gov.au/focus-areas/inquiries-ongoing/digital-platforms-inquiry/final-report-executive-summary; University of Chicago, Stigler Center, *Stigler Committee on Digital Platforms,* Final Report (September 2019) at pg. 43, available at https://research.chicagobooth.edu/stigler/events/single-events/antitrust-competition-conference/digital-platforms-committee.

11 Charles Fishman, *The Wal-Mart Effect: How the World's Most Powerful Company Really Works - and How it's Transforming the American Economy* (New York: Penguin Books, 2006).

12 Federal Trade Commission, *Data Brokers: A call for transparency and accountability* (May 2014), available at https://www.ftc.gov/system/files/documents/reports/data-brokers-call-transparency-accountability-report-federal-trade-commission-may-2014/140527databrokerreport.pdf.

to clients for a price. Data is also "non-rivalrous."[13] In other words, the use of raw data by one firm does not preclude its use by other firms.

As the economist Joseph Schumpeter argued, it is difficult to predict future developments of companies and technologies. Schumpeter's famous term "creative destruction" was used to describe the process through which firms innovate to capture consumers and market share, only to be eventually displaced themselves. He posited a concern that this dynamic aspect of competition is too often overlooked in order to assess competition simplistically in a static fashion.[14] It is easy to find evidence that such a concern is still relevant today. For example, a 2007 article in *The Guardian* suggested that the social media company, Myspace, was a natural monopoly.[15] Extensive network effects were the basis for the claim that Myspace's dominant market position was unassailable similar to those being made about Facebook and Google today.

Myspace, founded in 2003, quickly saw a rapid rise in its market position. The website was a social network with individual profiles, creating networks of friends and opportunities to embed or connect to music. By May 2009, Myspace had been overtaken by Facebook. With a more user-friendly interface, Facebook's superior advertising allowed for greater innovation propelling them to the top and displacing MySpace in the social media market.[16] Apart from the advent of new superior network usages or technologies, any durable barriers to entry of the dominant digital platforms could be also be challenged on account of lower fixed entry costs associated with cloud computing, growing overall venture capital investments in the digital economy, and improved data portability such as those that may result from voluntary initiatives by Big Tech companies such as the Data Transfer Project.[17]

Notwithstanding such potential disruption, economies of scale and scope do appear to be particularly strong in relation to the accumulation and use of certain types of data relating to consumer behavior. A potential new entrant in a given market may face significant barriers to entry and expansion from incumbents who use large-scale datasets to improve the quality of their own products and services. Big Tech companies can apply machine learning to extensive data sets to improve their offerings and expand their activities into new areas. Thus, incumbent firms may be able to use machine learning trained on large datasets to cement their position by attracting more users by improving their services; they may also end up making more money by better targeting their advertising. By limiting a rival's access to such data, dominant firms can provide strong incentives for consumers to use their services exclusively.

III. THE EXISTING ANTITRUST FRAMEWORK MAY LEAD TO BETTER OUTCOMES THAN REGULATION

The traditional antitrust framework has nothing to do with ensuring that new entrants have the right to succeed or that firms take (subjective) steps that support democracy, fairness or freedom. That is not to say that such concerns are not valid; it is just that they have traditionally been more of a political issue than a technocratic antitrust issue. For instance, there may be a public interest in creating legislation or regulations that protect privacy, media diversity and democratic institutions, but these are not antitrust issues. What is interesting is that certain solutions to antitrust problems, such as giving consumers more autonomy over their data through portability, may be a solution to both an antitrust and a public interest concern. There is nothing wrong with killing two birds with one stone, but it is also important to be precise about the problems that each solution is intended to solve. Competition is best promoted with minimal regulation and in keeping with the rationale for economic regulation, which is rooted in addressing market failures such as those arising from natural monopolies or externalities.

The benefit to using the traditional antitrust framework is that it avoids micro-managing the technology sector, a complex and rapidly evolving sector of the economy. Of course, there are large sectors of the economy that are currently regulated (e.g. a municipal electricity distribution company may have its prices, the services it offers, and investments it makes decided by regulation). But traditionally regulation is only imposed in industries where the cost of entry is so great, or the duplication of facilities would be so wasteful, that some degree of monopoly is

---

13 D. Daniel Sokol & Roisin Comerford, "Antitrust and Regulating Big Data," *George Mason Law Review* 23:5 (Fall 2016) pg. 1137.

14 Joseph A. Schumpeter, *Can Capitalism Survive? Creative Destruction and the Global Economy* (New York: Harper Perennial, 2009). Originally published as *Capitalism, Socialism, and Democracy.*

15 Victor Keegan, "Will MySpace Ever Lose its Monopoly?" *The Guardian* (February 8, 2007).

16 Ryan Bourne, "Is This Time Different? Schumpeter, the Tech Giants, and Monopoly Fatalism," CATO Institute (June 17, 2019), available at https://www.cato.org/publications/policy-analysis/time-different-schumpeter-tech-giants-monopoly-fatalism#null.

17 Data Transfer Project, available at https://datatransferproject.dev.

considered unavoidable.[18] For instance, public utilities are regulated based on their significant economies of scale such that one firm can provide service to a market at a lower cost than two or more competing firms. It is also important to note that most regulation is imposed on industries where the nature of goods or services is unchanging (e.g garbage pick-up, electricity distribution) relative to a rapidly evolving technology sector.

While we believe that calls for regulation to fix perceived problems in big tech are drastic and should be questioned, we believe that it is appropriate to examine the existing antitrust framework in light of current concerns. In other words, it is reasonable to ask whether the existing antitrust framework could potentially benefit from being "fine-tuned." Such fine tuning has happened in the past and it is natural to expect it will continue in the future. Past examples include (a) moving from *per se* condemnation of certain vertical restraints (e.g. resale price maintenance) in favor of a rule of reason approach in the United States,[19] (b) the European Commission's adoption of a new substantive test for merger control, the so-called SIEC ("significant impediment of effective competition") test[20] and (c) numerous revisions to Canada's competition legislation in 1986 including the introduction of civil reviewable practices to address mergers, abuse of dominance, refusal to deal, exclusive dealing, and tied selling, removing most competition matters from the cumbersome criminal regime.[21]

This article concerns a specific kind of "fine tuning" that might be useful to consider in light of the concerns about data usage by Big Tech. It examines the legal test and standard of proof on which the anticompetitive effects of a transaction or conduct are proven and met, and by whom.

IV. ASSESSING EFFECTS IN BIG TECH

Much antitrust enforcement requires an assessment of effects. For example, in Canada there is no injunctive relief from an alleged anticompetitive act without showing anticompetitive effects. There is also no enjoining of a merger unless it can be shown that the merger is likely to cause a substantial lessening or prevention of competition ("SLPC"). The SLPC test is very similar to the 'substantial lessening of competition' ("SLC") test, which is used by most other common law jurisdictions (*e.g.* the United States, the UK, Ireland, Australia, and Singapore).

That is not to say that showing effects is critical to all antitrust enforcement. For example, in most jurisdictions, cartel conduct is a *per se* offence and condemned without proof of anticompetitive effects. And in Europe, even some types of agreements between non-competitors are treated as "by object" infringements of competition law that do not require a showing of effects.[22] Nevertheless, a significant amount of antitrust enforcement, in most jurisdictions, requires a showing of anticompetitive effects.

In light of the importance of demonstrating anticompetitive effects, the remainder of this article considers the current legal test required to show anticompetitive effects and suggests that, in situations where economies of scale, scope, and/or network effects are important — as some have claimed about certain tech markets — that test may be overly onerous for antitrust plaintiffs when markets are characterized by a "winner-take-all" dynamic.

---

18 Walter Adams, "The Role of Competition in the Regulated Industries," *Journal of Reprints for Antitrust Law and Economics* 9.2 (1978), reprinted from 48 American Economic Review 527 (1958) pg. 457.

19 *Leegin Creative Leather Products, Inc. v. PSKS Inc.,* 551 U.S. 877 (2007); Iacobucci, E. & Winter, R.A., "Vertical Restraints Across Jurisdictions," *The Oxford Handbook of International Antitrust Economics*, Roger D. Blair & D. Daniel Sokol, Eds' (Oxford: Oxford University Press, 2014) pgs. 351-386.

20 Council Regulation (EC) No 139/2004 of 20 January 2004, [2004] OJ L24, 1; "Commission Notice - Guidelines on the Assessment of Horizontal Mergers under the Council Regulation on Control of Concentrations between Undertakings," DG COMP, 28 January 2004; Lars-Hendrik Roller & Miguel De La Mano, "The Impact of the New Substantive Test in European Merger Control," *European Competition Journal* 2:1 (April 2006).

21 Bill C-91, An Act to establish the Competition Tribunal and to amend the Combines Investigation Act and the Bank Act and other Acts in consequences thereof, 1st Sess, 33rd Parl, 1985 (assented to June 17, 1986), SC 1986, c 26; Sandra Walker & Michael Kirby, "Institutional Overview and Statutory History," *Fundamentals of Canadian Competition Law,* 3rd ed, James B Musgrove ed. (Toronto: Carswell, 2015): pgs. 24-26.

22 European Commission, "Guidance on restrictions of competition 'by object' for the purpose of defining which agreements may benefit from the De Minimis Notice" Commission Staff Working Document, Brussels (June 25, 2014), available at https://ec.europa.eu/competition/antitrust/legislation/de_minimis_notice_annex.pdf.

A. Winner-take-all Markets

Some markets support the existence of multiple, even a great many, competitors. For example, driving on a highway in Canada reveals that a great many companies offer trucking services. Other markets are different in that a substantially smaller number of producers typically exist. For example, as of October 2019, Android and iOS accounted for nearly all the share of a "worldwide mobile operating system market" with Android accounting for about three times iOS's share (77 percent and 22 percent).[23] That was not always the case, however, as Blackberry's share peaked around 20 percent in 2010 although by early 2017 its share was 0.0 percent.[24]

In such markets, which we will call "winner-take-all markets," there is competition *for* the market. By contrast, in traditional markets, there is competition *in* the market.[25] Some have claimed that competition for the market — as opposed for competition in the market — is a key feature of markets in which big tech firms are active.[26]

Winner-take-all markets support a small number of competitors because large firms can create much more value than smaller firms. Consider an extreme example: the benefit of a water and sewer authority being "big" is so great that we resign ourselves to regulating it by specifying the nature of what it sells and at what price. Any of the following three types of efficiencies may be why bigger firms deliver greater value than smaller firms.

- *Economies of scale* are present when firms that sell more of a particular product incur costs that are lower in proportion to firms that sell less of a particular product. The existing water and sewer authority can deliver service to a new house for substantially lower costs than could a new entrant who would not only have to connect the house to a network of supply and sewer lines, but also construct that network and construct water filtration and wastewater collection and treatment facilities.

- *Economies of scope* are present when firms that sell more products incur costs that are lower in proportion to firms that sell fewer products. Some automobile manufacturers take advantage of economies of scope when they produce multiple automobile models based on common engineering designs. For example, Volkswagen's "Modular Transverse Matrix standardizes many vehicle component parameters across brands and vehicle classes. It essentially means that one platform can be used to build a wide variety of cars. This means the highest levels of technology can be shared across the Volkswagen Group, and production costs can be reduced while production flexibility is increased."[27]

- *Network effects* are present when consumers value a particular product more as more consumers also consume that particular product. In contrast to economies of scale or scope, which are characteristics of supply, network effects are a characteristic of demand. Perhaps the most obvious example is a social media product like Facebook where users benefit when more users join the platform.[28]

To exploit these efficiencies, a certain amount of scale is necessary. Thus, in winner-take-all markets — that is in markets where some or all of these efficiencies are particularly strong — a successful firm must be a big firm and, hence, its presence or absence will have very

---

23 "Mobile Operating System Market Share Worldwide: Nov 2018 - Nov 2019," *Statcounter, Global Stats* (December 2019), available at https://gs.statcounter.com/os-market-share/mobile/worldwide.

24 Jake Swearingen, "BlackBerry Now Controls 0.0 Percent of the Smartphone Market," *New York* (Feb. 15, 2017), available at http://nymag.com/intelligencer/2017/02/black-berrys-global-market-share-is-now-0-0.html.

25 Evans, D.S., & R. Schmalensee, "Some Economic Aspects of Antitrust Analysis in Dynamically Competitive Industries," *Innovation Policy and the Economy* 2 (2002) 1-49; Paul Andrew Geroski, "Competition in Markets and Competition for Markets," *Journal of Industry, Competition and Trade* 3 (2003): 151-166; Joshua S. Gans, "When is Static Analysis a Sufficient Proxy for Dynamic Considerations? Reconsidering Antitrust and Innovation," *Innovation Policy and the Economy* 11 (2011): 55-78.

26 Charles McConnell, "The digital economy means competition for the market, says Scott Morton," *Global Competition Review* (November 13, 2017), available at https://globalcompetitionreview.com/article/usa/1150021/the-digital-economy-means-competition-for-the-market-says-scott-morton.

27 "Details on the Volkswagen Group's Modular Transverse Matrix (MQB)" *Volkswagen UK media site* (2018), available at https://vwpress.co.uk/technology/technology-volkswagen-groups-mqb.

28 Such an example is a direct network effect. Other products exhibit what are called indirect network effects. For example, an Amazon Marketplace consumer derives no direct benefit as other consumers use Amazon Marketplace, but that consumer does derive benefit from an increase in the number of merchants that sell on Amazon Marketplace. And importantly, on Amazon Marketplace, the number of merchants may grow with the number of consumers. Thus, an Amazon Marketplace consumer derives an indirect benefit from an increase in the number of Amazon Marketplace consumers. Indirect network effects usually operate across different sides of a platform; direct network effects operate within a single set of users, for example, on a given side of a platform.

substantial competitive effects. In other words, winning competition *for* a market is likely to result in very substantial competitive effects. Those effects are likely to be much less substantial if competition is only *in* the market. Consider, for example, the likely competitive effects of a merger between iOS and Android compared with the likely effects of a merger of firms that offer trucking services in Canada. Clearly, the former would be more substantial - measured in any meaningful way - than the latter.

B. Assessing Anticompetitive Effects in Winner-take-all Markets

Analysis of anticompetitive effects under an SLC test can operate very differently in winner-take-all markets compared with traditional markets. In short, while an SLC test can work well in traditional markets — in the sense that some conduct or acquisition will be enjoined only if welfare is harmed *in expectation* — an SLC test may not work so well in winner-take-all markets. The reason is that effects will usually be small in scale in traditional markets so that the likelihood of those effects is a reasonable proxy for how they would affect welfare *in expectation*. By contrast, effects will usually be of enormous scale in winner-take-all markets so dismissing such effects whenever they are deemed unlikely to occur will lead to a failure to enjoin a merger or conduct that lowers welfare substantially *in expectation*.

The words "in expectation" above are used in the mathematical sense of "expected value" and are important to appreciate. The expected value of an event is defined to be the product of the event's probability and the scale of its effect, if it occurs. Symbolically, if an event occurs with probability p and the effect of that event, if it occurs, is denoted x, the expected value of the event is equal to px. To illustrate, suppose an anticompetitive effect of $10,000 occurs with probability 10 percent but, otherwise (i.e. with probability 90 percent) that effect is zero. In that case, the expected value is equal to 10%×$10,000 + 90%×$0 = $1,000.

A fundamental property of an expected value is that a reduction in probability can be perfectly offset by an increase in the scale of the effect. While perhaps abstract when stated in this way, this property is key to what follows. To illustrate, the following statements all imply the same expected value of anticompetitive effects: 1) an anticompetitive effect of $10,000 occurs with probability 10 percent and $0 otherwise, 2) an anticompetitive effect of $100,000 occurs with probability 1 percent and $0 otherwise, and 3) an anticompetitive effect of $1,000 occurs with probability 100 percent.

The fungibility between probability and scale of effect is universally appreciated by humans and businesses in the ordinary course. Examples are numerous. Many people wear their seat belt when driving even though the probability of an accident is very small; they realize that the costs of an accident without wearing a seat belt can be very large. A college applicant may apply to "sure thing" colleges as well as "stretch" colleges. While admission at a very prestigious university may be unlikely, or a "stretch," the benefits of gaining acceptance may be perceived to be very large and offset the lower likelihood of acceptance. Insurance companies charge positive premiums to those they insure even though accidents are unlikely. Conversely, those that are insured pay those premiums even though they are unlikely to need the coverage. Pharmaceutical companies will pursue expensive and lengthy research and development efforts on a particular molecule despite the fact that those efforts may be extremely unlikely to result in commercial success.

An SLC test operates very differently from an expected value because if effects are not found to be likely, they are disregarded entirely. In other words, there is no fungibility between the likelihood of an event and the scale of its effects. To illustrate, in only the third case described above (an anticompetitive effect of $1,000 occurs with probability 100 percent) was anticompetitive harm likely.

To see the implications further, consider how an SLC test functions in a typical traditional market and a typical winner-take-all market, on a balance of probabilities:

- Case 1: entry in a traditional market (where there is competition *in* the market). Suppose that an entrant is poised to enter a market and the procompetitive effect of its entry is uncertain but equally likely to be anywhere between $0 and $100. (To visualize, suppose that the numbers $0, $1, $2…$100 are written on 101 balls that are placed in an urn from which a single ball is drawn at random. The number on the ball that is drawn represents the procompetitive effects of entry that are realized.) This case reflects competition in the market because the entrant's effect on the market can be small. Moreover, the entrant is almost certain to make at least some sales. Thus, we are almost certain that entry will cause at least some procompetitive benefit: there is a 99 percent probability that the procompetitive effects of entry will be at least $1. Thus, on a balance of probabilities (i.e. a probability greater than 50 percent), entry will have some procompetitive effects. The expected value of the procompetitive effects of entry in this case is $50.[29]

---

29 To see this without resorting to calculus, suppose that effects take on the integer values $0, $1, $2… $100 with equal probability. This implies that each integer occurs with probability (1/101). Summing the product of the values and probabilities leads to the expected value of $50.

- Case 2: entry in a winner-take-all market (where there is competition _for_ the market). Suppose that an entrant is poised to enter a market and the procompetitive effects of its entry is equal to $10,000 with a probability of 10 percent and $0 with probability of 90 percent. This setting reflects competition for the market because the entrant either fails entirely or has a relatively large effect. This case supports the following statement: "On a balance of probabilities (i.e. a probability of greater than 50 percent), the procompetitive effect of entry will be $0." Nevertheless, the expected value of this entry in this case ($1,000) is substantially greater than in Case 1 ($50). Interestingly, the statement "On a balance of probabilities, the procompetitive effect of entry will be $0" remains true _regardless of the scale of the effects of entry_. For example, if the effects of entry were increased 10-fold, the expected value of entry would increase 10-fold but, on a balance of probabilities, the procompetitive effect remains zero.

Now consider an anticompetitive act by an incumbent that somehow precludes any successful entry. In other words, any attempted entry results in no procompetitive effects. This anticompetitive act would cause harm on a balance of probabilities for Case 1, but not for Case 2 even though precluded entry in Case 2 has substantially larger effects, in expectation, than in Case 1. Moreover, that remains true even as the scale of the effect in Case 2 becomes arbitrarily large. Thus, a competition enforcement agency that is required to show the existence of anticompetitive effects from precluding entry on a balance of probabilities could only successfully challenge the conduct in the case of competition in the market (i.e. Case 1) and not in the case of competition for the market (i.e. Case 2).

The discussion above highlights the fundamental point of this section and bears repeating. An enforcement rule that ignores an event regardless of the scale of its effect so long as it is deemed unlikely is problematic. Such an enforcement rule would accept _any_ loss in welfare so long as it is deemed unlikely to occur (i.e. will occur with a probability of less than 50 percent). Humans and businesses certainly do not use these types of rules to make decisions. No (sane) human would accept a small payment in exchange for engaging in behavior that causes severe injury with a small probability (e.g. Russian roulette).

We suspect that this point is relevant to the current debate about whether competition law is up to the task of preventing harmful acquisitions or conduct by big tech companies. In the next section we discuss several propositions to change competition law enforcement and assess how they would operate in light of these observations.

V. PROPOSITIONS TO CHANGE COMPETITION LAW IN RESPONSE TO BIG TECH

As detailed above, a substantial share of the current debate about antitrust and big tech concerns the use of regulation. While regulation is certainly necessary to address certain non-competition problems, we are dubious about calls to regulate big tech companies just as a utility. A more useful discussion is to consider whether current antitrust enforcement can be modified in ways that address specific competition concerns in these markets in light of our observations above.

We perceive there to be three broad categories of calls to modify the competition law framework for proving anticompetitive effects in the context of big tech:

- Those that adopt an explicitly probabilistic approach and reject a traditional analysis of effects based on a balance of probabilities,

- Those that adopt a bifurcated approach, whereby the burden of proof or applicable legal test is applied as a function of some observable initial condition, and

- Those that uniformly lessen the burden on an antitrust plaintiff.

The probabilistic approach is exemplified by the "balance of harms" approach articulated in the Furman Report submitted to the CMA.[30] This "more economic assessment" considers both the likelihood and the magnitude of the impact of a merger or conduct allowing a competition authority "to intervene where it expects, on average, for the harm of the merger to be substantially greater than the benefits."[31] In the language introduced above, this approach proposes making the notion of expected value central to an assessment of effects. While a departure for com-

---

30 United Kingdom, _Unlocking Digital Competition: Report of the Digital Competition Expert Panel,_ also known as the 'Furman Report' (March 2019), available at https://assets. publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/785547/unlocking_digital_competition_furman_review_web.pdf. See Recommendation s 9 and 10 at pgs. 13, 98-101.

31 _Ibid_, at para 3.96. Note that the report only suggested adopting the balance of harms test for merger review.

petition law enforcement, the report points out that such an approach is already used in other areas of government: "The balance of harms test would have similarities with the government's recognized approach for making regulatory decisions, which draws on the principles of cost-benefit analysis. This can combine qualitative and quantitative analysis and judgements, with various techniques for addressing the challenges of uncertainty. This approach is frequently used for significant and complex government decisions, for example for public health proposals, environmental protection, or major infrastructure investment."[32]

Ultimately, this suggestion was rejected by the CMA due to "practical challenges in applying this kind of test in a transparent and robust way."[33] One practical challenge is estimating with sufficient precision the probabilities required in the approach.[34] For example, suppose a merger would create $10 million of benefit with certainty, but creates $100 million of harm with some probability. Thus, whether that merger's net effect, in expectation, is positive or negative depends on whether that probability is greater than or less than 10 percent. Estimating probabilities with such precision may very well be challenging. For example, it may require understanding when evidence is consistent with a 9 percent probability and when evidence is consistent with an 11 percent probability.

A bifurcated approach is illustrated by Senator Amy Klobuchar's bill, the Consolidation Prevention and Competition Promotion Act of 2019.[35] Among other things, it proposes to shift the burden of proof onto the merging parties to demonstrate that the merger does not harm competition whenever the proposed acquisition either significantly increases consolidation or involves a large transaction price or large companies.[36] (It would also change the legal test in the Clayton Act[37] for prohibiting mergers from an SLC test to a "material lessening of competition" test.)

Such a proposal is bifurcated because it involves two distinct steps. The first step involves a determination of which party bears the burden of proof and the second step involves one or the other party meeting their burden of proof on the new legal test - whether the acquisition will tend to materially lessen competition or tend to create a monopoly or a monopsony, on a balance of probabilities.

The first step involves determining who has the burden of proof based on whether the financial threshold is exceeded. If the threshold *is* exceeded, then the merging parties have the burden of proving the acquisition will not "materially lessen competition," on a balance of probabilities. If the threshold *is not* exceeded, then it is the antitrust plaintiff's responsibility to bring sufficient evidence to prove a material lessening of competition in order to block the merger. The reversal of the burden of proof for acquisitions exceeding the threshold would be a significant change because the starting point for the court in such cases would be that the merger harms competition. This first step, determining who has the burden of proof, is unlikely to be a significant issue in a trial as it is highly factual.

The second step would either require the antitrust plaintiff to bring evidence that a merger harms competition or the merging parties to bring evidence that the merger does not harm competition, depending on whether the threshold is exceeded. Practically, both parties will bring this evidence regardless of who has the burden of proof. However, it is easier for the antitrust plaintiff to win its case when the court is starting with the presumption that a merger harms competition and the merging parties have to show it does not create a material lessening of competition. And on the other hand, it is easier for the merging parties to win their case when the court's starting point is that the transaction does not harm competition and the antitrust plaintiff has to show that the transaction has created a material lessening of competition.

An approach that uniformly lessens the burden on an antitrust plaintiff is one where a lower legal standard applies. For example, some have proposed adopting a strict structuralist approach to antitrust, which, for example, makes illegal *any* merger that creates a firm with 10 per-

32 *Ibid*, at para. 3.91.

33 Letter from Dr. Andrea Coscelli (Chief Executive, Competition and Markets Authority) to Alex Chisholm (Permanent Secretary, Business, Energy and Industrial Strategy, Department for Business, Energy and Industrial Strategy) and Charles Roxburgh (Second Permanent Secretary, Her Majesty's Treasury), "Digital Competition Expert Panel Recommendations - CMA view" (March 21, 2019): pg. 5, available at https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/788480/CMA_letter_to_BEIS_-_DCEP_report_and_recommendations__Redacted.pdf.

34 Jeffrey M. Wilder, "Acting Deputy Assistant Attorney General Jeffrey M. Wilder Delivers Remarks at the Hal White Antitrust Conference," Speech, Washington, DC, (June 10, 2019), available at https://www.justice.gov/opa/speech/acting-deputy-assistant-attorney-general-jeffrey-m-wilder-delivers-remarks-hal-white.

35 S. 307 - 116th Congress (2019-2020). Available online at https://www.congress.gov/bill/116th-congress/senate-bill/307?q=%7B%22search%22%3A%5B%22S.+192%22%5D%7D.

36 The financial thresholds that define such acquisitions would be adjusted annually. As of 2019, they would implicate acquisitions greater than $5 billion in value or involving a party with assets, net annual sales, or a market capitalization greater than $100 billion.

37 Clayton Antitrust Act of 1914 (15 U.S.C. §§ 12-27).

cent or more market share.[38] We have already mentioned Amy Klobuchar's proposal to change the legal test for prohibiting mergers in the United States from a "*substantial* lessening of competition" to a "*material* lessening of competition." Other suggestions to lessen the burden on anti-trust plaintiffs include modifying antitrust law to relax the proof requirements imposed upon them in appropriate cases, such as those involving technology platforms. It has been proposed that courts should be more willing to permit plaintiffs to prove harm to competition by circumstantial evidence, especially where the propositions in question are not observable and there thus cannot be direct evidence.[39] It has also been proposed that courts should not presume efficiencies from vertical transactions and that crediting of efficiencies should require strong supporting evidence showing merger-specificity and verifiability.[40]

One objection to a bifurcated approach that is conditioned on some measure of size or a uniform lowering of burdens on antitrust plain-tiffs is that both proposals could prevent procompetitive and efficiency-enhancing transactions. For example, the Furman Report noted the risks inherent in adopting a presumption that acquisitions by large digital companies are anticompetitive: "the majority of acquisitions by large digital companies are likely to be either benign or beneficial for consumers, though a minority may not be. Being acquired is also an important exit strategy for technology start-ups, providing significant incentives for investors to provide funding to risky projects and support market entry."[41] To illustrate, Google's chief economist has claimed that Google's acquisitions are primarily "acquihires:" the median number of employees in companies acquired by Google is 6; 25 percent had 3 or fewer employees; 75 percent had 18 or fewer employees.[42] While preventing large companies from hiring additional employees may benefit competitors to those large companies, it is unlikely to help competition or consumers.

The objection suggested by the current paper is that any approach that is conditioned on "bigness" is not tailored to the issues inherent in assessing effects in winner-take-all markets described above. Specifically, "bigness" is clearly not a sufficient indicator of transactions or conduct that may implicate very large effects. Simply put, there exist many "big" companies that do not operate in winner-take-all markets.

Instead, a bifurcated approach could better address the issues described above by focusing the first step on identifying instances where a winner-take-all dynamic is present. If a winner-take-all dynamic is indeed present, then the second step would entail an examination of the evidence in relation to a weaker legal test. For example, the burden could shift to the defendant to demonstrate that the transaction or conduct would not harm competition. Alternatively, the fact finder could judge whether it is *possible* that a transaction or conduct would cause substantial effects.

VI. CONCLUSION

In prospective cases – that is cases where a new product or service has not yet been proven to be significant – substantial uncertainty is inherent and unavoidable. Even in retrospective cases – that is cases when the product or service has matured – it is frequently very difficult to say wheth-er an acquisition or conduct should have been enjoined. That is, whether outcomes would have been "better" absent the conduct or acquisition. Consider Google's acquisition of Android. It is easy to identify facts about the world in which Google did acquire Android. For example, it is a fact that a large majority of portable devices currently run on Android. But opining whether consumers and competition would be in a better place in a world where Google was stopped from acquiring Android requires knowing how the mobile device marketplace would have evolved absent the acquisition. Such an endeavor, to put it mildly, is not easy.

---

38 Sandeep Vaheesan, "Unleash the Existing Anti-Monopoly Arsenal: Corporate power can be neutralized if federal agencies simply used the prodigious authority they've been granted," *The American Prospect* (September 24, 2019), available at https://prospect.org/day-one-agenda/unleash-anti-monopoly-arsenal/.

39 University of Chicago, Stigler Center, *Stigler Committee on Digital Platforms,* Final Report (September 2019), available at https://research.chicagobooth.edu/stigler/events/single-events/antitrust-competition-conference/digital-platforms-committee, at pgs. 98-99.

40 University of Chicago, Stigler Center, *Stigler Committee on Digital Platforms,* Final Report (September 2019), available at https://research.chicagobooth.edu/stigler/events/single-events/antitrust-competition-conference/digital-platforms-committee at pg. 99.

41 United Kingdom, *Unlocking Digital Competition: Report of the Digital Competition Expert Panel,* also known as the 'Furman Report' (March 2019) para. 3.102, available at https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/785547/unlocking_digital_competition_furman_review_web.pdf.

42 Hal Varian, "The Seven Deadly Sins of Tech?" Presentation at the Global Antitrust Economics Conference, New York University, Stern School of Business (May 2019), available at https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=14&ved=2ahUKEwjDweuA4b_IAhVog-AKHakgCQY4ChAWMAN6BAgDEAI&url=https%3A%2F%2Fwww.concurrences.com%2FIMG%2Fpdf%2Fconcurrences_190531_gae_presentations.pdf%3F50755%2F072841c64e7d6daa8f5d7fc2f9d660ef4aa302be&usg=AOvVaw2oh_6nE0vJuP6oNkShBMFR.

In this sense, there is likely no silver bullet that will ensure that enforcement decisions are always correct. However, recognizing existing biases in competition law enforcement and trying to minimize them can go some way toward improving outcomes.

Moreover, improving current competition law enforcement is valuable because it provides a tangible response to widespread calls for potentially dramatic change. Calls to regulate big tech companies like we do a municipal utility are indeed dramatic and, we believe, are likely to be harmful on balance. Instead, we believe that a better path forward is to give competition — and antitrust enforcement — a shot.

CPI Subscriptions

CPI reaches more than 35,000 readers in over 150 countries every day. Our online library houses over 23,000 papers, articles and interviews.

Visit competitionpolicyinternational.com today to see our available plans and join CPI's global community of antitrust experts.