

ICLE Final Report on the FTC Hearings on Competition & Consumer Protection in the 21st Century

The Weakness of Interventionist Claims

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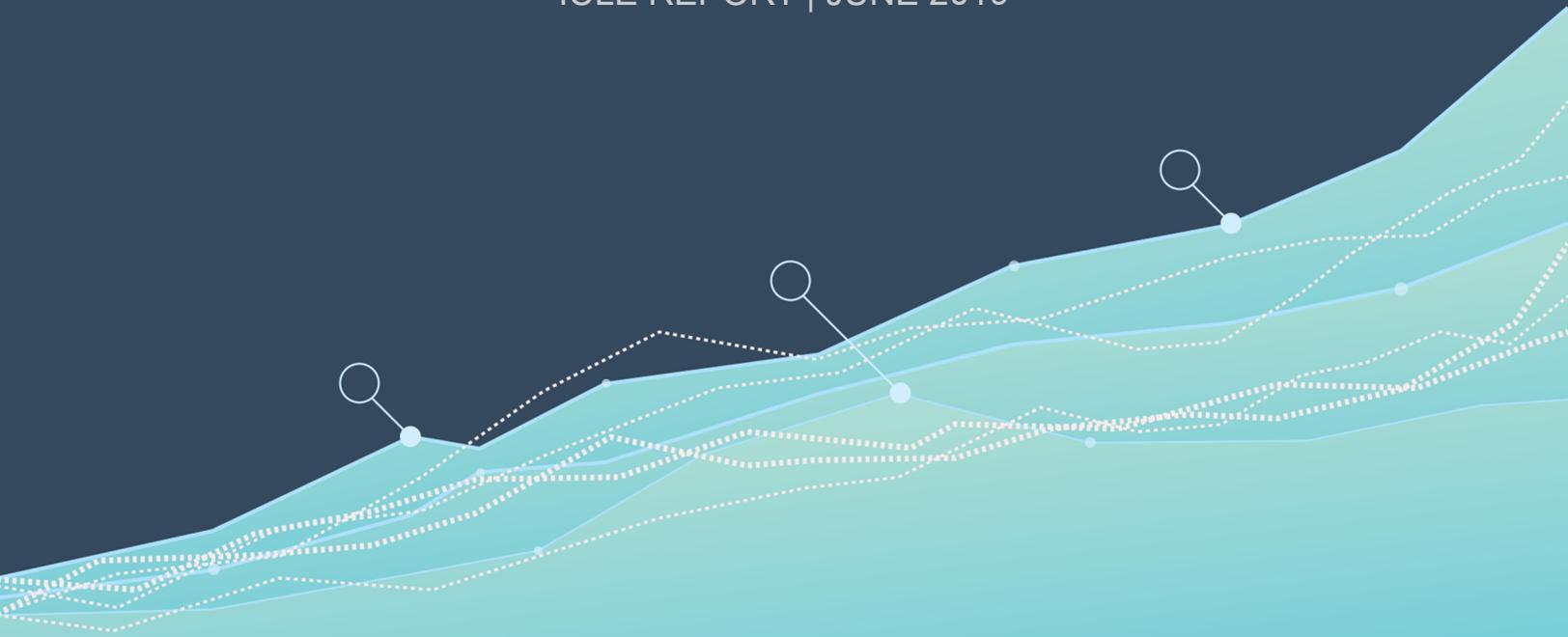


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Section I: Executive Summary

I. The consumer welfare standard

Whether or not the consumer welfare standard (“CWS”) remains relevant to competition policy in the twenty-first century, as well as what potential replacement standards would look like, occupied a good deal of the Commission’s attention during these hearings. Two primary criticisms emerged from critics of the CWS.

First, some critics contended that the history of the antitrust laws demonstrates that the true purpose of those laws includes a variety of non-economic, explicitly political goals. At the core of this criticism is a mistaken notion that the antitrust laws were designed to protect a general concept of “liberty” without any specific reference to economic concepts or market-relevant characteristics of consumers and producers. The antitrust laws, in this telling, are designed more to prevent large firms from competing with or controlling the state in the political process. The advocates for this position are not shy about asking enforcers explicitly to include political components in their competition analyses. They likewise hold that by attempting to conduct objective empirical evaluations of markets and, therefore, exclude political considerations, the CWS is itself used to make political decisions.

The second major criticism is that, although the CWS may be an effective tool to handle some narrow set of anticompetitive harms, many modern firms have characteristics that make the CWS inapplicable. Notably, several commenters raised concerns regarding firms that offer zero- or low-priced goods and services on one side of a two-sided platform characterized by relatively strong network effects. These commenters offered an alternative comprising multiple competing goals—such as preservation of small producers, protection of labor, and preservation of competitive market structures (however defined). That, ultimately, would require an enforcer to determine which ends to prioritize and as such is little better than the purely political vision of enforcement. To the extent that any clear methodology was offered for resolving such conflicts, it was essentially in the form of hurdles, such as firm size or extent of market concentration—harking back to the kinds of analysis conducted in the mid-20th century, when the widely discredited “structure-conduct-performance” (SCP) paradigm held sway.

But other testimony during these proceedings—as well as the weight of the economics literature and the evolution of the law itself—demonstrate that “consumer welfare” is the best yardstick yet devised for distinguishing between anticompetitive behavior that is (likely) harmful and procompetitive behavior that is (likely) benign or beneficial.

To speak of using antitrust to optimize “democratic values” is to do worse than speak mere nonsense. It is to step outside of the reasonable limits that Congress and the courts have placed on antitrust

law, and to establish a shadow body of law with which to subsume other legal aims into antitrust. To evade these definitional limits on antitrust is clearly wrong; Congress hardly intended to vest enforcement agencies with the power of a super-legislature, operating outside of the democratic process.

Moreover, as we detail at length in Section I.C, enforcers and courts have, in fact, long been concerned with evaluating a wide range of potential harms under the CWS. It is simply not true that modern antitrust standards are incapable of analyzing nonprice factors. A wide range of sources from the Horizontal Merger Guidelines to Supreme Court cases stress the importance of considering factors like innovation, consumer choice, or product quality and diversity when looking at alleged competitive abuses. The CWS is more than capable of incorporating these characteristics.

But, even with that being true, the critics are far too quick to discount the power of price theory and its place in the CWS. It is important to remember that price and output are merely proxies for the ultimate investigation: what do consumers actually value, and are they being well-served according to those preferences?

Price and output are metrics (and relatively easily identifiable ones, at that) that aggregate the decisions of countless individuals who are performing their own hedonic calculations, using all their own subjective values, with respect to the conduct of firms in the economy. The price and level of output that arise from those individual calculations necessarily takes account of the various preferences—albeit relatively imprecisely—of all those subjective, multidimensional calculations. Importantly, price and output offer the best means available to evaluate the effects of many non-price factors, including innovation. In other words, although imperfect, measurements of market price and market output are (generally) reliably informative, at the very least of the direction of likely changes in consumer welfare along all dimensions in response to changes in firm conduct.

The advocates for inferior standards (or worse, enforcement as pure political discretion) seek to return antitrust to bygone days when, for example, enforcers could sometimes punish firms for raising prices, while later punishing firms engaged in allegedly “ruinous competition” by merely lowering prices. This antiquated era of antitrust was marked by courts arbitrarily punishing firms that successfully outcompeted their rivals and simply grew “too large.” Such would be the result of the rootless alternatives that advocates propose to the CWS. The Commission should tread carefully before incorporating these ideas, which, during the course of its evolution in the 20th century, antitrust law carefully and correctly selected out.

II. Vertical mergers

A vertical merger occurs when firms at different levels of the same supply or production chain merge to function as a single firm. The ubiquity of such arrangements and the multifarious ways in which such integrations can improve firms’ operations and increase efficiency have generally led courts and enforcers to view vertical mergers with far less skepticism than their horizontal counterparts. But a

number of participants in these hearings have criticized this view, asserting that vertical mergers raise at least the same risk of harm as horizontal mergers, and that any presumption in their favor is unwarranted. Others pushed back against this position, however. Thus, the range of assessments of the current framework for evaluating vertical mergers fall generally into two broad categories:

1. The current framework is too lax, leading to too many “false negatives” in which anticompetitive vertical mergers have been allowed to proceed and any remedies have not been effective. Current economic theory and empirical literature do not support treating vertical mergers more leniently than horizontal ones, and, in fact, the law should adopt a presumption against vertical mergers where at least one of the parties has market power. Following on this, the vertical merger guidelines should be revised to reflect that the agencies will demand a greater burden of proof from merging parties to demonstrate no net harm to consumers and/or verifiable, procompetitive, and merger-specific efficiencies. Moreover, structural remedies should be favored over behavioral remedies.
2. The current framework is well-established and adequate, but the existing vertical merger guidelines are outdated and out of use. Vertical mergers do not involve the loss of a direct competitor, hence there should be some presumption that vertical mergers do not harm competition or consumer welfare as readily as horizontal mergers. Guidelines are designed to assist the business community and antitrust practitioners by increasing the transparency of the analytical process underlying agencies’ enforcement decisions. Economic theory and evidence do not provide clear understanding or simple tools and analyses to identify the potentially anti-competitive vertical mergers *a priori* with any confidence, but the weight of the literature points overall to a presumption in favor of vertically merging parties. Nevertheless, with our current state of knowledge and understanding, new vertical merger guidelines would likely lead to more “false positives” that would prevent procompetitive vertical mergers.

Regarding the first set of assessments, while there was, overall, general agreement that the existing guidelines are out of date, there were few specific criticisms of the guidelines themselves or concrete suggestions for reform. Most speakers and commentators critical of the agency’s vertical merger enforcement activities simply wanted more enforcement. Indeed, it was difficult to escape the sense that critics of the current merger guidelines were seeking reform not so much because the current guidelines cause any problems, but because they want to use the opportunity to induce the Commission to bring more vertical merger enforcement actions and to influence the courts to make it easier for the Commission to win.

Were there a strong theoretical or empirical basis to believe that the current, fairly deferential regime is unfounded, these efforts might be understandable. As it is, however, and as we discuss in [Section 3](#), the purported justifications offered during these hearings for enhanced vertical merger enforcement are exceedingly weak. In particular:

While it is undoubtedly true that the 1984 vertical merger guidelines do not reflect the latest economic knowledge, it is by no means clear that this is a problem. Indeed, several commenters noted that the possible disconnect between the guidelines and agency learning and practice is of little

practical concern. Most importantly, even on the terms of their staunchest critics, there is no need to change the non-horizontal merger guidelines. This is because they do not in their current form apply any sort of preference for vertical mergers, nor do they recommend adoption of a different procedure for vertical merger analysis.

Several commenters noted that a new set of guidelines might create even greater problems, in particular if they were to result in over-enforcement, blocking many potentially beneficial mergers.

One commenter, in particular, raised numerous concerns regarding underenforcement, claiming that some recent evidence regarding the effects of vertical mergers suggests that in many more cases than assumed they might be harmful to consumers. The overwhelming body of evidence, however, *including* that from recent studies (reviewed in detail in [Section 3](#)), shows that vertical mergers mostly result in net benefits to consumers.

One commenter also asserted that vertical mergers deserve additional scrutiny due to the potential for such mergers to have effects on competition that are similar to those of horizontal mergers. In reality, however, such effects—when they occur—are indirect and less likely to arise compared to the direct, automatic effects of horizontal mergers.

One of the more problematic arguments for heightened scrutiny of vertical mergers came from a commenter who claims that virtually any and all efficiencies that might be obtained through a merger could equally be achieved through contracting (or at least presumed to be so available), and that prospective mergers should have to overcome this presumption by providing considerable evidence to the contrary. The claim itself does not stand up to scrutiny, as we demonstrate. Meanwhile, the evidentiary burden proposed would in many cases be practically insurmountable, leading to an unacceptably large number of false positives.

Of particular note, the general approach to vertical mergers—and the proposals to subject them to heightened scrutiny, in particular—is insufficiently attentive to dynamic effects. Indeed, the real upshot of the hearings and the literature is that vertical merger review should, if anything, be pared back out of recognition that the failure to account for dynamic effects (and the inherent difficulty of doing so) means it is likely that procompetitive mergers are being over-deterred.

III. Vertical discrimination

Concerns regarding vertical discrimination have come to prominence recently following enforcement actions in the EU and an increase in speculation that big tech platforms might be harming competition by favoring their own content over that of their complementors. This concern, repeated by several commenters at these hearings, usually hinges upon two key claims: First, large digital platforms have an incentive to leverage their strong positions as platform operators to favor their downstream products/services at the expense of competitors. Second, when it occurs, this self-preferencing is likely to lead to the exclusion of competitors and to consumer harm.

As we explain in Section I.B.1 neither assertion is supported by either theoretical or empirical evidence. First, the two-sided markets literature shows that platforms do not systematically have an incentive to leverage their strong position in the platform market in order to exclude competing retailers, downstream rivals, or the like. Absent additional case-specific factors, the first part of the argument made by vertical discrimination critics is unfounded. Second, when it occurs, the foreclosure of competing complementors does not necessarily (let alone presumptively) harm consumers. Indeed, often the opposite appears to be true.

IV. Concerns regarding technology platforms and innovation

Traditional market definition analysis that infers future substitution possibilities from existing or past market conditions will systematically lead to overly narrow markets and an increased likelihood of erroneous market power determinations. This limited method shows the problem with viewing Google as a “search engine” and Amazon as an “online retailer,” and excluding each from the other’s market. Of course, when defining markets, we should continue to rely on economic learning and use tools such as merger simulations and SSNIP tests to estimate boundaries. But market definition and market power analyses should be improved to better account for out-of-market constraints on the exercise of market power and the constraints imposed by sequential product-innovation competition, rather than price competition alone.

Many of the participants concerned about “killer acquisitions” have fallen prey to hindsight bias. Most small acquisitions either fail outright or have a negligible impact on the acquirer’s business. In the small minority of cases where the acquisition becomes hugely successful, it is almost impossible to know whether the acquired company could have achieved the same level of success in the counterfactual scenario. Arguing that enforcers have missed one or two anticompetitive mergers in the tech market is insufficient evidence for overturning the entire system, as any substitute would also be imperfect.

In particular, such claims assign implicit probabilities to entry in the case of merging firms that are improbably high (essentially approaching 1) while simultaneously assigning negligible or non-existent probabilities to the prospect of entry in defining markets or assessing market power. The two positions are incommensurable and reflect the reality that we do not, in fact, know with any certainty the likelihood or extent of competition from adjacent-market merging firms. The cost of false positives is substantial, however, as removing the merger exit path for startups and risky investments will chill such endeavors.

Some participants claimed that network effects create winner-take-all markets for tech platforms. While it may be true that some markets are naturally winner-take-most, from the perspective of consumer welfare, this is not necessarily a negative outcome. In the case of communications networks, it is intuitively obvious why consumers would be better off participating in a few large networks than in many small ones. Furthermore, critics ignore the potential for Schumpeterian innovation, i.e.,

when innovation occurs at the platform level, and platform owners leapfrog each other, maintaining a temporary monopoly long enough to be compensated for putting startup capital at risk.

All too often commenters committed what Demsetz called the “nirvana fallacy”—when government intervention is recommended based on discrepancies between real-world markets and some idealized and unachievable yardstick (rather than plausible alternatives). The market is highly imperfect—and some situations call for intervention—but regulators would be wise to remain humble about the limits of their ability to improve the status quo, primarily due to the unavoidable lack of knowledge about the future, as well as the lack of consistent feedback mechanisms to ensure that their decision-making evolves. At the very least, enforcers should refrain from *increasing* enforcement, as many commenters argue they should, based on overly simplified theoretical possibilities, especially in complex technology markets.

Lastly, participants seeking more regulation argued that platform owners were behaving anti-competitively by observing activity on the platform and then “appropriating” a feature or manufacturing a product—ostensibly reducing the returns to edge innovation. While these concerns sound alarming, they are entirely speculative and rooted in a non-falsifiable (and unsupported) claim that such conduct decreases innovation and is insufficiently accounted for in standard antitrust analysis. In fact, platform operators have an incentive *not* to choke off too much innovation. Of course, some “edge” features will be bundled with the core platform over time, but this is at least as likely a benefit to consumers as it is to harm them. Banning such conduct would be equivalent to a costly *per se* prohibition on innovation at the platform level.

V. Data competition and privacy

Data is a valuable input for companies competing in the digital economy. It is not, however, a magic bullet or holy grail, as some commenters suggested. As with other assets, companies can use data in both procompetitive and anticompetitive ways. “Big data” may be a new term, but it does not pose unique problems for competition policy.

Likewise, firms offering zero-priced services to consumers in exchange for matching them with advertisers are not unmanageable under existing antitrust law. As we saw in the *Amex* decision, the consumer welfare standard can handle cases involving multi-sided platforms with the simple rules of defining markets to include both sides of a transaction platform and netting out costs and benefits across all sides of the platform.

Contrary to what some participants claimed during the hearings, data is not the “new oil.” Data can be shared and processed *ad infinitum* without degrading in quality or decreasing in quantity. Oil, like all scarce goods, is finite and can only be burned once. Furthermore, data is a highly specific asset. Data may be extremely valuable to the company that collected it (and when used in conjunction with proprietary technology), but worthless to all others.

As we've seen time and again throughout history, while network effects may be a desirable feature for increasing a service's value proposition, they are by no means an insurmountable barrier. Moreover, whatever benefit network effects do provide, they work equally in reverse as the size of a network starts to shrink. To borrow a phrase: How did the network become irrelevant? Gradually and then suddenly.

Critics advocating for more data regulation and predating antitrust enforcement actions on harms from data accumulation also improperly discount the benefits of such practices. Like all agencies, the FTC would be remiss not to fully account for both the costs and benefits of the corporate behavior in question. Personal data is often used to tailor products and services to consumers' needs—a substantial benefit that might be lost in the case of potential regulatory failure.

And insofar as “big data” is a uniquely valuable and costly asset—as many critics of current policy contend—that would be a reason to favor *large* firms over small firms. The economies of scale necessary to deliver high-quality global products and services at zero-price or low cost might be safely assumed to be enormous. In general, antitrust policy should be neutral to firm size, but it is telling that many commenters naively assumed that the rise of big data automatically means we need to return to the “big is bad” era of competition enforcement.

It is also important to remember that data is not unique to zero-priced online platforms—or even to Internet companies for that matter. Firms have been using data to improve their business processes for decades, if not centuries. This means we are discussing a difference of degree not kind. The line between business intelligence and corporate espionage can be fuzzy. All firms need the former to succeed, and intellectual property laws protect us against the latter.

Moreover, there was much discussion of data as a barrier to entry. In addition to a lack of specificity around what the implications of that would be, many critics did not acknowledge the reality of entry without data, and the apparent limits of data barrier to entry claims. In addition, critics failed to acknowledge that incumbents' intense use of data may create a *positive* externality for new entrants: existing knowledge and organizations devoted to data analysis and collection, industry knowledge, reputation, awareness, incentive for schools to offer courses, etc. It could well be that new entrants in fact face *lower* barriers with respect to data than did incumbents when they entered.

Many hearing participants also voiced concerns about the potential for data to enable more price discrimination. Perplexingly, this issue was largely discussed as a presumptively harmful outcome. On the contrary, in industries with high fixed costs, price discrimination can increase total output and produce benefits for previously unserved segments of the market. Of course, price discrimination can also reduce the economic surplus of a transaction for some consumers. Fortunately, analyzing the costs and benefits of price discrimination is squarely within the domain of the Commission's capabilities and expertise.

Section 2: The Consumer Welfare Standard

Introduction and overview of Section 2

A major tension running throughout these hearings concerns the applicability of modern antitrust law to the challenges that arise as firms continue to experiment with unfamiliar business models. At the center of this dispute is whether the framework provided by the consumer welfare standard (“CWS”) is capable of detecting and rectifying potential anticompetitive harms that violate the anti-trust laws.

In the Commission’s hearings, opponents of the CWS raised two primary objections, which can be summarized in the form of these contentions:

1. The history of the antitrust laws demonstrates that the CWS’s anchor in economic analysis is at odds with the “true” purpose of US competition policy to protect the “democratic process” through economic atomization; and,
2. While the CWS may be able to handle some relatively narrow set of harms amenable to price analysis, it is no longer capable of handling an important set of competition concerns that arise in the modern economy.

Both contentions are incorrect. As we discuss below, antitrust analysis must have a realizable goal to guide its application. Although there is certainly room for improvement,¹ a primary benefit of the CWS is that it is an ascertainable standard. By contrast, even when couched in standard-like terms, the alternatives lack a realizable goal; they are standards in name only. The consequence of moving to such alternatives would be that enforcers would be afforded wide discretion—which would likely lead to the pursuit of political goals ungrounded in economic analysis.

The CWS is a collection of tools, entailing a set of inquiries that can predictably guide a legal investigation, that

has been widely lauded for bringing “coherence and credibility” to antitrust law, providing a framework for consistent, economically-sound decision making, and giving consumers the benefit of lower prices, increased output, higher product quality, and more innovation. By focusing on a single objective measure, the consumer welfare standard disciplines modern antitrust law. Antitrust enforcers and courts under a consumer

¹ See, e.g., Geoffrey A. Manne, *In defence of the Supreme Court’s ‘single market’ definition in Ohio v. American Express*, 7 J. ANTITRUST ENFORCEMENT 104 (2019) (discussing the importance of incorporating consideration of both sides of a two-sided platform in effects analysis). See also *Ohio v. Am. Express Co.*, 138 S. Ct. 2274, 2287 (2018) (“Evaluating both sides of a two-sided transaction platform is also necessary to accurately assess competition.”); see also Geoffrey A. Manne and Kristian Stout, *The Evolution of Antitrust Doctrine After Ohio v. American Express, and the Apple v. Pepper Decision that Should Have Been* (May 24, 2019), NEBR. L. REV. (forthcoming 2019), available at <https://ssrn.com/abstract=3393873> (Describing how antitrust law should both substantively and procedurally adjust to incorporate new economic understandings of two-sided platforms).

welfare standard are forced to support their actions with sound economic evidence. This helps to deter arbitrary or politically motivated enforcement actions that would chill aggressive, but beneficial, competitive conduct. Most important, the standard helps consumers, which is to say, all Americans.²

Despite allegations, discussed below, that the CWS is fixated on price to the exclusion of all other values, it is not. It is, rather, simply a guiding methodology and is fundamentally neutral as to the particular doctrines that are incorporated into it, so long as those doctrines and associated tools are employed by enforcers and judges to optimize enforcement such that consumers are, on net, better off than they would be otherwise.

By contrast, the advocates for inferior standards (or worse, enforcement as pure political discretion) seek to return antitrust to bygone days when, for example, enforcers could sometimes punish firms for raising prices, while later punishing firms that engage in “ruinous competition”³ by merely lowering prices. This antiquated era of antitrust was marked by courts arbitrarily punishing firms that successfully outcompeted their rivals and simply grew “too large.”⁴ Such would be the result of the rootless alternatives that advocates propose to the CWS. The Commission should tread carefully before incorporating these ideas, which, during the course of its evolution in the 20th century, antitrust law carefully and correctly selected out.

I. Specific criticisms of the CWS

In this section, we summarize the main critiques of the CWS, notably its failure to take into account the effects of market concentration (a) on the democratic process, and (b) on producers. This is followed, in Section II with a critique of those critiques and a defense of the CWS.

A. The CWS fails to protect democracy

Barry Lynn and the Open Markets Institute are among the primary proponents of the idea that the antitrust laws were explicitly designed to incorporate political considerations. According to Lynn, “the prime purpose of antimonopoly law is to protect the liberties of the individual citizen and our democracy.”⁵ The CWS is at odds with US competition law, in his view, because treating economic

² Comment of the Global Antitrust Institute, Antonin Scalia Law School, George Mason University, The Federal Trade Commission’s Hearings on Competition and Consumer Protection in the 21st Century, Hearing #1 The Current Landscape of Competition and Privacy Law and Policy, 2-3 (Sept. 7, 2018), https://www.ftc.gov/system/files/documents/public_comments/2018/11/ftc-2018-0091-d-0009-156139.pdf.

³ *United States v. Joint-Traffic Ass’n*, 171 U.S. 505, 576 (1898).

⁴ Although, notably, “too large” need not be very large. *See, e.g., Brown Shoe Co. v. United States*, 370 U.S. 294 (1962).

⁵ *Competition and Consumer Protection in the 21st Century: FTC Hearing #5: Vertical Merger Analysis and the Role of the Consumer Welfare Standard in U.S. Antitrust Law; Before the FTC*, FTC Transcript 164 (Nov. 1, 2018) (statement of Barry Lynn, Executive Director, Open Markets Institute), https://www.ftc.gov/system/files/documents/public_events/1415284/ftc_hearings_session_5_transcript_11-1-18.pdf.

efficiency as a primary concern for antitrust misunderstands the goals that Congress had for the Sherman and Clayton Acts:

[T]he main practical goal of antimonopoly is to extend checks and balances into the political economy. The foremost goal is not and must never be efficiency. Markets are made, they do not exist in any platonic ether. The making of markets is a political and moral act.⁶

In Lynn’s formulation, the goal of the antitrust laws is to “protect us as producers, creators of goods, crops, services, ideas, art.”⁷ And the vice of the CWS, in this view, is that “[i]t leads us naturally to focus on material measurements of well-being rather than the political goals that prevent and keep citizens alert to concentrations of power, the maintenance of liberty, the protection of democracy.”⁸

In short, this view of antitrust is one of explicit political adjudication of the relations of individuals and firms in the economy, not on economic grounds, but according to some vision of an ideal political economy.

B. The CWS fails to protect the competitive process

Other commentators likewise feel that the CWS is an inappropriate standard, but propose alternatives linked either to a different conception of the ends to be optimized (i.e. something other than the welfare of consumers), and/or to older economic frameworks they believe are more appropriate for controlling feared harms from modern firms.

In his panel, Maurice Stucke, for example, discussed an “effective competition standard” which he believes will better capture anticompetitive conduct that, in his opinion, the CWS currently misses. Among other things, the “effective competition standard” would focus on the “protection of individuals, purchasers, consumers and producers”⁹ through “preservation of competitive market structures”¹⁰—a standard which harkens back to the mid-twentieth century “Structure-Conduct-Performance” paradigm popularized by Joe S. Bain.¹¹

According to Stucke, a major difference between the CWS—which focuses economic analysis on the impact of challenged conduct on some measure of consumer welfare—and his “effective competition standard” is that “all you would need to show is a substantial lessening of competition. You would

⁶ *Id.* at 165 (statement of Barry Lynn, Executive Director, Open Markets Institute).

⁷ *Id.* at 168 (statement of Barry Lynn, Executive Director, Open Markets Institute).

⁸ *Id.* at 168 (statement of Barry Lynn, Executive Director, Open Markets Institute).

⁹ *Id.* at 183 (statement of Maurice Stucke, Professor of Law, University of Tennessee-Knoxville).

¹⁰ *Id.* at 183 (statement of Maurice Stucke, Professor of Law, University of Tennessee-Knoxville).

¹¹ JOE S. BAIN, INDUSTRIAL ORGANIZATION (1959).

not then have to show... how does that substantial lessening of competition affect consumer's welfare."¹²

Echoing Barry Lynn's political discretion preference for antitrust enforcement, Stucke also believes that a role of antitrust should be "promoting individual autonomy and well-being,"¹³ which includes, among other things, an explicit focus on labor issues.¹⁴

Tim Wu offered his own alternative to the CWS, the "protection of the competitive process" standard, which he described as a process-oriented or procedural standard, as opposed to a goal-focused standard. According to Wu,

[This standard] posits a basic question for law enforcement and judges. Given complained-of conduct, is that conduct actually part of the competitive process, or is it a sufficient deviation as to be unlawful? In this view, antitrust law aims to create a body of common-law rules that punish and therefore deter such disruptions—hence 'protecting the competitive process.'

Further, in order to determine whether a firm's conduct harms the "competitive process,"

the government or plaintiff still faces the burden of proving that the conduct harmed the competitive process. That requires at a minimum, analyzing the context, the history of the industry, the evident intent of the defendant, and whether what was done falls into a familiar category of anticompetitive conduct, or whether it is something new. It requires analysis of market power, to ascertain whether the conduct really did make a difference, whether it really did pose a threat to the competitive process. And it requires careful analysis of the procompetitive justifications offered by the defendant.¹⁵

Wu's critique of the CWS is primarily focused on its demand that proof of anticompetitive conduct includes *both* a showing that the conduct was anticompetitive and harmed consumers, rather than more narrowly focused on rendering a judgment regarding a violation of the competitive process. "To say [consumer harm] always matters," he argues, "and is indeed the lodestone of the law, is both unsupportable and can sometimes border on the ridiculous. It is not unlike asking [a sports] referee not only to assess that an illegal maneuver was used in a football game, but then also prove that it *also* harmed the fans watching the game. That would be an absurd undertaking[.]"¹⁶

¹² *FTC Hearing #5*, *supra* note 5, 184 (statement of Maurice Stucke, Professor of Law, University of Tennessee-Knoxville).

¹³ *Id.* at 184 (statement of Maurice Stucke, Professor of Law, University of Tennessee-Knoxville).

¹⁴ *Id.* at (statement of Maurice Stucke, Professor of Law, University of Tennessee-Knoxville).

¹⁵ Comment of Tim Wu, The "Protection of the Competitive Process" The Federal Trade Commission's Hearings on Competition and Consumer Protection in the 21st Century at 2 (Nov. 1, 2018), https://www.ftc.gov/system/files/documents/public_comments/2018/11/ftc-2018-0091-d-0008-156114.pdf

¹⁶ *Id.* at 2.

Other advocates have sounded similar notes of skepticism elsewhere. Lina Khan has criticized the CWS’s focus on consumers as being boiled down to a concern for price and output alone, which she believes

undermines effective antitrust enforcement by delaying intervention until market power is being actively exercised, and largely ignoring whether and how it is being acquired. In other words, pegging anticompetitive harm to high prices and/or low output—while disregarding the market structure and competitive process that give rise to this market power—restricts intervention to the moment when a company has already acquired sufficient dominance to distort competition.¹⁷

II. The CWS remains the gold standard for antitrust analysis

Whatever we choose to call the collection of tools employed in enforcing competition policy, the focus of the application of those tools is the optimal production of social welfare through the economic behavior of firms in the economy.

There are as many political goals to optimize for as there are perspectives on politics, but in the domain of law, the tools employed for a particular body of doctrine are sharpened by application toward a particular set of welfare concerns. The criminal law is specifically designed to deter criminal conduct; tort law seeks to curb the incidence of, among other things, negligent or fraudulent conduct. Similarly, antitrust law is—at its best—designed to align the incentives of producers with the interests of those who consume their output.

To speak of using antitrust to optimize “democratic values” is to do worse than speak mere nonsense. It is to step outside of the reasonable limits that Congress and the courts have placed on antitrust law, and establish a shadow body of law with which to subsume other legal aims into antitrust. To evade these definitional limits on antitrust is clearly wrong—Congress hardly intended to vest enforcement agencies with the power of a super legislature, operating outside of the democratic process.

So too are calls to retain the formalism of antitrust doctrine while simultaneously unhooking that process from the aim of consumer welfare. The CWS is a set of tools to create the alignment of incentives between producers and consumers, and to instead treat antitrust as flitting between a mercurial set of shifting priorities is to arrive at the same incoherent end as abandoning the standard altogether.

Choose to call it something other than “consumer welfare,” if necessary, but the ultimate goal is the optimization of that set of relationships such that they yield the largest amount of social welfare possible. The CWS is merely a set of tools that helps enforcers to carefully examine that set of relationships and make determinations about the likely consequence of firm behavior on welfare.

¹⁷ Lina M. Khan, *Amazon’s Antitrust Paradox*, 126 YALE L. J. 564 (2017).

A. Antitrust should not be about paternalism

In truth, the underlying thrust of the calls for reform are not *really* about the formal tools applied by antitrust enforcers, but about the disposition that reformers believe enforcement agencies should have toward novel firm conduct. That is, should enforcement officials be hostile to unfamiliar business conduct and forms, and seek to preempt any novel conduct that strays too far from familiar territory, or should enforcement officials presumptively permit novel conduct and seek to remedy harms that arise when novel conduct is empirically found to be more harmful than beneficial?

Further, underlying this attack on the presumption to permit innovation is an elitist disbelief in the capacity of individuals to make wise decisions for themselves. Barry Lynn, quoting Brandeis, summed up this sentiment in one of his panel appearances:

Far-seeing organized capital secures [with its tendency to cut prices] the cooperation of the short-sighted, unorganized consumer to his own undoing. Thoughtless or weak, the consumer yields to the temptation of trifling immediate gain, and, selling his birthright for a mess of pottage, becomes himself an instrument of monopoly.¹⁸

Brandeis, herald of the current crop of antitrust reform advocates, has had other choice words about individual consumers as well: “The Consumer is servile, self-indulgent, indolent, ignorant.”¹⁹

Advocates for abolition of the CWS make much more sense in this frame: if consumers are too stupid to see after their own best interests, why in the world would we permit competition policy that aligns firm conduct with this constellation of false consciousnesses? The role of enforcers is not just to make sure, as Tim Wu wishes, that they act as neutral umpires making calls, but that they act as far-seeing guides to help the members of society make better decisions that they are themselves otherwise incapable of making. Moreover, even Tim Wu’s preference for a neutral umpire arrives at the same result: antitrust without an explicitly enunciated end goal—e.g. the welfare of consumers—is a set of doctrines that can be arbitrarily employed to reach whatever ends enforcers (or advocates) think best.

From this view—where novel conduct is deeply distrusted, and consumers are assumed to be self-destructively simple—the suspicion naturally follows that firms are constantly prowling for opportunities to victimize the hapless public. *Something* must be wrong with the conduct that deviated from historical norms, and, therefore, the absence of broad antitrust enforcement crusades is used to infer that, therefore, the CWS must be incapable of recognizing and rectifying harms.

¹⁸ BRANDEIS, BUSINESS—A PROFESSION 261 (1933).

¹⁹ Draft Letter Louis D. Brandeis to George Henry Soule (Apr. 22, 1923), in 5 LETTERS OF LOUIS D. BRANDEIS (1921-41): ELDER STATESMEN, 92 (Melvin I. Urofsky & David W. Levy eds, 1st ed. 1978) , <https://books.google.com/books?id=kYn-quo0jyoC&pg=PA92&lpg=PA92>

But the absence of widespread antitrust violations in the economy is at least as consistent (if not more so) with strong antitrust doctrines that are clearly enunciated and enforced (when harms occur). By analogy, the consistent decline in the murder rate in the US over the last century is not typically interpreted to mean that criminals are escaping punishment or that prosecutors and police are helpless. Instead, the crime of murder is well defined and there is a strong supply of police and prosecutors standing ready to pursue murders. Antitrust largely operates in much the same way: for most potential harms, existing doctrine is relatively clear about when firm conduct crosses a line, and firms generally avoid crossing that line.

As antitrust has become more well-defined, and firms have guided their conduct along its contours, the cases that are brought have tended to focus on issues that are relatively less clear due to the complex nature of the related industry and its economics.²⁰ But these cases, and their contribution to the extension of antitrust doctrine, demonstrate that the CWS is working—they are hard cases with close calls, and they are used to fill out areas of previous legal uncertainty.

In short, it would be highly inappropriate to measure the effectiveness of the CWS by counting enforcement actions, or even litigation wins because, logically speaking, if the legal regime is working, we should *expect* there to be relatively few cases as most problematic conduct would be deterred.²¹ To criticize the CWS for a relatively small amount of litigation wins is essentially to criticize the CWS for successfully achieving the aims of competition policy.

B. The real purpose of the antitrust laws

Assertions that US antitrust law was intended as a tool to politically design markets, and that economic efficiency is at odds with this intention,²² misread both the nature of these laws as well as the subsequent development of US antitrust doctrine.

This is not to say that the well-being of the polis is disconnected from the proper operation of the antitrust laws, but that the health of our democracy is tied to the antitrust laws performing the economically-oriented and economically-grounded purpose to which they are suited. As Deborah Garza noted in her panel,

²⁰ See, e.g. *Ohio v. American Express*, 138 S. Ct. 2274 (2018), *Leegin Creative Leather Prods. v. PSKS, Inc.*, 551 U.S. 877 (2018), *Apple Inc. v. Pepper*, 139 S. Ct. 1514 (2019), *United States v. AT&T, Inc.*, 916 F.3d 1029 (D.C. Cir. 2019).

²¹ And none of this criticism considers the actual enforcement actions that occur. Between 1996 and 2019, for instance, the FTC successfully closed 604 competition cases—roughly twenty-six actions each year. See FTC Nonmerger Enforcement Actions Data Set: FTC Merger Enforcement Actions; BC Civil Penalty Actions, available at <https://www.ftc.gov/site-information/open-government/data-sets>. The incentives for Commissioners and staff are hardly to refrain from investigation—the Commission is staffed by professional litigators. The Commission has the resources to investigate and enforce, an ability to bring cases before its own administrative law judge, and a relatively straightforward process available for seeking preliminary injunction.

²² *FTC Hearing #5*, *supra* note 5, 165 (statement of Barry Lynn, Executive Director, Open Markets Institute).

The Sherman Act was designed to be a comprehensive charter of economic liberty and of preserving free and unfettered competition as a rule of trade. It rests on the premise of the unrestrained interaction of competitive forces will yield the best allocation of our economic resources, the lowest prices, the highest quality and the greatest material progress, while at the same time providing an environment conducive to the preservation of our democratic, political and social institutions.²³

In truth, early antitrust law was ambiguous in its aims. Senator Sherman, the namesake of the Sherman Act, famously declared that “[i]f we would not submit to an emperor, we should not submit to an autocrat of trade”²⁴—a bold statement that suggested a sweeping view of the law’s intent to chasten industrial titans of the nineteenth century. Yet the bill he submitted stated its aims in more familiar pro-consumer terms, declaring the goal to be the guarantee of full and free competition, as well as the prevention of increased costs to consumers.²⁵

From the first cases, courts began immediately to tease apart the strains of thinking in the intent of the antitrust laws, and to develop doctrines that could be applied to separate proper firm conduct from improper conduct. This was complicated by the fact that the law clearly implicated economic concepts,²⁶ and yet was frustratingly terse and unspecific about how these concepts should be applied.

For example, the Sherman Act, by its text, forbids every contract that operates in restraint of trade.²⁷ In *United States v. Trans-Missouri Freight Association* (1897), the Supreme Court was asked to consider whether this command truly forbade every such restraint, or only “unreasonable” ones.²⁸ The Court reviewed arguments about how to understand the history of common law judgments regarding contracts in restraint of trade as well as the legislative history, before ultimately settling on a strict textualist reading of the Sherman Act, holding that it literally “renders illegal all agreements which are in restraint of trade or commerce.”²⁹ Yet, just one year later, in the Sixth Circuit, Judge William Taft recognized that this interpretation of the Sherman Act could not possibly be correct, and added an important gloss to the law. In his *Addyston Pipe & Steel Co. v. United States* opinion—which the Supreme Court affirmed—he recognized that some restraints could be competitively benign or neutral. Surveying 18th century antecedents to antitrust law, Judge Taft observed a series of obvious instances of “restraints of trade” which the Sherman Act could not have meant to overrule:

²³ *Id.* at 203 (statement of Deborah A. Garza, Partner, Covington & Burling LLP).

²⁴ 21 CONG. REC. S2457 (1890) (statement of Sen. Sherman).

²⁵ 21 CONG. REC. S1765 (1890) (statement of Sen. Sherman).

²⁶ See William E. Kovacic & Carl Shapiro, *Antitrust Policy: A Century of Economic and Legal Thinking*, 14 J. ECON. PERSP. 43 (2000).

²⁷ 15 U.S.C.S. § 1 (LexisNexis, Lexis Advance through PL 115-442, approved 1/14/19).

²⁸ *United States v. Trans-Missouri Freight Ass’n*, 166 U.S. 290, 292 (1897).

²⁹ *United States v. Trans-Missouri Freight Ass’n*, 166 U.S. 290, 341 (1897).

After a time it became apparent to the people and the courts that it was in the interest of trade that certain covenants in restraint of trade should be enforced. It was of importance... that [a person] should be able to sell his business and good will to the best advantage, and he could not do so unless he could bind himself by an enforceable contract not to engage in the same business in such a way as to prevent injury to that which he was about to sell. It was equally [important] when partners dissolved... that each partner might bind himself not to do anything in trade thereafter which would derogate from his grant of the interest conveyed to his former partner. Again, when two men became partners in a business, although their union might reduce competition, this effect was only an incident to the main purpose of a union of their capital, enterprise, and energy to carry on a successful business[.] Restrictions in the articles of partnership upon the business activity of the members, with a view of securing their entire effort in the common enterprise, were, of course, only ancillary to the main end of the union, and were to be encouraged. Again, when one in business sold property with which the buyer might set up a rival business, it was certainly reasonable that the seller should be able to restrain the buyer from doing him an injury which, but for the sale, the buyer would be unable to inflict. This was not reducing competition, but was only securing the seller against an increase of competition of his own creating...Again, it was of importance that business men... should have every motive to employ the ablest assistants, and to instruct them thoroughly; but they would naturally be reluctant to do so unless such assistants were able to bind themselves not to set up a rival business in the vicinity after learning the details and secrets of the business of their employers.³⁰

Judge Taft, in view of the Supreme Court’s literal reading of the Sherman Act a year earlier, went on to declare that the Sherman Act was not written to prohibit such “ancillary” restraints of trade but only “naked” restraints that directly harm competition—thus avoiding, even if only semantically, a debate about whether restraints were “unreasonable.”³¹ That is to say, if the restraints were “merely ancillary to the main purpose of a lawful contract” they would not offend the Sherman Act, its literal prohibition notwithstanding.³² Thus, in short order, antitrust law began to recognize that *some* restraints could be competitively benign or neutral.

In 1911, the Supreme Court returned to the discussion it opened in *Trans-Missouri* in 1897 with its *Standard Oil Co. of New Jersey v. United States* decision.³³ In that case, the Court was much more amenable to examining the common law history that had preceded the Sherman Act, and couched its discussion of restraints in terms of “undue” restraints of trade.³⁴ The Court thus drew an

³⁰ *United States v. Addyston Pipe & Steel Co.*, 85 F. 271, 280–81 (6th Cir. 1898), *aff’d as modified*, 175 U.S. 211 (1899).

³¹ *United States v. Addyston Pipe & Steel Co.*, 85 F. 271, 282 (6th Cir. 1898), *aff’d as modified*, 175 U.S. 211 (1899).

³² *Id.*

³³ *Standard Oil Co. of New Jersey v. United States*, 221 U.S. 1, 59 (1911).

³⁴ *Id.* In dissent, Justice Harlan noted that the Court had considered the same exact question in *Trans-Missouri* and had declined to engage in a sort of “judicial legislation” that would have been necessary to read the Sherman Act in the light that the majority was adopting:

important distinction between reasonable and unreasonable restraints of trade, declaring that the Sherman Act prevents only “undue” restraints:

[T]he words ‘to monopolize’ and ‘monopolize’..., reach every act bringing about the prohibited results. The ambiguity... is involved in determining what is intended by monopolize. But this ambiguity is readily dispelled in the light of the previous history of the law of restraint of trade... and the indication which it gives of the practical evolution by which monopoly..., that is, an undue restraint of the course of trade, all came to be... synonymous with... restraint of trade....

And it is worthy of observation, as we have previously remarked concerning the common law, that although the statute... makes it certain that its purpose was to prevent undue restraints of every kind or nature, nevertheless by the omission of any direct prohibition against monopoly in the concrete, it indicates a consciousness that the freedom of the individual right to contract, when not unduly or improperly exercised, was the most efficient means for the prevention of monopoly, since the operation of the centrifugal and centripetal forces resulting from the right to freely contract was the means by which monopoly would be inevitably prevented... In other words, that freedom to contract was the essence of freedom from undue restraint on the right to contract.³⁵

The Court thus adopted a much more nuanced view of what “restraint of trade” meant. Refuting its earlier position in *Trans-Missouri*,³⁶ the Court recognized that the freedom to contract—that is, to restrain trade to some degree—was at the core of the tools necessary to discipline *harmful* restraints of trade.

Despite these early advances, the unsteady evolution of antitrust doctrine continued throughout the twentieth century, with mid-century cases sometimes presenting conflicting conceptions of competition law within a single opinion. For example, Judge Learned Hand’s Second Circuit *Alcoa* opinion asserted that, besides economic reasons for forbidding monopoly, the antitrust laws were adopted to prevent “great industrial consolidations” that, “regardless of their economic results” were undesirable because “of the helplessness of the individual before them.”³⁷ Moreover, Judge Hand continued that “[t]hroughout the history of these statutes it has been constantly assumed that one of their

It thus appears that fifteen years ago, when the purpose of Congress in passing the anti-trust act was fresh in the minds of courts, lawyers, statesmen, and the general public, this court expressly declined to indulge in judicial legislation, by inserting in the act the word ‘unreasonable’ or any other word of like import.”

Id. at 91 (Harlan, J. dissenting).

³⁵ *Id.* at 61–62 (emphasis added).

³⁶ The Court did not describe its turn as a refutation, it should be noted. It carefully dealt with *Trans-Missouri* and some its subsequent progeny by describing the cases as focused on much narrower technical application of the Sherman Act. *Id.* at 64.

³⁷ *United States v. Aluminum Co. of Am.*, 148 F.2d 416, 428 (2d Cir. 1945).

purposes was to perpetuate and preserve, for its own sake and in spite of possible cost, an organization of industry in small units which can effectively compete with each other.”³⁸

In essentially the next breath, Judge Hand continued that, despite the prohibition on large firms, because of their economic benefits, *sometimes* economic reality justified their existence:

This notion has usually been expressed by saying that size does not determine guilt; that there must be some ‘exclusion’ of competitors; that the growth must be something else than ‘natural’ or ‘normal’; that there must be a ‘wrongful intent,’ or some other specific intent; or that some ‘unduly’ coercive means must be used... A market may, for example, be so limited that it is impossible to produce at all and meet the cost of production except by a plant large enough to supply the whole demand. Or there may be changes in taste or in cost which drive out all but one purveyor. A single producer may be the survivor out of a group of active competitors, merely by virtue of his superior skill, foresight and industry. In such cases a strong argument can be made that, although the result may expose the public to the evils of monopoly, the Act does not mean to condemn the resultant of those very forces which it is its prime object to foster: *finis opus coronat*. The successful competitor, having been urged to compete, must not be turned upon when he wins.³⁹

This was not an uncharacteristic conflict in antitrust law of the period. Sometimes the Court would fret that prices that were *too* low would cause harm by making it hard for smaller firms to operate,⁴⁰ and that it was acceptable that “occasional higher costs and prices might result from the maintenance of fragmented industries and markets” that would arise by protecting small firms from larger competitors.⁴¹ Yet, during the same period, the Court was apparently unphased by the uneasy tension that its maintenance of price floors had with the continued legal prohibition of price fixing.⁴² Justice Stewart’s dissent in *United States v. Von’s Grocery Co.* ably captured the spirit of this era of antitrust: “The sole consistency that I can find is that in litigation[...] the Government always wins.”⁴³

Nonetheless, despite the unsteady progression of antitrust law, the refinements that began with cases like *Addyston Steel* and *Standard Oil* continued throughout the twentieth century as the discipline of economics matured and courts and enforcers developed a better grasp on the behavior of firms and consumers in markets.

³⁸ *Id.*

³⁹ *Id.* at 429–30.

⁴⁰ *Utah Pie Co. v. Continental Baking Co.*, 386 U.S. 685, 699 (1967) (“It could also have reasonably concluded that a competitor who is forced to reduce his price to a new all-time low in a market of declining prices will in time feel the financial pinch and will be a less effective competitive force.”).

⁴¹ *Brown Shoe Co. v. United States*, 370 U.S. 294, 333, 344 (1962).

⁴² *See, e.g., United States v. Socony-Vacuum Oil Co.*, 310 U.S. 150, 218 (1940).

⁴³ *United States v. Von’s Grocery Co.*, 384 U.S. 270, 301 (1966) (Stewart, J., dissenting).

Though maligned by the Neo-Brandeisians,⁴⁴ far from instituting a revolution, the Chicago School merely clarified the different strands of thought that had long been present in the law and developed analytical tools that were sorely needed. All of this culminated in the development of the consumer welfare standard, which, when distilled to its essence, merely asks that we always evaluate the costs and benefits of firm conduct as well as proposed remedies in terms of the effects on consumer welfare.⁴⁵

Although there was not monolithic consensus over the actual legal rules that were implicated by the consumer welfare standard, some consistent themes became apparent. As its name implied, one obvious implication is that antitrust policy treated the welfare of consumers as its lodestar (as opposed to the welfare of producers or small businesses). Through this framework, enforcers and academics were forced to consider why competition was valuable with respect to its effect on the end consumer. Over time, this focus led to a view that competition was valuable because of its ability to lead to more plentiful goods at lower prices and of greater variety and quality.⁴⁶ Accordingly, and as discussed below, antitrust scholars and enforcement officials came to understand that the exact quantity of competitors in a given market was not necessarily (or even usually) determinative of the health of that market.⁴⁷

This focus on quality, output, and price also helped bring to the fore the preeminence of economic theory and empirical research, as well as the application of the error-cost framework.⁴⁸ Under this approach, proper enforcement of the antitrust laws relies upon both economic theory and evidence in order to minimize the risk of both overenforcement and underenforcement.⁴⁹

In short, to claim that economic efficiency is an inappropriate touchstone for antitrust analysis, or that consumer welfare should not be the guiding principle, is to completely ignore the legal origins and development of the law over the course of more than a century.

⁴⁴ Maurice E. Stucke & Marshall Steinbaum, *The Effective Competition Standard A New Standard for Antitrust* 7-10 (Univ. of Tenn., Working Paper No. 367, 2018), *see also* *FTC Hearing #5*, *supra* note 5, at 180-83.

⁴⁵ R.H. BORK, *ANTITRUST PARADOX* 422 (Simon & Schuster, 1993); Frank H. Easterbrook, *Limits of Antitrust*, 63 *TEX. L. REV.* 1, 14-15 (1984).

⁴⁶ *See, e.g.*, *Nat'l Soc'y of Prof'l Eng'rs v. United States*, 435 U.S. 679, 695 (1978); *accord* *FTC v. Superior Court Trial Lawyers Ass'n*, 493 U.S. 411, 423 (1990) ("The assumption that competition is the best method of allocating resources in a free market recognizes that all elements of a bargain—quality, service, safety, and durability—and not just the immediate cost, are favorably affected by the free opportunity to select among alternative offers").

⁴⁷ Douglas H. Ginsburg & Joshua D. Wright, *Philadelphia National Bank: Bad Economics, Bad Law, Good Riddance*, 80 *ANTITRUST L. J.* 80, 377 (2015).

⁴⁸ *See* Easterbrook, *The Limits of Antitrust*, *supra* note 45, at 6.

⁴⁹ *Id.*

C. The CWS can be reliably applied to a wide range of cases

An exchange between Tim Wu and Deborah Garza ably illustrates the weakness of criticisms alleging that the CWS fails to deter anticompetitive conduct. When asked to illustrate what cases he believed demonstrate the failure of the CWS, Wu offered the following:

Here's a few—the American Express case, the AT&T-Time Warner case, Brooke Group, the American Airlines predatory pricing case, the approval of Facebook's acquisition of Instagram, the approval of Facebook's acquisition of WhatsApp, the approval of Google's acquisition of Waze, a three-to-two merger, the approval of LiveNation-Ticket-Master, the approval of the American Airlines-U.S. Air merger, the approval of the United Airlines-Continental merger... I think these have all been failures in antitrust law to deal with anticompetitive mergers or anticompetitive conduct.⁵⁰

In response, Garza observed that

you haven't linked them to some specific problem with the consumer welfare standard as opposed to judges seeing the facts differently, enforcement agencies making a different call, and I don't think those cases at all prove that the consumer welfare standard has been a disaster. **It's not enough to name cases where you just disagreed with the results. We have to connect it to what is it about the consumer welfare standard, what is about having to use economics to prove a theory of harm, what is it that made those cases... to be wrongly decided.**⁵¹

And this is exactly the purpose of the CWS: to provide an objective set of tools with which to view firm conduct in order to determine when that conduct violates antitrust law. And, in many cases—particularly those cited by Wu—the conduct in question is novel, which particularly raises the concerns of advocates for enforcement, but properly only emphasizes the need for rigorous process. As Coase famously observed:

[I]f an economist finds something—a business practice of one sort or another—that he does not understand, he looks for a monopoly explanation. And as in this field we are very ignorant, the number of ununderstandable practices tends to be very large, and the reliance on a monopoly explanation, frequent.⁵²

But the role of economics in antitrust is to help enforcers and courts to expose and reckon with their ignorance in the face of ambiguous conduct. The basic problem for policy design is, as Harold Demsetz formulated it,

⁵⁰ *FTC Hearing #5*, *supra* note 5, at 229 (statement of Tim Wu, Professor, Columbia Law School).

⁵¹ *Id.* at 232 (statement of Deborah A. Garza, Partner, Covington & Burling LLP).

⁵² Ronald Coase, *Industrial Organization: A Proposal for Research*, in *POLICY ISSUES AND RESEARCH OPPORTUNITIES IN INDUSTRIAL ORGANIZATION* 59, 67 (Victor R. Fuchs ed., 1972).

the design of institutional arrangements that provide incentives to encourage experimentation (including the development of new products, new knowledge, new reputations, and new ways of organizing activities) without overly insulating these experiments from the ultimate test of survival.⁵³

When viewing the economy and antitrust enforcement through such a lens of dynamism there will necessarily be cases some subset of observers believe were incorrectly decided. But even where particular cases may actually have come out incorrectly, this says *nothing* about the wisdom of the overall analytical exercise involved.

The work of economists such as Demsetz and Hayek—whose crucial work developed the understanding of competition as a discovery process⁵⁴—teaches that policymakers should tend to operate under the assumptions that (i) a market outcome should only be acted upon if intervention improves upon the current state of affairs (and not if the market merely departs from some idealized state), and (ii) even when this is the case, intervention in complex systems should always be accompanied by an appropriate measure of restraint because it entails numerous unforeseeable effects; there is no guarantee that regulators will obtain what they set out to achieve.

Antitrust intervention entails more harm than good when enforcement moves away from the promotion of economic efficiency (through the proxy of consumer welfare).⁵⁵

That said, the CWS has demonstrated a great deal of flexibility in its operation over the years. Under the CWS,

antitrust law can replace rules that require detailed factual assessment of individual cases with simpler, more categorical rules, such as the per se prohibition of price fixing; the modified per se rule applicable to most tying arrangements under Jefferson Parish; presumptions such as those used in horizontal merger analysis; and abbreviated rule of reason standards which do not require plaintiffs to prove harm to competition. While antitrust law moved away from such short-hands in recent years, there is nothing about the [consumer welfare] paradigm that would preclude a movement of the pendulum in the other direction, as evidenced by past episodes of antitrust expansion in monopolization doctrine and enforcement policy.⁵⁶

Wu's list of cases further underscores this flexible nature of the CWS. *American Express*, to take one example, wrestled with the proper market definition in cases involving two-sided markets.⁵⁷

⁵³ See, e.g., Harold Demsetz, *Information and efficiency*, 12 J. L. & ECON. 14 (1969).

⁵⁴ See F.A. Hayek, *Competition as a Discovery Procedure*, 5 Q. J. AUSTRIAN ECON. 9 (2002) (translation by Marcellus Snow).

⁵⁵ See generally BORK, *ANTITRUST PARADOX*, *supra* note 45, at 422.

⁵⁶ A. Douglas Melamed & Nicolas Petit, *Before After Consumer Welfare—A Response To Professor Wu*, COMPETITION POL'Y INT'L (July 2018), available at <https://www.competitionpolicyinternational.com/before-after-consumer-welfare-a-response-to-professor-wu/>.

⁵⁷ *Ohio v. Am. Express Co.*, 138 S. Ct. 2274 (2018) [hereinafter "Amex"].

Although nominally concerned with potential anticompetitive effects involved in American Express's no-steering provisions,⁵⁸ the Court was first required to analyze the proper market in which the alleged effects occurred. But two-sided markets, as economic literature from the past several decades has repeatedly shown,⁵⁹ have unique features that alter the competitive dynamics as compared to more traditionally recognized markets characterized by relatively strong separation between the various layers of production, distribution, and consumption.

The Court in *Amex* concluded that both sides of Amex's platform—and transaction platforms more generally—must be considered part of the relevant market in order to capture the actual competitive process at issue:

Due to indirect network effects, two-sided platforms cannot raise prices on one side without risking a feedback loop of declining demand.... Price increases on one side of the platform [] do not suggest anticompetitive effects without some evidence that they have increased the overall cost of the platform's services.⁶⁰

By including both sides of a two-sided platform in the relevant market, the Court's rule ensured that the full relationship between price, quality, and output of the relevant products is properly considered. This is especially important because, while output of a two-sided platform may often be measured looking at only one side (particularly for two-sided transactional platforms where it is presumed that a transaction on one side also entails a transaction on the other side),⁶¹ price and non-price product characteristics generally will not be properly measured by doing so.

In fact, Wu's own criticism of *Amex* is not so much about the CWS, as it is about his view about the proper market definition given the idiosyncratic facts of the case. As he has written:

After inviting the government to present evidence of harm under a rule-of-reason framework, the Court effectively moved the goalposts at the point of appeal, demanding something far more challenging to prove. In other words, it suggested that direct evidence of harm to competition was not enough. In that undertaking, the Court committed the same mistakes that the vertical per se rules did at their worst, by choosing to ignore evidence in favour of theory.⁶²

⁵⁸ *Id.* at 2283.

⁵⁹ David Evans & Richard Schmalensee: *The Industrial Organization of Markets with Two-Sided Platforms*, 3(1) COMPETITION POL'Y INT'L 151 (2007), available at <https://www.law.berkeley.edu/wp-content/uploads/2015/04/Evans-Schmalensee-The-Industrial-Organization-of-Markets-with-Two-Sided-Platforms-2007.pdf>.

⁶⁰ *Amex*, *supra* note 20, at 2285-86.

⁶¹ See Benjamin Klein et al., *Competition in Two-Sided Markets: The Antitrust Economics of Payment Card Interchange Fees*, 73 ANTITRUST L. J. 571, 583 (2006) ("Because cardholders and merchants jointly consume a single product, payment card transactions, their consumption of payment card transactions must be directly proportional.").

⁶² Tim Wu, *The American Express Opinion, The Rule of Reason, and Tech Platforms*, 7 J. ANTITRUST ENFORCEMENT 117, 120 (2019).

Wu's view of the case was that harm to competition in the form of restricting the behavior of merchants to steer customers to alternative payment methods was a sufficient showing for liability.⁶³ But this has nothing to do with the tools of the CWS, and is instead an argument about how the proper market should be defined. In the Court's view market definition required accounting for the effects on both card users as well as merchants, whereas Wu believed that a more narrowly drawn market definition strictly around the relationship between merchants and Amex was appropriate.

The AT&T-Time Warner case offers a similar demonstration of the continued viability of the CWS. Wu cited ATT-TWX as an example where, even in the face of potential price increases, Judge Leon essentially chose to rule in favor of the merging parties, ostensibly an indication that the CWS was helpless in the face of an economically ignorant judge and under-resourced enforcers.⁶⁴ But the facts of the case were highly contested, and even the price increases offered by the government's economic expert, Carl Shapiro, were not at all clear.⁶⁵ Shapiro initially indicated the merger would cause consumers to pay an additional \$436 million per year, which amounts to an average of 45 cents a month per customer, or a 0.4 percent increase. At trial, he testified that the amount might be closer to 27 cents a month and conceded it could be as low as 13 cents a month.⁶⁶

Brooke Group, a favorite target of the Neo-Brandeisian assault on the CWS, demonstrates as well the nature of modern antitrust law's ability to incorporate economic learning. *Brooke Group* elucidated the now settled test for predatory pricing cases, establishing two conditions: (i) Monopolists must charge prices that are below some measure of their incremental costs; and (ii) there must be a realistic prospect that they will be able to recoup these first-period losses.⁶⁷ It is the recoupment requirement that typically draws the ire of Neo-Brandeisians, which places on plaintiffs the burden to

demonstrate that there is a likelihood that the predatory scheme alleged would cause a rise in prices above a competitive level that would be sufficient to compensate for the amounts expended on the predation, including the time value of the money invested in it.⁶⁸

Critics, such as Lina Khan, describe the recoupment requirement as inappropriately placing "profit maximization [as] the singular goal of predatory pricing" and allege, further, that "the Court collapsed the rich set of concerns that had animated earlier critics of predation, including an aversion

⁶³ *Id.*

⁶⁴ *FTC Hearing #5*, *supra* note 5, at 228-30 (statement of Tim Wu, Professor, Columbia Law School).

⁶⁵ See Eric Fruits, *AT&T-Time Warner merger approved*, TRUTH ON THE MARKET (Jun. 12, 2018), <https://laweconcenter.org/resource/att-time-warner-merger-approved/>

⁶⁶ Brian Fung, *Key Government Witness Clashes With AT&T Lawyer in Time Warner Case*, WASHINGTON POST, Apr. 4, 2018, https://www.washingtonpost.com/news/the-switch/wp/2018/04/24/key-government-witness-admits-error-in-att-time-warner-case/?utm_term=.3d18a2b3cfd4.

⁶⁷ See *Brooke Group Ltd. v. Brown & Williamson Tobacco Corp.*, 509 U.S. 209, 222-27 (1993).

⁶⁸ *Id.* at 226.

to large firms that exploit their size and a desire to preserve local control.”⁶⁹ But criticisms such as these again avert to a notion that the ill-formed nineteenth century conception of antitrust law should be regnant, not that the CWS is incapable on its own terms of deterring anticompetitive conduct.

Once again, it’s a difference of visions for what the ideal operation of antitrust should be, and not a direct allegation that the CWS is incapable of realizing its ends of deterring anticompetitive conduct by focusing on the economic efficiency of firms and the maximization of consumer welfare. If we are to believe that antitrust should be enforcing broad democratic norms that span a large range of Congress’s legislative prerogative then, yes, the CWS is inapplicable. If we are to believe that there is something unique that antitrust should be specifically doing with respect to the behavior of firms viz a viz consumers, then the recoupment test makes perfect sense. Perhaps Wu and Khan would *prefer* that prices not be lowered below some arbitrary threshold, but there is nothing economically testable in the theories they have advanced that demonstrates empirical harms that are not outweighed by net benefits to consumers.

Wu also asserted that, in his view, the *Microsoft* case—which, notably, was won by the government when litigating in courts governed by the CWS—would not be brought today.⁷⁰ He qualified the government’s win by saying that the case “was saved by the D.C. Circuit’s willingness to basically equate a competitive process standard and a consumer harm standard.”⁷¹ But this only further underscores a misunderstanding of what work the CWS does.

First, the CWS is not unconcerned with the competitive process, but treats the competitive process as a means to achieving greater consumer welfare. The two concepts are linked in a proper analysis. But more to the point, it may be the case the *Microsoft* case would not have been brought today, *and that might be the correct result.*

Regardless of what one thinks of the outcome of *Microsoft*, the fact is that the case itself arose under its own idiosyncratic facts bound to the context of the mid- to late-1990s. In that world, where Microsoft was viewed as essentially the only major provider of access to popularly accessible computing technologies as well as a major player in access to the developing Internet, enforcement officials were perhaps understandably overzealous in the rush to condemn the challenged conduct. Today? It seems almost absurd to assert that any one company seriously holds anything approaching monopoly control over particular pieces of software, let alone operating systems and browsers (and certainly not Microsoft). What was a speculative theory in 1999 would be considered an unserious opinion today.

⁶⁹ Khan, *supra* note 17, at 730.

⁷⁰ *FTC Hearing #5*, *supra* note 5, at 189-90 (statement of Tim Wu, Professor, Columbia Law School).

⁷¹ *Id.* at 190 (statement of Tim Wu, Professor, Columbia Law School).

But this again demonstrates the flexibility of the CWS. The enforcers may have acted too quickly to condemn conduct they did not understand at the time, but the CWS was merely a toolset that they then used to explore their theories. That those theories would not work today is attributable to two decades worth of experience with technology firms and better familiarity with the details of related industries. The CWS remains as vital today as it was then, perhaps more so for the greater degree of information now available.

I. Alternative standards would result in more arbitrary enforcement

The alternatives to the CWS offered in the Commission’s panels are, in fact, far more vulnerable to criticism that they would result in arbitrary enforcement patterns. Maurice Stucke’s “effective competition standard,” for example, would be focused on the protection of “individuals, purchasers, consumers and producers.”[.]” Stucke and co-author Marshall Steinbaum have defined that standard as follows:

Agencies and courts shall use the preservation of competitive market structures that protect individuals, purchasers, consumers, and producers; preserve opportunities for competitors; promote individual autonomy and well-being; and disperse private power as the principal objective of the federal antitrust laws.⁷²

Short of returning to the mid-twentieth century “Structure-Conduct-Performance” approach to market structure analysis in antitrust (discussed, *infra*), it’s not at all clear how an enforcer would be expected to aggregate and resolve conflicts among the interests of the separate groups of “individuals, purchasers, consumers, and producers,” to say nothing of how an enforcement agency should be expected to decide between the conflicting interests of direct competitors.

In fact, an approach like this (as well as the alternative offered by Tim Wu, mentioned, *supra*) offers a discretionary model of antitrust based, ostensibly, on the 1968 guidelines. And to restrain the arbitrary preference of enforcers, the only alternative (if one chooses not to engage in a CWS analysis) would be to create an arbitrary set of thresholds (e.g., for firm size or concentration) that determine the operation of presumptions. Yet, though this approach may limit some of the political discretion of enforcers, its arbitrary approach to “market structure” is guaranteed to yield undesirable results.

Jonathan Neuchterlein highlight the faults with this approach in his discussion of the *A&P* case from the mid-twentieth century:

[T]here was never a clear distinction in DOJ’s case between competitive pricing and predatory pricing. This is a problem that afflicted a lot of predatory pricing claims back in the early to mid 20th Century. There were no determinative standards. It ended up being

⁷² Marshall Steinbaum & Maurice E. Stucke, *THE EFFECTIVE COMPETITION STANDARD: A NEW STANDARD FOR ANTITRUST 27* (2018), available at <https://rooseveltinstitute.org/wp-content/uploads/2018/09/The-Effective-Competition-Standard-FINAL.pdf>.

sort of a “know it when I see it” standard, but there was definitely not with anything comparable to what we would now call the recoupment requirement for plaintiffs.⁷³

And

[I]nstead of analysis, we ultimately had rhetoric. This is an actual quote from a prosecutor in the A&P case. It’s amazing that you actually had prosecutors saying these things. “A&P should be convicted of a criminal offense because it sells foods cheaply to consumers in its own stores because it is a gigantic bloodsucker taking its toll from all levels of the industry.” Focus on other competitors in the industry rather than on the consumer beneficiaries of A&P’s low prices.⁷⁴

A&P had grown very large and had come to operate a number of vertically integrated units.⁷⁵ Yet enforcers lacking an analytical toolset like the CWS and a goal against which theories could be empirically tested, like consumer welfare, were free to pursue what they viewed as a “giant blood-sucker,” despite the fact that A&P brought a large array of foods at low prices to a huge number of consumers throughout the country.

Modern antitrust law, guided by the CWS, provides a two-way process for growing US competition law. It is just as capable of incorporating new harms as they are discovered as it is of modifying prior presumptions about harms where experience has taught us how to differentiate anticompetitive from procompetitive behavior. Despite Brandeis’s general hostility to big business, this understanding was implicit in his approach to the FTC Act. As Jonathan Sallet observed of Brandeis:

[B]ecause, he said, there will be new kinds of harm that we cannot anticipate. If we write a detailed list, we are going to miss some. So he wanted a standard that would evolve as economic issues as the facts evolved.⁷⁶

Indeed, Brandeis expressed a good deal of wisdom in this preference, even if he and his modern supporters fail to recognize its full implications. Antitrust cannot be a one-way ratchet where enforcers continually seek to add to an ever-growing list of prohibitions without also updating their prior assumptions about the presumed benefits of firm conduct.

2. *Many of the reforms that advocates propose can be incorporated into the CWS*

Apart from explicit calls to introduce new standards, much of the panel discussions included calls for enforcers to incorporate considerations that the CWS either already includes, or is capable of including. Carl Shapiro summed up the reality for most criticisms of the CWS:

⁷³ *FTC Hearing #5, supra* note 5, at 260 (statement of Jonathan E. Nuechterlein, Partner, Sidely Austin, LLP).

⁷⁴ *Id.* at 261 (statement of Jonathan E. Nuechterlein, Partner, Sidely Austin, LLP).

⁷⁵ Paul B. Ellickson, *The Evolution of the Supermarket Industry: From A&P to Wal-Mart*, in *HANDBOOK ON THE ECONOMICS OF RETAIL AND DISTRIBUTION* (2016), available at <http://paullickson.com/SMEvolution.pdf>.

⁷⁶ *FTC Hearing #5, supra* note 5, at 176 (statement of Jonathan Sallet, Partner, Steptoe & Johnson LLP).

I think the fundamental issue is that the case law has gotten out of whack using a kind of an improper notion of consumer welfare standard and what that means and we need to fix that, but not to fundamentally change the standard we use in antitrust.⁷⁷

There are undoubtedly decisions in which a court has misconstrued the economics or facts of a case—though we may be in disagreement about which particular cases and in which direction the misconceptions run. As Shapiro notes, the truly useful criticisms of the CWS are about how it can be extended to include dimensions it inadequately incorporates or tends to neglect. To take one example, Shapiro noted that most of what he believes needs correction could be done “a lot with shifting the burdens of proof and the presumptions.”⁷⁸ In this vein, Maurice Stucke also, perhaps inadvertently, acknowledged the CWS could be adjusted to incorporate different presumptions:

For mergers, we already have now a bill to switch the presumption. We just add a couple finetuning [sic] to that. And I think this will give them greater accountability, particularly when the agencies allow these mergers to occur in highly-concentrated industries or mergers where the acquiring firm is a monopoly.⁷⁹

But as the Global Antitrust Institute noted in its comments

[A]ntitrust agencies [and] private plaintiffs [are not required to] prove actual harms that outweigh actual benefits in every case. Rather, they use economic theory and judicial experience to create presumptions and procedural rules to truncate analysis where appropriate to minimize error costs and administrative costs.⁸⁰

Indeed, as Geoffrey Manne noted in response to Maurice Stucke,

what we're really talking about here—and Maurice's comments just brought this home to me—is whether we start with a presumption, we start with the basic presumption of anti-trust as one that is inhospitable to un-understood business practices or one that is relatively inhospitable to their condemnation.

* * *

There's nothing in the consumer welfare standard that says you can't fiddle with the specific levers, the specific doctrines by which cases are decided.... [T]he consumer welfare standard isn't operable. What matters... is the presumptions, the burden-shifting, the standards of proof, the actually process by which we decide antitrust cases.⁸¹

⁷⁷ *FTC Hearing #5*, *supra* note 5, at 272 (statement of Carl Shapiro, Professor, University of California-Berkeley).

⁷⁸ *Id.* at 283 (statement of Carl Shapiro, Professor, University of California-Berkeley).

⁷⁹ *Id.* at 183 (statement of Maurice Stucke, Professor of Law, University of Tennessee-Knoxville).

⁸⁰ GAI Comments, *supra* note 2, at 2.

⁸¹ *FTC Hearing #5*, *supra* note 5, at 297 & 299 (statement of Geoffrey Manne, president of the International Center for Law & Economics).

The use of presumptions is completely compatible with the CWS—what critics actually want is for the presumptions and the processes to be altered. And there is nothing wrong, per se, with using presumptions in antitrust if they are empirically and theoretically defensible and, ultimately, produce a result that, to some substantial degree, improves outcomes for consumers.

But, by the same token, it makes little sense to abandon presumptions that happen to result in relatively less enforcement simply in response to demands for “more” enforcement, however defined. To dismiss well developed doctrine in this way amounts to reverse engineering from a preferred result: it is an inherently political activity and not a legally, economically, or empirically grounded exercise.

In fact, antitrust already includes a number of presumptions that work under the CWS. These include standing/injury requirements,⁸² conduct requirements,⁸³ effects analysis,⁸⁴ burdens of proof,⁸⁵ market definition requirements,⁸⁶ and, relevant here, presumptions.

Judge Easterbrook, a strong proponent of the CWS, argued in 1984 for *more* presumptions in antitrust, to take one prominent example.⁸⁷ But, as Easterbrook makes clear, a presumption need not be a presumption that conduct is *harmful*; it may be the opposite, in fact. “In which direction should these rules err? For a number of reasons, errors on the side of excusing questionable practices are preferable.”⁸⁸

3. *The CWS incorporates innovation and other nonprice factors*

Apart from more presumptions, other items on Stucke’s wishlist are operative under the CWS. Chief among his desired reforms would be to more fully incorporate nonprice effects and coordinated effects:

⁸² See, e.g., *Brunswick Corp. v. Pueblo Bowl-O-Mat, Inc.* 429 U.S. 477, 488 (1977).

⁸³ See, e.g., *Eastman Kodak Co. v. Image Technical Services, Inc.*, 504 U.S. 451, 488 (1992).

⁸⁴ See, e.g., *Leegin Creative Leather Prod., Inc. v. PSKS, Inc.*, 551 U.S. 877, 894 (2007).

⁸⁵ See, e.g., *Ohio v. Am. Express Co.*, 138 S. Ct. at 228 (“To determine whether a restraint violates the rule of reason, the parties agree that a three-step, burden-shifting framework applies. Under this framework, the plaintiff has the initial burden to prove that the challenged restraint has a substantial anticompetitive effect that harms consumers in the relevant market... If the plaintiff carries its burden, then the burden shifts to the defendant to show a procompetitive rationale for the restraint... If the defendant makes this showing, then the burden shifts back to the plaintiff to demonstrate that the procompetitive efficiencies could be reasonably achieved through less anticompetitive means.”).

⁸⁶ See, e.g., *Id.* at 2280 (considering the question of how to properly conduct a market definition analysis for two-sided markets); *Eastman Kodak Co. v. Image Tech. Servs., Inc.*, 504 U.S. at 482 (Noting that a market definition analysis can be either broad or narrow, depending on the unique character of the goods in question).

⁸⁷ Easterbrook, *The Limits of Antitrust*, *supra* note 45, at 14-15 (“Courts should use the economists’ way out. They should adopt some simple presumptions that structure antitrust inquiry. Strong presumptions would guide businesses in planning their affairs by making it possible for counsel to state that some things do not create risks of liability. They would reduce the costs of litigation by designating as dispositive particular topics capable of resolution.”).

⁸⁸ *Id.* at 15.

That turns next to looking beyond price effects. Everyone agrees on this. I mean, there is no real dispute that antitrust looks beyond price. The problem, though, is that price is what we invariably gravitate back to. That is why unilateral effects theory is so popular today, because it is quantifiable. Coordinated effects much less so. And this is not going to really help us. The price-centric tools that the agencies have are not going to help us in the data-driven economy where things are often for free.⁸⁹

Tim Wu struck a similar note:

I think that what we have seen over the last two decades is a consistent neglect of a huge number of costs, things like quality effects, dynamic benefits, and so forth; other things we mentioned, labor market, political considerations, all of which might be considered important, all of which are exceptionally difficult to measure, and all of which have made, in some ways, made the soul of the antitrust law resemble the joke about the economist and the street light, which would be very funny if it was not actually so tragic.

Yet, contrary to what is sometimes claimed,⁹⁰ the CWS has generally proven itself up to the task of dealing with non-price parameters of competition. At least in the opinion of the DOJ and the FTC, current antitrust analysis is fully capable of capturing innovation harms. According to the 2010 Horizontal Merger Guidelines

Competition often spurs firms to innovate. The Agencies may consider whether a merger is likely to diminish innovation competition by encouraging the merged firm to curtail its innovative efforts below the level that would prevail in the absence of the merger.⁹¹

And AAG Delrahim reaffirmed the DOJ's commitment to including nonprice factors in its antitrust analysis during a speech in 2018.⁹² Moreover, courts have long recognized that non-price competition is important to antitrust analysis. In *U.S. v. Cont'l Can Co.*, the Supreme Court observed that product variety “may not be price competition but it is nevertheless meaningful competition,”⁹³ and in *U.S. v. E. L. du Pont de Nemours & Co.*, the Court also observed that

The ‘market’ which one must study to determine when a producer has monopoly power will vary with the part of commerce under consideration. The tests are constant. That

⁸⁹ *FTC Hearing #5*, *supra* note 5, at 186 (statement of Maurice Stucke, Professor of Law, University of Tennessee-Knoxville).

⁹⁰ See, e.g., Kevin W. Caves & Hal J. Singer, *When the Econometrician Shrugged: Identifying and Plugging Gaps in the Consumer Welfare Standard*, *GEORGE MASON LAW REVIEW* 2 (forthcoming, 2018), available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3205518

⁹¹ HMG § 6.4

⁹² Makan Delrahim, Assistant Att’y Gen., Remarks at the Open Market Institute Event: Antitrust and the News (Jun. 12, 2018), <https://www.justice.gov/opa/speech/assistant-attorney-general-makan-delrahim-delivers-remarks-open-markets-institute-event>.

⁹³ *United States v. Cont'l Can Co.*, 378 U.S. 441, 456 (1964).

market is composed of products that have reasonable interchangeability for the purposes for which they are produced—**price, use and qualities considered**.⁹⁴

Alcoa was an attempt by the Court to address entry and the risk of bad long-term incentives from a protected monopoly.⁹⁵ *Jefferson Parish* tried to parse the preferences of consumers in contexts where the goods were tied.⁹⁶ *Microsoft* was entirely focused on threats to innovation from conduct that might create barriers to entry.⁹⁷ *Intel* was about innovation, as were the issues involved in the *AT&T/Time Warner*,⁹⁸ *Dow-DuPont*,⁹⁹ and *Bayer-Monsanto* mergers.¹⁰⁰

In its investigation of the Google/DoubleClick merger, the FTC looked into non-price attributes of competition, including privacy.¹⁰¹ And, more recently, in *U.S. v. Anthem*, the D.C. Circuit declared that price was not the sole factor for consideration in antitrust cases, but “[r]ather, product variety, quality, innovation, and efficient market allocation—all increased through competition—are equally protected forms of consumer welfare.”¹⁰²

While the analyses in these cases may not be perfect, they do seek to determine the effect of non-price factors on consumer welfare and, in so doing, demonstrate that it is possible to wrestle with non-price effects under the CWS.¹⁰³

Further, both the FTC and DOJ have actively incorporated innovation harms into their analyses. As ITIF notes in its comments

[A]ccording to Joshua Wright of George Mason University, between 2004 and 2014, the Federal Trade Commission (FTC) challenged 164 mergers, alleging harm to innovation in 54 of them. For example, former FTC Commissioner Terrell McSweeney wrote that in 2014, “The FTC challenged the proposed acquisition of EagleView Technology by

⁹⁴ *United States v. E. I. du Pont de Nemours & Co.*, 351 U.S. 377, 404 (1956) (emphasis added).

⁹⁵ *United States v. Aluminum Co. of America*, 148 F.2d at 416.

⁹⁶ *Jefferson Parish Hosp. Dist. v. Hyde*, 466 U.S. 2 (1984).

⁹⁷ *United States v. Microsoft Corporation*, 253 F.3d 34 (D.C. Cir. 2001).

⁹⁸ *United States v. AT&T Inc.*, 310 F. Supp. 3d 161 (D.D.C. 2018).

⁹⁹ Proposed Final Judgement, *U.S. Department of Justice v. Dow & DuPont*, available at <https://www.justice.gov/opa/press-release/file/973941/download>.

¹⁰⁰ Proposed Final Judgement, *United States v. Bayer AG and Monsanto Company*, available at <https://www.justice.gov/atr/case-document/file/1066676/download>.

¹⁰¹ FTC, FTC FILE NO. 071-0170, STATEMENT OF THE FEDERAL TRADE COMMISSION CONCERNING GOOGLE/DOUBLE CLICK 2 (2007), available at https://www.ftc.gov/system/files/documents/public_statements/418081/071220googledc-commstmt.pdf.

¹⁰² *United States v. Anthem Inc.*, 855 F.3d 345, 353 (D.C. Cir. 2017), available at <https://www.justice.gov/atr/case-document/file/971316/downloads>

¹⁰³ There are stumbles, of course. The FTC’s *Nielsen-Arbitron* decision, for example, grappled with innovation, but in a ham-fisted way that eschewed, rather than embraced, the available tools for predicting consumer welfare effects. See Dissenting Statement of Commissioner Joshua D. Wright, *In the Matter of Nielsen Holdings N.V. and Arbitron Inc.*, FTC File No. 131-0058 (Sep. 20, 2013).

Verisk Analytics.... The FTC closely examined whether likely future competition between the merging parties would offer customers ever more innovative products.” More recently, DOJ prevented two potential mergers based on the likely effect to research and innovation.¹⁰⁴

4. *Price as a proxy for quality and innovation*

Yet, it is true that under the CWS analysis often (though surely not always) looks to price and output to identify and measure the consumer welfare effects of complained-of conduct. But it is important to remember that price and output are merely proxies for the ultimate investigation: what do consumers actually value, and are they being served well according to those preferences?

Price and output are metrics (and relatively easily identifiable ones, at that) that aggregate the decisions of countless individuals who are performing their own hedonic calculations, using all their own subjective values, with respect to the conduct of firms in the economy. The price and level of output that arise from those individual calculations necessarily take account of the various preferences, albeit relatively imprecisely, of all those subjective calculations. In other words, although imperfect, measurements of market price and market output are (generally) reliably informative, at the very least of the direction of likely changes in consumer welfare along all dimensions in response to changes in firm conduct.

Nor are measurements of price and output as constraining as is often argued. As Melamed and Petit have recently observed:

[W]hen economists draw demand (and supply) curves, they are often not literally talking about prices. Instead, they are depicting a metaphor that represents marginal benefit (and costs) from which one can infer a rich set of individual preferences not confined to a dollar valuation. A consumer’s price point on the demand curve denotes, for example, a quality-adjusted marginal benefit. The slope of the demand curve reflects consumers’ actual and potential alternatives in and out of the market. Upwards and downwards shifts of the demand curve reflect dynamic competition and innovation, or lack thereof. Downward shifts of the supply curve reflect innovation and increased efficiency. There is nothing about antitrust nomenclature or metaphors that restricts the focus to static price analysis.¹⁰⁵

Of course, this is an imperfect process. A price analysis, for instance, might fail to capture adequately how much innovation a group of consumers actually prefers as against the next best (or the ideal) option. Multi-dimensional competition analysis is inherently fraught. As Josh Wright sums up Harold Demsetz’s argument on this score:

¹⁰⁴ ITIF Comments, *Why the Consumer Welfare Standard Should Remain the Bedrock of Antitrust Policy*, at 11 (internal citations omitted), available at <https://www.ftc.gov/policy/public-comments/2018/10/24/comment-ftc-2018-0091-d-0006>.

¹⁰⁵ Melamed & Petit, *supra*, note 56, at 3.

Demsetz argued that the ubiquity of multiple and negatively correlated forms of competitive rivalry, such as price and innovation, had important implications for the antitrust enterprise. Specifically, antitrust intervention would result in a substitution of a different mix of competitive forms. The ability of antitrust intervention to improve consumer welfare depends on our knowledge of these technical rates of substitution between various competitive forms. Economic theory, Demsetz argued, provided no such basis.¹⁰⁶

Yet price *does* take into account innovation, at least relatively, when users defect between manufacturers or among different models from a particular manufacturer. This is generally referred to as Hedonic Demand Theory, and is notably used to compute economic indicators such as the Consumer Price Index.¹⁰⁷ Discrete choice models can also be used for similar ends.¹⁰⁸ Alternatively, economists have also used regression discontinuity analysis to measure how much consumer surplus innovative new products can generate.¹⁰⁹ Despite the truth of Demsetz’s observation that incorporating the multiple dimensions of competition into an aggregate metric is imprecise and complicated, it is incorrect to claim that innovation is not cognizable under price-centric analyses (even if this type of analysis only imperfectly factors-in innovation-related benefits).

And this is the point: price and other metrics that CWS-oriented antitrust analysis employs are not perfect, but the question is not one of perfection, but of “good enough” in a world of second-bests. Antitrust enforcers and judges work hard to find ways to read the subjective preferences of consumers within a wide variety of cases under the CWS—including ones implicating consumer preferences for innovation. Innovation matters to consumers, so it matters to the CWS. Whether the tools employed to measure and incorporate consumer preferences for innovation are the most effective is an important question, and one that should be (and is) continually addressed by economists, enforcers, and courts. But that is quite a different matter than the question whether the CWS is the proper standard at all.

To be sure, it is possible that proxies other than price and output may better assess and evaluate the consumer welfare effects arising from non-price factors, including innovation. But if there are better proxies, we have not yet discovered them. And this is not for lack of trying. Tying antitrust principles arbitrarily to the structure of industry and the size of firms—the alternative most commonly offered

¹⁰⁶ Joshua D. Wright, *Antitrust, Multi-Dimensional Competition, and Innovation: Do We Have an Antitrust-Relevant Theory of Competition Now?*, in REGULATING INNOVATION: COMPETITION POLICY AND PATENT LAW UNDER UNCERTAINTY (Geoffrey A. Manne and Joshua D. Wright, eds. 2011) (commenting on Harold Demsetz, *The Intensity and Dimensionality of Competition*, in HAROLD DEMSETZ, *THE ECONOMICS OF THE BUSINESS FIRM: SEVEN CRITICAL COMMENTARIES* 137 (1995)).

¹⁰⁷ Jerry Hausman, *Sources of Bias and Solutions to Bias in the Consumer Price Index*, 17 J. ECON. PERSPECTIVES 35 (2003). See also, Sherwin Rosen, *Hedonic Prices and Implicit Markets: Product Differentiation in Pure Competition*, 82 J. POL. ECON. 34-55 (1974).

¹⁰⁸ Amil Petrin, *Quantifying the Benefits of New Products: The Case of the Minivan*, 110 J. POL. ECON. 706 (2002).

¹⁰⁹ Peter Cohen, Robert Hahn, Jonathan Hall, Steven Levitt & Robert Metcalfe, *Using Big Data to Estimate Consumer Surplus: The Case of Uber*, NBER WORKING PAPER NO. W22627 (2016).

in these hearings—has been shown repeatedly to be a poor method of understanding the competitive dynamics that contribute to the welfare of consumers.

D. The siren song of market structure analysis

A major commonality—and flaw—of the criticisms of the CWS and the proposed alternatives is a preference for imposing some form of a market structure presumption on antitrust analysis. Maurice Stucke characterized a component of his proposed alternative as requiring enforcers to merely show “a substantial lessening of competition. You would not then have to show, well, how does that substantial lessening of competition affect consumers’ welfare.”¹¹⁰ Which is another way of saying that some numerical quantity of competitors declined in a market and, regardless on the competitive effects of the remaining balance of competition, enforcers would be presumptively permitted to interfere in the market.

Tim Wu has similarly characterized his proposed alternative as being centered on questions of market structure:

No economist would seriously deny that the number of firms, their market share, and the barriers to entry maintained singly or jointly determines the very nature of competition in an industry. And yet somehow... merger review has slid further away from recognizing structure and tended to move to a [sic] open ended analysis of price effects and claimed efficiencies in the consideration of most mergers.¹¹¹

According to Barry Lynn, earlier periods of antitrust—which were characterized by just such structuralist thinking—relied on analysis that “was simpler, more predictable, and easier to enforce.”¹¹²

The sentiment of these structuralist proposals is rooted in an explicit or implicit application of the (largely-discredited¹¹³) structure-conduct-performance (SCP) paradigm.¹¹⁴ Under a SCP analysis, the conduct of firms in an industry, and ultimately their performance, is a function of the overall structure of the industry.¹¹⁵ One of the predictions of the SCP model is that more-concentrated industries are inherently less competitive, allowing firms to employ anticompetitive conduct (like collusion) to

¹¹⁰ *FTC Hearing #5*, *supra* note 5, at 184 (statement of Maurice Stucke, Professor of Law, University of Tennessee-Knoxville), *see also* Steinbaum & Stucke, *supra* note 72.

¹¹¹ Tim Wu, *The ‘Protection of the Competitive Process’ Standard 4* (Colum. Pub. L. Research Paper No. 14-612, 2018) available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3276896&download=yes.

¹¹² *FTC Hearing #5*, *supra* note 5, at 168 (statement of Barry Lynn, Executive Director, Open Markets Institute).

¹¹³ *See generally* INDUSTRIAL CONCENTRATION: THE NEW LEARNING (Harvey J. Goldschmid, H. Michael Mann, and J. Fred Weston, eds., 1974), and *see especially* Harold Demsetz, *Two Systems of Belief About Monopoly*, in *id.* at 164-184. *See also* Sam Peltzman, *The Gains and Losses from Industrial Concentration*, 20 J. L. & ECON. 229 (1977); Yale Brozen, *The Concentration-Collusion Doctrine*, 46 ANTITRUST L. J. 826 (1978).

¹¹⁴ 4 *See* JOE BAIN, INDUSTRIAL ORGANIZATION 372-468 (1968).

¹¹⁵ *Id.*

raise prices.¹¹⁶ Profitability and market performance, in this view, are a function of market structure, not the relative efficiency of competing firms. SCP therefore generally supported presumptions against concentration regardless of market power—for instance by breaking up firms or challenging mergers—as a way of making industries more competitive. Ultimately, the SCP model proved to be overly simplistic and fell out of favor not long after it was popularized.¹¹⁷

The SCP view of antitrust espouses a preference for smaller firms and, consequently, a preference for presumptions against “bigness” (however defined).¹¹⁸ The various Neo-Brandeisian proposals, operating under an SCP-based intuition, broadly hold that a market comprised of multiple competing smaller firms is comparatively better than a highly concentrated one.¹¹⁹ This approach does not admit the possibility that big could be better under appropriate conditions. In practice, this leads to presumptions against large firms because they often happen to imply more concentrated market structures.

The classic example of the problem with the SCP approach to antitrust analysis is the 1966 *Von’s Grocery* case.¹²⁰ In *Von’s Grocery*, the Supreme Court addressed the government’s challenge of the 1960 merger of Von’s Grocery and Shopping Bag Food Stores, two grocery chains in southern California that were succeeding in a rapidly changing and increasingly concentrated grocery market.¹²¹ Together, these chains controlled less than 8% of a grocery market that was becoming dominated by a small number of “big box” supermarkets with innovative business models that took advantage of changing demographics, affordable automobiles, and economies of scale, enabled in part by new technology.¹²²

The market share of the merged chains was insufficient to have any meaningful effect on prices, but it might have been sufficient to give the resulting retail chain the scale it needed to compete. Yet despite the lack of evidence of any anticompetitive effect from the merger, the Supreme Court affirmed the government’s challenge, adopting the SCP presumption against increased concentration even where there was no anticompetitive harm.¹²³

¹¹⁶ Joe S. Bain, *Structure Versus Conduct as Indicators of Market Performance: The Chicago-school Attempts Revisited*, 18 ANTITRUST L. & ECON. REV. 293-324 (1986).

¹¹⁷ See Frank H. Easterbrook, *Workable Antitrust Policy*, 84 MICH. L. REV. 1698 (1986).

¹¹⁸ See, e.g., Louis D. Brandeis, *A Curse of Bigness*, HARPER’S WKLY. (Jan. 10, 1914).

¹¹⁹ See Joe S. Bain, *supra*, note 116.

¹²⁰ *United States v. Von’s Grocery Co.*, 384 U.S. 270 (1966).

¹²¹ *Id.* at 273.

¹²² *Id.* at 281.

¹²³ *Id.* at 277.

In *Von's Grocery*, this meant breaking up a merger that did not harm consumers, on the one hand, while preventing firms from remaining competitive in an evolving market by achieving efficient scale, on the other. As Justice Stewart noted in dissent:

In fashioning its per se rule, based on the net arithmetical decline in the number of single store operators, the Court completely disregards the obvious proactive vigour of competition in the market as reflected in the turbulent history of entry and exit of competing small chains.... The Clayton Act was never intended by Congress for use by the Court as a charter to roll back the supermarket revolution.¹²⁴

In other words, by adopting a formalistic rule against increased concentration, the analysis in *Von's Grocery* disregarded the more-nuanced market dynamics that justified the merger, thus harming consumers, competitors, and dynamic competition.

In the 1970s, antitrust economists increasingly questioned the sort of small-is-good bias promoted by SCP analysis. Prompted by cases like *Von's Grocery*, antitrust economists realized that small-is-good as an antitrust ethos lacked empirical and intellectual justification. Moreover, preferring firm size as an analytical dimension for applying antitrust laws could often lead to perverse outcomes where consumers were harmed and smaller, less-efficient competitors were protected. Rather than focusing on naïve proxies for conduct and performance, more probing analysis was needed.

And the subsequent weight of economic research undertaken since the popularization of SCP has found that large firms are frequently ideal economic actors for maximizing consumer welfare.¹²⁵ Since the Industrial Revolution, and especially in the Information Age, it's not unusual for efficient, competitive markets to comprise only a few big, innovative firms. Unlike the textbook models of monopoly markets, these markets tend to exhibit extremely high levels of R&D, continual product evolution, frequent entry, almost as frequent exit, and economies of scope and scale (i.e., "bigness"). Size simply does not correlate with anything recognizable as "consumer harm" (which may be a reason that advocates for change who distrust large firms on a gut level prefer to abandon a focus on consumer welfare).

As ITIF observed in its comments in this proceeding:

[M]any studies have shown innovation and competition can be modeled according to an inverted "U" relation, with both too much and too little competition producing less innovation. A study of U.K. manufacturing firms discovered this relationship: Competition above a certain level reduces the high profits successful innovators earn and are able to reinvest in their next round of innovation. Others, including F.M. Scherer and Toshihiko Mukoyoma have found similar patterns. Similarly, in a study of U.S. manufacturing firms, Aamir Hashmi found that too much competition led to slightly less innovation. Firms need to be able to obtain "Schumpeterian" profits to reinvest in

¹²⁴ *Id.* at 292.

¹²⁵ See Robert E. Lucas Jr., *On the Size Distribution of Business Firms*, 9(2) BELL J. OF ECON. 508 (1978).

innovation that is both expensive and uncertain. As Carl Shapiro notes, “Innovation incentives are low if ex-post competition is so intense that even successful innovators cannot earn profits sufficient to allow a reasonable risk-adjusted rate of return on their R&D costs.”¹²⁶

While perhaps counterintuitive, this means that, in many cases, modern antitrust law has evolved to actually permit bigness—or, put differently, without more, antitrust law has grown to be fundamentally agnostic about the size of firms or the extent of market concentration.

The preference of critics to the contrary should be quickly and summarily dismissed. Nothing in their proposals justifies a return to misguided structural models. As Steve Berry, Martin Gaynor, and Fiona Scott Morton forcefully argue in a recent paper:

In short, there is no well-defined “causal effect of concentration on price,” but rather a set of hypotheses that can explain observed correlations of the joint outcomes of price, measured markups, market share, and concentration....

Some of the recent literature on concentration, profits, and markups has simply reasserted the relevance of the old-style structure-conduct-performance correlations. For economists trained in subfields outside industrial organization, such correlations can be attractive. **Our own view, based on the well-established mainstream wisdom in the field of industrial organization for several decades, is that regressions of market outcomes on measures of industry structure like the Herfindahl-Hirschman Index should be given little weight in policy debates. Such correlations will not produce information about the causal estimates that policy demands.** It is these causal relationships that will help us understand what, if anything, may be causing markups to rise.¹²⁷

Particularly in the age of online platforms (with their attendant network effects) and advanced economic understandings of the dynamic efficiency benefits of more-integrated firms, the claim that antitrust enforcement should be used to arbitrarily reduce the size of firms—as if that were actually determinative of their effect on welfare—is simply unsupported and unsupportable.

E. The unwise introduction of political factors

As discussed above, it is far from clear that the original framers of the antitrust laws intended that courts and enforcers rely upon political discretion in order to “protect the liberties of the individual citizen and our democracy.”¹²⁸ But, whether or not the framers intended economic efficiency as a guiding light for antitrust analysis, courts and enforcers have come to rely upon this concept, and

¹²⁶ ITIF Comments, *supra* note 104, at 12 (citations omitted).

¹²⁷ Steven Berry, Martin Gaynor, and Fiona Scott Morton, *Do Increasing Markups Matter? Lessons from Empirical Industrial Organization*, Working Paper (Jun. 2019) at 5-6, available at <https://www.researchgate.net/publication/333966085> (emphasis added).

¹²⁸ *FTC Hearing #5*, *supra* note 5, at 164 (statement of Barry Lynn, Executive Director, Open Markets Institute).

consumers are better off for it. It would be a grave mistake to uncouple antitrust analysis from an examination of the efficient conduct of firms and its effects on consumer welfare.

Jonathan Nuechterlein offered some pertinent thoughts in his panel before the Commission:

What could go wrong if we added [political considerations] to the antitrust analysis? Well, a president could go wrong. These are actual tweets or campaign statements by our nation's chief executive who views antitrust as a weapon to punish his political enemies and reward his political friends. He is very explicit about saying that he would block the NBC-Comcast merger mainly because NBC is liberal, but he would approve the Sinclair merger with Tribune because they are conservative and America needs more conservative voices. Now, the question is, do we want that sort of analysis explicit or even implicit in antitrust law? The consumer welfare standard with its precise focus on standards and economics insulates us from this sort of political influence.¹²⁹

Lina Khan, a leading Neo-Brandeisian, inadvertently framed another problem with the Brandeisian discretionary approach well:

Brandeis believed that the structure of our markets and of our economy can determine how much real liberty individuals experience in their daily lives. Most people's day-to-day experience of power comes not from interacting with public officials, but through relationships in their economic lives—negotiating pay with an employer, for example, or wrangling the terms of business with a trading partner. Brandeis feared that autocratic structures in the commercial sphere—such as when one or a few private corporations call all the shots—can preclude the experience of liberty, threatening democracy in our civic sphere.¹³⁰

The Neo-Brandeisians fear concentrated market power because of its potential to violate negative individual liberty. Their intuition is that large firms create the environment in which individuals operate in all aspects of work, family, and leisure, thus allowing these firms to exert a tremendous amount of control. But none of these concerns is a special problem of large firms. Small businesses have, if anything, more incentives to cut corners and lean heavily on employees to squeeze out a competitive advantage.¹³¹ Small businesses with less scale are less able to offer additional services and discounts that, when available, extend the purchasing power and attendant quality-of-life improvements that individuals can enjoy from more efficient firms. Such increases in living standards

¹²⁹ *Id.* at 269 (statement of Jonathan E. Nuechterlein, Partner, Sidley Austin, LLP).

¹³⁰ Lina Khan, *The New Brandeis Movement: America's Antimonopoly Debate*, J. EUR. COM. L & PRAC. 131 (2018) available at <https://academic.oup.com/jeclap/article/9/3/131/4915966>.

¹³¹ Mark Stephens, *7 Reasons Why You Need to Work For A Big Company*, ONSTARTUPS (Dec. 15, 2010), <http://www.onstartups.com/tabid/3339/bid/33111/7-Reasons-Why-You-Need-To-Work-For-A-Big-Company.aspx>.

increase the individual capacity to choose along nearly every dimension.¹³² Limiting the size of firms in pursuit of protecting individual liberty is simply a poor fit between means and ends.

Moreover, when antitrust enforcement is disconnected from economic analysis in order to accommodate non-competition goals, it becomes internally contradictory. Professor Herbert Hovenkamp summarized this problem aptly in a recent paper:

[Neo-Brandeisian antitrust] often succeeds at capturing political attention and engaging at least some voters, but it fails at making effective or even coherent policy. The result is goals that are unmeasurable and fundamentally inconsistent, although with their contradictions rarely exposed. Among the most problematic contradictions is the one between small business protection and consumer welfare. In a nutshell, consumers benefit from low prices, high output and high quality and variety of products and services. But when a firm or a technology is able to offer these things they invariably injure rivals, typically those who are smaller or heavily invested in older technologies. Although [Neo-Brandeisian] antitrust rhetoric is often opaque about specifics, its general effect is invariably to encourage higher prices or reduced output or innovation, mainly for the protection of small business or those whose technology or other investments have become obsolete.¹³³

Even notable advocates for incorporating political concerns into antitrust have disclaimed incorporating many of the Neo-Brandeisian goals like the protection of small businesses because they could “play no useful role in antitrust enforcement.”¹³⁴

As a society we should think about how best to protect liberty, the proper leverage between labor and firms, how free speech rights are deployed, and so forth. But these are matters of high concern that deserve proper vetting through the political process. These need to be issues that constituents discuss with their representatives, and that the representatives debate in legislatures. These are not subjects that should be considered and decided through relatively arcane antitrust enforcement procedures in a manner that creates political discretion without political accountability.

The tradeoffs involved in selecting one incommensurate social goal over another become lodged in the political organization of enforcement agencies, with firms and individuals no longer able to negotiate these tradeoffs amongst each other and through direct democratic elections. Further, by removing these concerns from the democratic process and putting them in the hands of a small expert class, it inevitably invites rent-seeking and protectionism.¹³⁵

¹³² Betsey Stevenson & Justin Wolfers, *Economic Growth and Subjective Well-Being: Reassessing the Easterlin Paradox* (Nat’l Bureau of Econ. Research, Working Paper No. 14282).

¹³³ Herbert Hovenkamp, *Whatever Did Happen to the Antitrust Movement?*, U. of Penn, Inst. for Law & Econ. Research Paper No. 18-7 (Feb. 2018) at 3 (*forthcoming*, Notre Dame Law Review), available at <https://ssrn.com/abstract=3097452>.

¹³⁴ Robert Pitofsky, *The Political Content of Antitrust*, 127 PENN. L. REV. 1051, 1058 (1979).

¹³⁵ See William J Baumol & Janusz A Ordover, *Use of Antitrust to Subvert Competition*, 28 J. L. & ECON. 252 (1985).

The Global Antitrust Institute highlighted this problem in its comments:

Antitrust agencies are not well-suited to conduct the complex weighing of various considerations embedded in a public interest standard. The various goals will inevitably come into conflict. For example, imagine a collusive agreement between small businesses that depressed wages, but helped the conspirators compete with larger firms that benefit from economies of scale. Would wages be sacrificed to protect small business, or the reverse? Or take the example of Walmart, which has grown large and economically powerful by offering low prices on a wide range of necessities. Would Walmart be broken up, and its scale economies lost, despite the employment it provides and the savings it brings to lower-income consumers? Agencies and courts would have to make complex tradeoffs in cases presenting such conflicts, which could involve not two but several vectors. The results necessarily would be arbitrary and unpredictable. Moreover, if the decision in a case deviates from the decision indicated by the consumer welfare standard, i.e., unless the change in standards has no effect, then consumers will pay the price.¹³⁶

And this highlights another of the key virtues of the consumer welfare standard in antitrust: it is designed to align the incentives of both firms and enforcers to focus their attention on how consumers actually express their preferences in free and open markets. Regulatory discretion over non-competition goals is both disconnected from consumer preference (except incidentally), and undemocratically insulated from voter selection. The end result of vast discretionary power is well known in public choice economics: it creates markets for special interest influence.¹³⁷

F. The reform advocates mistakenly seek to elevate the means of enforcement above the goals of antitrust

The alternatives to the CWS that were offered over the course of the hearings contain another deep flaw insofar as they fetishize the particular means of achieving a competitive process without either ascertaining the end to which those means are meant to work, or without suitably narrowing the goals such that competitive ends can be properly defined.

Tim Wu’s “protection of competition” standard is emblematic of this fault.¹³⁸ In his view, focusing on protecting the process of competition, as opposed to focusing on the end of consumers’ welfare, would allow judges to more fully function as neutral arbiters of antitrust law.¹³⁹ He analogizes the proper role of antitrust enforcers to that of referees in a sporting contest:

¹³⁶ GAI Comments, *supra* note 2, at 6.

¹³⁷ See, e.g., BRINK LINDSEY & STEVEN M. TELES, *THE CAPTURED ECONOMY: HOW THE POWERFUL ENRICH THEMSELVES, SLOW DOWN GROWTH, AND INCREASE INEQUALITY* (2017), available at <https://www.amazon.com/Captured-Economy-Powerful-Themselves-Inequality/dp/019062776X>; JAMES M. BUCHANAN & GORDON TULLOCK, *THE CALCULUS OF CONSENT: LOGICAL FOUNDATIONS OF CONSTITUTIONAL DEMOCRACY* (1962).

¹³⁸ Tim Wu, *supra* note 15.

¹³⁹ *Id.* at 2. We dispute that the CWS is not about protection of the competitive process. But for the purposes of this comment, we engage with his proposal on its own terms.

We might analogize the economy to a complex competitive sport, like American football, with rules set by custom and the legal system. It would be very different to ask the referees to enforce the rules in an effort to maximize “fan welfare,” as opposed to telling them to protect the process of competitive [sic] from any gross distortions or subversions. The former creates a near-impossible undertaking – who can measure fan welfare? – in which a failing to call [sic] fouls (false negative) would seem inevitable. The latter objective puts the referees in the more realistic position of penalizing what seem like deviations and abuses that threaten to ruin the game, by providing an end-run around competition on the merits. I think its [sic] more realistic to ask enforcers and judges to act like referees, calling out fouls and penalties, with the goal of ultimately protecting the quality of play, which in this case means an economy that does not allow size, market power, or anti-competitive agreements to be used as weapons, and instead seeks to reward the firms with better products.¹⁴⁰

This is a tempting analogy, but ultimately a useless one. There is emphatically nothing similar about competition among firms in the economy. Football exists only by virtue of a certain set of well-defined, top-down rules to which players must adhere in order for the game even to be recognizable as football. By contrast, any economic system is far more diverse; there is no single “game.” Moreover, the “players” in the economy engage in far more complicated interactions that very rarely admit of the easy application of simplistic rules to say whether conduct was obviously good or bad.

Wu would have antitrust “focus on one question: is the complained-of conduct (or merger) merely part of the competitive process, or is it meant to ‘suppress or even destroy competition?’”¹⁴¹ Maurice Stucke voiced a similar preference for the operation of antitrust standards, by describing a “fundamental value of competition law” as the “preserv[ation] of opportunities for competitors.”¹⁴²

But, in some sense, the goal of every firm is to drive competitors from the market. Attempts to base antitrust on the “intent” of firms would find all firms in violation, with the result that all actions by all firms would be illegal except those explicitly permitted by antitrust authorities.¹⁴³ Without an anchoring goal—like the promotion of consumer welfare—efforts to “protect” opportunities for competitors can amount to little more than authoritarian control to remake the economy according to the industrial policy preferences of a political class.

Continuing to draw on Wu’s analogy, the frailty of proposing a simplistic set of rules to determine “fouls” becomes clearer. In a football game there are obvious and well-known restraints that are definitionally important: only a certain number of players can be allowed on a field at a given time; only certain players are permitted to occupy certain positions on the field; movement is permitted only within a well-defined and narrow set of spatial-temporal parameters. Similarly, players are

¹⁴⁰ *Id.* at 9.

¹⁴¹ *Id.*

¹⁴² *FTC Hearing #5, supra* note 5, at 184, 183 (statement of Tim Wu, Professor, Columbia Law School).

¹⁴³ See generally Geoffrey A. Manne & Marc Williamson, *Hot Docs vs. Cold Economics*, 47 *ARIZ. L. REV.* 609 (2005).

expected to be kept within a “natural” size, as judged by whether they ingested chemicals in order to augment their size.

There is emphatically nothing similar about competition among firms in the economy. Not only is every firm explicitly trying to make it so that no one else can play the same game at all (obviously not the point of spectator sports), it is not readily apparent what is the “right” structure of firms in an industry. Some markets operate best with few firms that vertically integrate, with competition being *for* the market itself.¹⁴⁴ Other markets operate well with a large number of competitors vying directly *in* the market. The choice of whether to vertically integrate (and thus potentially grow into a very large firm), or else to contract with other firms for similar services is critically made by different firms in different ways, and with differing degrees of success.

Moreover, simple games with well-known rules also have simple objectives: scoring points by reaching an end-zone or sinking a ball in a basket. Cutting through the technical law and economics of antitrust, the end goal can be stated as optimizing the creation of value in society by firms. Unfortunately (for regulators), value is inherently subjective, which means that the determination of whether firms are serving the goal of optimally providing value to society must ultimately be judged by the consumers of the goods and services themselves.

Maurice Stucke’s “effective competition standard” is no better in this regard. He claims that there should be a multiplicity of goals, from the “protect[ion of] individuals, purchasers, consumers, and producers”; the “preserv[ation of] opportunities for competitors”; the “promot[ion of] individual autonomy and well-being”; to the “dispers[ion of] private power.”¹⁴⁵

To take just one of Stucke’s priorities—the promotion of “autonomy and well-being”—the problems become clear. If we are to seriously treat “autonomy” as a proper end for enforcers to maximize, how should we expect to weigh whatever measure of “autonomy” that they derive against the competing values of preserving “opportunities for competitors” and the “dispersion of private power?” When is dispersing private power more important than promoting individual autonomy (which is, of course, another way describing private power)? Is private power a problem only when a collective of suitably autonomous individuals, who properly act in their individual capacity, begin to act collectively? Does their “autonomy” cease to be a concern when they act in concert, and if so, what number of properly “autonomous” collaborators working together become a disfavored center of “private power?”

As noted above, both Stucke’s and Wu’s proposals are, more or less, calls to revive some form of SCP antitrust analysis. If enforcers go back to a regime of presumptions based on static market

¹⁴⁴ See Harold Demsetz, *Why Regulate Utilities?*, 11 J. L. & ECON., 1 (1968); See also, Neil Quigley, *Dynamic Competition in Telecommunications: Implications for Regulatory Policy* 17, C.D. HOWE INSTITUTE COMMENTARY, no. 194 (Feb. 2004), available at https://www.cdhowe.org/pdf/commentary_194.pdf; Sami Hyrynsalmi, Arho Suominen & Matti Mäntymäki, *The Influence of Developer Multi-homing on Competition Between Software Ecosystems*, 111 J. SYS. & SOFTWARE 119, 119-27 (2016).

¹⁴⁵ Steinbaum & Stucke, *supra* note 72, at 29.

structure, how do those enforcers factor “autonomy” into the decisionmaking process in a way that is not fully arbitrary? Most likely, including such a value must be at some level fully arbitrary, and so those enforcers can’t even be sure they are optimizing the values at which they are aiming.

How, for example, would a presumptive limit of 25% market share further the values of “autonomy” and overall “well being?” Perhaps, as *Topco* claims and Stucke cites approvingly, competition law is the “Magna Carta” for promoting economic freedom.¹⁴⁶ Yet, even if this rhetorical flourish has some element of truth to it, that statement does nothing to determine a fixed entitlement to particular opportunities to compete, but only highlights the fact that a properly tuned competition policy is a guarantee that individuals can choose to operate as they wish within the constraints of everyone else operating within similar constraints. Creating arbitrary rules disconnected from realizable goals is the surest way to destroy this guarantee.

Ultimately, as Thibault Schrepel writes:

Admittedly, every law and regulation express indirect values. It is the case for antitrust law, which is the expression of a preference for capitalism. It remains, as we have seen from the analysis of the founding texts, that antitrust law is an instrument protecting trade, commerce, and free competition. It facilitates exchanges without cherry picking which ones should be legal based on moral values. The sole expressive role that one may deduce from it is a preference for competition rather than the absence of it. It may be “boring,” as highlighted by Richard Hofstadter, but one should prefer dull but impartial bodies of law rather than spectacular but arbitrary ones.¹⁴⁷

¹⁴⁶United States v. *Topco Assocs.*, 405 U.S. 596, 610 (1972); see also *FTC Hearing #5*, *supra* note 5, at 184 (statement of Maurice Stucke, Professor of Law, University of Tennessee-Knoxville).

¹⁴⁷ Thibault Schrepel, *Antitrust Without Romance*, Working Paper (May 28, 2019), available at <https://ssrn.com/abstract=3395001>.

Section 3: Vertical Integration and Vertical Restraints

Introduction and overview of Section 3

For several decades, there has been a general presumption that vertical integration and vertical mergers are not anticompetitive. This presumption rests on solid theoretical and empirical research, as discussed below. However, in the past few years concerns have been raised in numerous fora—including during these FTC hearings—that by entering complementary markets platform operators might engage in conduct that harms consumers both directly, by raising prices, and indirectly, by reducing investments in innovation. In addition, some observers have claimed—contrary to the amassed evidence—that highly concentrated markets tend to exhibit less innovation and have argued for a “structural innovation presumption” in favor of atomistic competition.

In this Section, we address these concerns, starting in Section 3.I with vertical integration and mergers. Section 3.II considers the claim that firms might engage in harmful vertical discrimination. Section 3.II discusses the effects on innovation of alleged “kill zone” mergers. In Section 3.I, we discuss the more general relationship between market structure and innovation and critique the notion of a “structural innovation presumption.” Finally, Section III concludes by emphasizing the importance of case-by-case analysis over structuralist presumptions.

I. Vertical mergers

A major tension running throughout these hearings concerns the applicability of modern antitrust law to the wide range of business models experimented with and adopted by businesses in a dynamic environment. A key element of those tensions involves the vertical integration of firms. A vertical merger occurs when firms at different levels of the same supply or production chain merge to function as a single firm. Examples of such vertical integrations are manifold throughout the economy. Indeed, it is even arguably the case that virtually every firm is vertically integrated to one degree or another insofar as it provides its own operation’s inputs (e.g., a restaurant also performs its own accounting in-house) or operates its own logistics systems (e.g., a manufacturer also owns and manages its own trucks and makes its own deliveries). In some industries many firms are vertically integrated along all levels of production: many petroleum firms are vertically integrated from exploration and production, to refining, to retail fuel stations; many restaurants are vertically integrated “from farm to table.” At the same time many retail fuel stations and restaurants operate independently, purchasing their inputs from suppliers, contracting out their logistics, and competing effectively against vertically integrated firms in the same market.

The ubiquity of such arrangements and the multifarious ways in which such integrations can improve firms' operations and increase efficiency have generally led courts and enforcers to view vertical mergers with far less skepticism than their horizontal counterparts.

But, a number of participants in these hearings have criticized this view, asserting that vertical mergers raise at least the same risk of harm as horizontal mergers, and that any presumption in their favor is unwarranted. At the same time, a number of participants pushed back against this position. Thus, the assessments of the current framework for evaluating vertical mergers fall generally into two broad categories:

3. The current framework is too lax, leading to too many “false negatives” in which anticompetitive vertical mergers have been allowed to proceed and any remedies have not been effective. Current economic theory and empirical literature do not support treating vertical mergers more leniently than horizontal ones, and, in fact, the law should adopt a presumption against vertical mergers where at least one of the parties has market power. Following on this, the vertical merger guidelines should be revised to reflect that the agencies will demand a greater burden of proof from merging parties to demonstrate no net harm to consumers and/or verifiable, pro-competitive, and merger-specific efficiencies. Moreover, structural remedies should be favored over behavioral remedies.
4. The current framework is well-established and adequate, but the existing vertical merger guidelines are outdated and out of use. Vertical mergers do not involve the loss of a direct competitor, hence there should be some presumption that vertical mergers do not harm competition or consumer welfare as readily as horizontal mergers. Guidelines are designed to assist the business community and antitrust practitioners by increasing the transparency of the analytical process underlying agencies' enforcement decisions. Economic theory and evidence do not provide clear understanding or simple tools and analyses to identify the potentially anti-competitive vertical mergers a priori with any confidence, but the weight of the literature points overall to a presumption in favor of vertically merging parties. Nevertheless, with our current state of knowledge and understanding, new vertical merger guidelines would likely lead to more “false positives” that would prevent procompetitive vertical mergers.

A. Criticisms of the current framework

Criticisms of the current framework include criticisms of the existing vertical merger guidelines published in 1984 and criticisms of the agency's enforcement decisions regarding vertical mergers. While there was, overall, general agreement that the existing guidelines are out of date, there were few specific criticisms of the guidelines themselves or concrete suggestions for reform (with the exception of Steve Salop, discussed below). Similarly, although there was some discussion critical of agencies' enforcement activities and remedies, there were few specific criticisms: Most speakers and commentators critical of the agency's vertical merger enforcement activities simply wanted more enforcement. Indeed, it was difficult to escape the sense that critics of the current merger guidelines were seeking reform not so much because the current guidelines cause any problems, but because they want to

use the opportunity to induce the Commission to bring more vertical merger enforcement actions and to influence the courts to make it easier for the Commission to win.

Were there a strong theoretical or empirical basis to believe that the current, fairly deferential regime is unfounded, these efforts might be understandable. As it is, however, and as we discuss below, the purported justifications offered during these hearings for enhanced vertical merger enforcement are exceedingly weak.

I. A quick canvassing of the views expressed at the hearings on the vertical merger guidelines and current enforcement practices

In his introductory remarks, Commissioner Phillips noted that the current vertical merger guidelines “are outdated and do not reflect current agency practice.”¹⁴⁸ Paul Yde commented, “nobody pays any attention to the ‘84 guidelines anymore.”¹⁴⁹

Critics of the 1984 guidelines argue they do not reflect current learning and do not reflect actual agency enforcement (a criticism to which we return at length below).¹⁵⁰ Carl Shapiro, for example, argues that the current guidelines do not address unilateral effects, but “there has been a lot of learning and a complete shift in agency enforcement related to unilateral [effects]” since the guidelines were published.¹⁵¹

Although it is doubtless correct that the 1984 guidelines do not reflect the latest economic knowledge, it is by no means clear that this is a problem—or that a new set of guidelines would not create even greater problems. To begin, Sharis Pozen expressed the view, supported by many, that the possible disconnect between the guidelines and agency learning and practice is of little concern: “I do not feel uncertainty because I do not have vertical guidelines. I have uncertainty because I do not know what the state of play is right now, particularly at the Department of Justice on these issues.”¹⁵²

As noted, criticism of the agencies’ enforcement activities leans toward urging more enforcement actions, and efforts to bolster the guidelines are aimed at effecting this goal. As Gene Kimmelman noted: “I want antitrust to push the envelope on what it is capable of doing, and I do not think we have done as good a job in vertical enforcement, in looking at potential competition and in fully

¹⁴⁸ *FTC Hearing #5*, *supra* note 5, at 7 (statement of Noah Phillips, Comm’r, FTC).

¹⁴⁹ *Id.* at 109 (statement of Paul Yde, Partner, Freshfields Bruckhaus Deringer).

¹⁵⁰ *Competition and Consumer Protection in the 21st Century; FTC Hearing #5: Vertical Merger Analysis and the Role of the Consumer Welfare Standard in U.S. Antitrust Law; Before the FTC*, FTC Hearing #5 Presentation Slides 9 (Nov. 1, 2018), https://www.ftc.gov/system/files/documents/public_events/1415284/ftc_hearings_5_georgetown_slides.pdf [hereinafter “Vertical Merger Slides”]

¹⁵¹ *FTC Hearing #5*, *supra* note 5, at 57 (statement of Carl Shapiro, Professor, University of California-Berkeley).

¹⁵² *Id.* at 148 (statement of Sharis Pozen, Partner, Clifford Chance).

assessing innovation and quality.”¹⁵³ Yet Paul Yde pointed out that this could occur under current guidelines: “I think actually the vertical merger guidelines could facilitate maybe challenging a few more.”¹⁵⁴

Gene Kimmelman and Steve Salop, however, expressed the view that, absent new guidelines to push courts in a different direction, the bar to successful vertical merger enforcement will remain insurmountable. Salop, in particular, argued that “vertical merger efficiencies are not inevitable”¹⁵⁵ and that merging parties should face a higher burden of demonstrating efficiencies:

across all of antitrust, everywhere, the defendants have the burden to prove restraint-specific efficiencies. That is true in Section 1, that is true in Section 2, and it is true in mergers. I do not see why vertical mergers should be different.¹⁵⁶

But Francine Lafontaine, Margaret Slade, and others noted the considerable risk of overenforcement: “And so the concern is that we would end up blocking a number of potentially beneficial mergers.”¹⁵⁷ Of course, Steve Salop dismissed this concern, speculating, “I think if we revise the merger guidelines, it will not increase false positives; instead it will reduce false negatives.”¹⁵⁸

B. Steve Salop’s invigorated vertical merger enforcement regime & why it doesn’t withstand scrutiny

Steve Salop offered the most comprehensive critique of the current vertical merger enforcement regime. But while Salop is broadly correct that economic learning regarding vertical mergers has progressed since the 1984 guidelines, his arguments in favor of a wholesale reconceptualization of vertical mergers are weakly supported, at best.

Salop argues (and reiterates in a recent paper with several co-authors¹⁵⁹) that, “[b]ased on our review of the economic literature on vertical integration and our experience analyzing vertical mergers,”¹⁶⁰ the agencies should adopt a set of principles that would treat vertical mergers at least as critically as horizontal mergers.¹⁶¹ In addition, Salop would allow enforcers to make their prima facie case based

¹⁵³ *Id.* at 136 (statement of Gene Kimmelman, President and CEO, Public Knowledge).

¹⁵⁴ *Id.* at 108 (statement of Paul Yde, Partner, Freshfields Bruckhaus Deringer).

¹⁵⁵ *Id.* at 21 (statement of Steve Salop, Professor, Georgetown Law).

¹⁵⁶ *Id.* at 124 (statement of Steve Salop, Professor, Georgetown Law).

¹⁵⁷ *Id.* at 75 (statement of Francine Lafontaine, Professor, Michigan-Ross).

¹⁵⁸ *Id.* at 17 (statement of Steve Salop, Professor, Georgetown Law).

¹⁵⁹ Jonathan B. Baker, Nancy L. Rose, Steven C. Salop, and Fiona Scott Morton, *Five Principles for Vertical Merger Enforcement Policy*, Georgetown Law Working Paper (Apr. 5, 2019), available at <https://scholarship.law.georgetown.edu/facpub/2148>.

¹⁶⁰ *Id.* at 4.

¹⁶¹ *See id.* at 4.

only on a “reasonable probability”¹⁶² of harm, and would have the agencies adopt a set of presumptions against vertical mergers in a wide range of circumstances.¹⁶³

I. Salop’s assessment lacks a sound basis in evidence or theory

a. The theory is far from clear-cut

Salop asserts that “things have changed”—that the former general economic consensus regarding vertical mergers and vertical restraints has crumbled. According to Salop:

1. Old Chicago-school economic theory presumptions are not economically correct.
2. Econometric evidence does not support a procompetitive presumption for vertical mergers in oligopoly markets.¹⁶⁴

On the Chicago School single monopoly profit theory Salop is partly right and partly wrong. He is correct that there are theoretical models in which the single monopoly profit theory does not operate as expected and where vertical integration can enable extraction of rents previously unavailable.¹⁶⁵ But he is wrong that the existence of some arithmetic models suggesting vertical merger problems justifies a wholesale rejection of the models that do not. As GAI put it in their comments on this topic:

Taken together, however, the theoretical literature, without empirical grounding, leaves practitioners, agencies, and courts with ambiguous guidance on the welfare consequences of vertical mergers.¹⁶⁶

Moreover, this isn’t really a justification put forth by Chicago adherents anymore, who have generally acknowledged the relevance of the newer literature.¹⁶⁷ But at the same time, it is not the case that the instances where the predictions of Chicago analysis *does* still hold effectively constitute a null set. For example, as Dan O’Brien noted at the hearing:

Vertical and complementary product mergers between firms with market power create downward pressure on price that grows with the extent of market power. In fact, **in**

¹⁶² *Vertical Merger Slides*, *supra* note 150, at 34.

¹⁶³ *Id.* at 32; Baker, et al, *supra* note 159 at 17-18.

¹⁶⁴ *Vertical Merger Slides*, *supra* note 150, at 22. Slide 23 lays out the specific theories with which Salop takes issue.

¹⁶⁵ See, e.g., Michael A. Salinger, *Vertical Mergers and Market Foreclosure*, 103 Q. J. ECON. 345 (1988); Thomas G. Krattenmaker & Steven C. Salop, *Anticompetitive Exclusion: Raising Rivals’ Costs to Achieve Power Over Price*, 96 YALE L.J. 209 (1986).

¹⁶⁶ Comment of the Global Antitrust Institute, Antonin Scalia Law School, George Mason University, The Federal Trade Commission’s Hearings on Competition and Consumer Protection in the 21st Century, Vertical Mergers (Sept. 6, 2018) at 3.

¹⁶⁷ See, e.g., *FTC Hearing #5*, *supra* note 5, at 110 (statement of Paul Yde, Partner, Freshfields Bruckhaus Deringer) (“[The focus on classic Chicago School theory criticized by Steve Salop in my recent paper] was essentially two paragraphs in the entire article and the rest of the article, I spent on the post-Chicago theoretical literature.”).

textbook models, the downward pressure often dominates the foreclosure effects. It often rises faster with market power than the foreclosure effect.

So this does not mean that the foreclosure effect never dominates. But there is a very important point here that no one should miss, and that is that **just as a merger between two substitutes in a concentrated market puts upward pressure on price, a merger between two complements in concentrated markets puts downward pressure on certain prices.**¹⁶⁸

b. The evidence just isn't there

On the empirical evidence Salop is simply wrong that the evidence supports greater condemnation of vertical mergers. While the caveat “in oligopoly markets” helps the claim slightly, at best the evidence from even oligopoly markets is mixed, suggesting nothing like the certainty with which Salop offers his claims, but rather the need for further research before any new policies are based on such ambivalent (at best) evidence.

Further, Salop mischaracterizes the empirical evidence. To begin he dismisses the literally hundreds of econometric studies famously reviewed by Lafontaine and Slade,¹⁶⁹ claiming that they are faulty in various ways and inapposite in others. The reality is that these studies still constitute the overwhelming majority of the evidence we have, and many if not most of the studies are perfectly well done, even by modern standards.¹⁷⁰ The upshot of these studies, as Lafontaine and Slade put it, is that

consistent with the large set of efficiency motives for vertical mergers that we have described so far, the evidence on the consequences of vertical mergers suggests that consumers mostly benefit from mergers that firms undertake voluntarily.¹⁷¹

Francine Lafontaine acknowledged the limitations of some of the evidence during the hearings, but reiterated the relevance of the studies to vertical mergers, and restated the overall conclusions of the literature:

We were clear that some of the early empirical evidence is less than ideal, in terms of data and methods.

¹⁶⁸ *FTC Hearing #5*, *supra* note 5, at 40 (statement of Dan O'Brien, Executive Vice President, Compass Lexecon).

¹⁶⁹ See Francine Lafontaine & Margaret Slade, *Vertical Integration and Firm Boundaries: The Evidence*, 45 J. ECON. LITERATURE 629 (2007). See also James C. Cooper et al., *Vertical Antitrust Policy as a Problem of Inference*, 23 INT'L J. INDUS. ORG. 639 (2005).

¹⁷⁰ It is fair to point out that, indeed, many of the studies look at the effects of vertical restraints rather than vertical mergers per se. But such studies are, of course, instructive given that the theories of harm arising from vertical mergers arise from precisely the sorts of conduct at issue in these studies. If perfect alignment of facts were required, no economic theory or evidence would ever be relevant.

¹⁷¹ Lafontaine & Slade, *supra* note 169, at 663.

But we summarized by saying that the empirical literature reveals consistent evidence of efficiencies associated with the use of vertical restraints (when chosen by market participants) and, similarly, with vertical integration decisions.¹⁷²

Margaret Slade also reiterated this same conclusion earlier this June at the OECD, where she noted that, even in light of further studies, “[t]he empirical evidence leads one to conclude that most vertical mergers are efficient.”¹⁷³ Moreover, as Slade noted, forecasting likely effects from vertical mergers using more modern tools like assessment of vertical upward pricing pressure is a fraught and unreliable endeavor.¹⁷⁴ Of the AT&T/Time Warner merger, in particular (held up by Salop as the sine qua non of proper, modern vertical merger enforcement, the outcome of the case notwithstanding), Slade remarks:

All of my comments are especially applicable to mergers in the technology, media, and telecom sectors. In particular those mergers usually involve many products both up and downstream, some of which might be susceptible to foreclosure and others which might not be. For example, before the contested merger between AT&T and Time Warner, Time Warner owned many content providers . . . each of which provided many products, and AT&T distributed video programming and had millions of direct to consumer relationships as well as high speed networks. Forecasting the effects of such a complex transaction using vGUPPIs would have been extremely hard if not impossible. Furthermore, the US Justice Department focused on the merged firm’s increased bargaining leverage, and vGUPPIs do not incorporate bargaining between up and downstream firms.¹⁷⁵

Reflecting on several of the more recent studies in particular, Salop simply mischaracterizes their findings in claiming that “a lot of studies show harm from vertical mergers. Gilbert and Hastings, Luco and Marshall....”¹⁷⁶ And in his coauthored paper his characterization is even more misleading:

Surveys of earlier economic studies, relied upon by commenters who propose a procompetitive presumption, reference studies of vertical mergers in which the researchers sometimes identified competitive harm and sometimes did not. However, recent empirical work using the most advanced empirical toolkit often finds evidence of anticompetitive effects.¹⁷⁷

The implication is that the balance of evidence taken from the newer studies tips the scales against a presumption of benefits from vertical mergers. Yet the newer literature is no different than the old

¹⁷² *FTC Hearing #5*, *supra* note 5, at 93 (statement of Francine Lafontaine, Professor, Michigan-Ross).

¹⁷³ Margaret E. Slade, *Vertical Integration and Mergers: Empirical Evidence and Evaluation Methods*, Note prepared for Vertical Mergers in the Technology, Media, and Telecom Sectors, OECD Competition Committee Meetings (Jun. 7, 2019), available at <http://www.oecd.org/daf/competition/vertical-mergers-in-the-technology-media-and-telecomsector.htm>.

¹⁷⁴ *Id.* at 10-12.

¹⁷⁵ *Id.* at 11-12.

¹⁷⁶ *FTC Hearing #5*, *supra* note 5, at 28 (statement of Steve Salop, Professor, Georgetown Law).

¹⁷⁷ Baker et al., *supra* note 159, at 11.

in finding overall procompetitive results, intermixed with relatively few seemingly harmful results. As GAI notes in its comments, in which it undertakes a thorough canvassing of the more-recent literature:

In sum, these papers from 2009-2018 continue to support the conclusions from Lafontaine & Slade (2007) and Cooper et al. (2005) that consumers mostly benefit from vertical integration. While vertical integration can certainly foreclose rivals in theory, there is only limited empirical evidence supporting that finding in real markets.¹⁷⁸

Similarly, as Lafontaine noted at the hearings, “[f]rom papers published since, some find negative effects from such mergers, but many find positive consumer welfare from vertical restraints and from vertical mergers.”¹⁷⁹

Below, we briefly review the actual results of several of these studies.

(1) *Luco and Marshall*

For example, Fernando Luco and Guillermo Marshall examine Coca-Cola and PepsiCo acquisitions of some of their downstream bottlers.¹⁸⁰ At the time, Dr Pepper Snapple Group remained independent in selling inputs to bottlers. Bottlers, even those that are vertically integrated with one of their upstream suppliers, purchased inputs from competing upstream suppliers. Based on their statistical analysis, the authors conclude that vertical integration in the carbonated-beverage industry was associated with price increases for Dr Pepper Snapple Group products and price decreases for both Coca-Cola and PepsiCo products bottled by vertically integrated bottlers. However, the market share of the products associated with higher prices was no more than two percent. Thus the authors conclude: “vertical integration did not have a significant effect on quantity-weighted prices when considering the full set of products.” These conclusions are at odds with Salop’s characterization of Luco and Marshall as one of the studies that “show[s] harm.” As Francine Lafontaine noted at the hearing:

And what they found was that the price of Coke and Pepsi in each of these went down, again, as you pointed out, and then the cost to some of the rivals went up, but, **in total, consumers were better off given who was consuming how much of what.**¹⁸¹

¹⁷⁸ GAI Comments, *supra* note 2, at 8.

¹⁷⁹ *Vertical Merger Slides*, *supra* note 150, at 94.

¹⁸⁰ Fernando Luco and Guillermo Marshall, *Vertical Integration With Multiproduct Firms: When Eliminating Double Marginalization May Hurt Consumers* (Jan. 15, 2018), available at <https://ssrn.com/abstract=3110038>.

¹⁸¹ *FTC Hearing #5*, *supra* note 5, at 88 (statement of Francine Lafontaine, Professor of Economics, University of Michigan) (emphasis added).

(2) *Hastings and Gilbert*

Justine Hastings and Richard Gilbert conclude that a vertically integrated refiner charged higher wholesale prices in cities where it competed more with independent gas stations.¹⁸² Christopher Taylor, Nicolas Kreisle, and Paul Zimmerman¹⁸³ is a follow-up to Hastings¹⁸⁴ review of retail gasoline prices following the 1997 acquisition of independent gasoline retailer, Thrifty Oil Company, by vertically integrated refiner/retailer, ARCO. Taylor et al. estimate the merger was associated with price increase of 0.4 to 1.0 cents per gallon—about one percent or less—and is economically insignificant. Hastings¹⁸⁵ response to Taylor et al. highlights the challenges of evaluating vertical mergers with incomplete data or using different sets of data. The differences in estimated effects indicates that even seemingly similar data can yield wildly different results. Taylor et al. note, “While we used a different dataset, we have found no reason that would explain this discrepancy.” Because of the wide range of reported results and their sensitivity to the data used, we should exercise caution in inferring any general conclusions from this line of research.

Other commonly cited studies for the proposition that the more-recent evidence on vertical mergers shows a greater likelihood of harm fare no better.

(3) *Crawford, et al.*

Consider the recent study by Gregory Crawford, Robin Lee, Michael Whinston, and Ali Yurukoglu, which looks at vertical mergers between cable MVPDs and local sports networks (RSNs). The findings of the paper are sometimes characterized as “mixed.” And in a purely semantic sense that is true. But the overall results overwhelmingly find procompetitive consumer welfare effects:

In counterfactual simulations that enforce program access rules, we find that vertical integration leads to significant gains in both consumer and aggregate welfare... Averaging results across channels, we find that integration of a single RSN with effective program access rules in place would reduce average cable prices by 1.2% (\$0.67) per subscriber per month in markets served by the RSN, and increase overall carriage of the RSN by 9.4%. **Combined, these effects would yield, on average, a \$0.43 increase in total welfare per household from all television services, representing approximately 17% of the average consumer willingness to pay for a single RSN. We also predict that consumer welfare would increase.**

¹⁸² Justine S. Hastings and Richard J. Gilbert, *Market Power, Vertical Integration, and the Wholesale Price of Gasoline*, 33(4) J. INDUS. ECON. 469 (2005).

¹⁸³ Christopher T. Taylor, Nicolas M. Kreisle, and Paul R. Zimmerman, *Vertical Relationships and Competition in Retail Gasoline Markets: Empirical Evidence from Contract Changes in Southern California: Comment*, 100(3) AM. ECON. REV. 1269 (2010).

¹⁸⁴ Justine Hastings, *Vertical Relationships and Competition in Retail Gasoline Markets: Empirical Evidence from Contract Changes in Southern California*, 94(1): AM. ECON. REV., 317 (2004).

¹⁸⁵ Justine Hastings, *Vertical Relationships and Competition in Retail Gasoline Markets: Empirical Evidence from Contract Changes in Southern California: Reply*, 100(3) AM. ECON. REV. , 1227 (2010).

* * *

On net, we find that the overall effect of vertical integration in the absence of effective program access rules—allowing for both efficiency and foreclosure incentives—is to increase consumer and total welfare on average, resulting in (statistically significant) gains of approximately \$0.38–0.39 per household per month, representing **15–16% of the average consumer willingness to pay for an RSN...**¹⁸⁶

It is true that their results are sensitive to the presence of program access rules, in the absence of which the consumer welfare effects remain positive (as noted above), but are slightly smaller:

Our results highlight the importance of program access rules in determining the effects of vertical integration.

* * *

When program access rules are instead not enforced, we find that—at the estimated lower bound for our “rival foreclosure” parameter—rival distributors would be denied access to an integrated RSN in 4 out of 26 cases; for the other 22 cases, the rival distributors continue to have access but pay on average 18% higher affiliate fees than if program access rules were effectively enforced. Together, failure to enforce program access rules leads to a reduction in both consumer and total welfare of 1–2% of the average consumer willingness to pay for a single RSN.¹⁸⁷

Nevertheless, the implications of this (exceptionally well-designed and carefully executed) study are clear. Indeed, here is how Harvard economist, Robin Lee, one of the study’s authors, characterized the results at one of the hearings:

[O]ur key findings are that, on average, across channels and simulations, there is a net consumer welfare gain from integration. Don’t get me wrong, there are significant foreclosure effects, and rival distributors are harmed, **but these negative effects are often-times offset by sizeable efficiency gains.** Of course, this is an average. It masks considerable heterogeneity. When complete exclusion occurs, which happens both in our simulations and in the data some of the times, consumer welfare is actually harmed.¹⁸⁸

Two things are particularly notable about the findings of this paper. First, the paper properly offers the caveat—completely missing from Salop’s and others’ overly-confident assertions regarding vertical merger welfare effects—that its results do not include possible dynamic effects:

¹⁸⁶ Gregory S. Crawford, Robin S. Lee, Michael D. Whinston, and Ali Yurukoglu, *The Welfare Effects of Vertical Integration in Multichannel Television Markets*, 86 *ECONOMICA* 891, 893-94 (2018) (emphasis added).

¹⁸⁷ *Id.*

¹⁸⁸ *FTC Hearing #3 Day 3, infra* note 226, at 101 (statement of Robin Lee, Professor, Harvard University) (emphasis added).

Despite the richness of our empirical model, the effects that we document are only partial. Most importantly, our model and analysis do not allow vertical integration to influence investments made by RSNs and MVPDs (both those that integrate and their rivals). As emphasized in the literature on investment effects of vertical integration (Bolton and Whinston (1991), Hart (1995)), the direction of these effects on consumer and aggregate surplus are ambiguous a priori (and remain an important topic for future research).¹⁸⁹

Any conclusions regarding the consumer welfare effects from vertical integration is unreliable as a policy guide if it does not consider, for example, the corresponding investment effects arising from the new corporate structure. Oftentimes, this is precisely *why* such transactions take place: not (solely) to avoid double marginalization and thus to offer outputs at lower prices, but to better coordinate R&D at different levels of production in order to improve the return on (and increase the level of) investments (for example). We return to this below in section 3.III.D, below.

Second, although the results hold overall, it is clear that the presence of statutory program access rules affects the magnitude of the positive effects from integration. This highlights the importance of evaluating the broad institutional environment for assessing competitive effects and the difficulty of drafting broadly applicable guidelines. Every situation is different (not only because of differing legal environments, of course), and the reasons and justifications for, and implementations of, vertical integration are complex and widely divergent. In short, the vast heterogeneity of circumstances even within a single industry ensure that predicting the welfare effects of a merger based on possibility theorems is a fool's errand.

(1) Suzuki

Relatedly, Ayako Suzuki reviews the vertical merger between Time Warner and Turner Broadcasting in programming and distribution in the cable television market.¹⁹⁰ The paper examined the merger's effects on foreclosure, per-channel prices, basic bundle product mix, and basic bundle penetration.

The authors find foreclosure following the merger in Time Warner markets for those rival channels that are not integrated with any cable distributors. After the merger, two independent channels, the Disney Channel and the Fox News Channel, were foreclosed from Time Warner markets. The paper notes that prior to the merger, two Turner channels (TBS and TCM) were foreclosed by Time Warner, but the foreclosure was ended after the merger: "Turner suffered from the low market shares of TBS and TCM in Time Warner markets, therefore it integrated itself with Time Warner in order to recover their market shares."

Suzuki concludes that per-channel price decreased more in Time Warner markets than they would have in the absence of the merger. The paper suggests transaction cost efficiencies lowered the

¹⁸⁹ *Id.* at 894.

¹⁹⁰ Ayako Suzuki, *Market Foreclosure and Vertical Merger: A Case Study of the Vertical Merger between Turner Broadcasting and Time Warner*, 27 INT'L J. OF INDUS. ORG. 532 (2009).

implicit cost to the distributor of the channels, causing input prices to shift downward, resulting in reduced cable price to consumers.

Crawford et al. describe the limitations of Suzuki’s approach in that it cannot separate efficiency from foreclosure incentives and, more importantly, cannot provide estimates of overall welfare effects. Crawford et al. also note that reduced carriage of rival, non-integrated channels could reflect either foreclosure effects or the effects of efficient increases in carriage of integrated channels when channels are substitutes.

What we do know is that, as an empirical matter, the clear weight of the evidence supports an overall presumption that such mergers are generally beneficial for consumers.

2. *The claimed equivalence between vertical and horizontal mergers is incorrect*

Salop argues that enforcers and courts should treat horizontal and vertical mergers in exactly the same manner by applying the same presumptions and burden shifting approach.¹⁹¹ But despite his arguments, the two are not the same, and any enforcement priorities or vertical merger guidelines should not adopt Salop’s false equivalence.

In contrast to Salop’s claims equating vertical and horizontal mergers, Bruce Hoffman lays out the extensive and fundamental differences between them in a compelling 2018 talk (which was frequently referenced at the hearing):¹⁹²

Horizontal mergers combine competitors. **By definition, a merger of competitors directly and necessarily reduces competition by eliminating a substitute.** There is a strong theoretical basis for horizontal enforcement because economic models predict at least nominal potential for anticompetitive effects due to elimination of horizontal competition between substitutes.

In contrast, vertical mergers do not combine substitutes, and in fact often involve complements, such as a product plus distribution or a critical input to a complex device. **Where horizontal mergers reduce competition on their face—though that reduction could be minimal or more than offset by benefits—vertical mergers do not.** Instead, to determine whether a vertical merger threatens competitive harm requires predictions about the post-merger conduct of the merged firm where theoretical predictions are ambiguous. As Professor Steve Salop has catalogued, and as I discuss in more detail in a few minutes, **there are plenty of theories of anticompetitive harm from vertical mergers.**

¹⁹¹ *Vertical Merger Slides*, *supra* note 150, at 14 (“Problematic vertical mergers are ‘vertical,’ but the harms are ‘horizontal.’ A stronger overarching procompetitive presumption for vertical mergers does not make sense in oligopoly markets where vertical merger enforcement would be focused (same as horizontal mergers).”).

¹⁹² D. Bruce Hoffman, *Vertical Merger Enforcement at the FTC*, Credit Suisse 2018 Washington Perspectives Conference, Washington, D.C., January 10, 2018, https://www.ftc.gov/system/files/documents/public_statements/1304213/hoffman_vertical_merger_speech_final.pdf.

But the problem is that those theories don't generally predict harm from vertical mergers; they simply show that harm is possible under certain conditions.

Moreover, while efficiencies are often important in horizontal mergers, they are much more intrinsic to a vertical transaction due to the cost-reducing effects of most vertical mergers, at least in the abstract. Due to the elimination of double-marginalization and the resulting downward pressure on prices, vertical mergers come with a more built-in likelihood of improving competition than horizontal mergers.

* * *

Unfortunately, compared to horizontal mergers, there are also fewer quantitative theoretical models that we can use to attempt to predict outcomes in vertical scenarios, and the models that exist have a far shorter track record than those used in assessing horizontal mergers. As a result, we mainly rely on standard sources of evidence, that is, documents and witness testimony. However, those sources of evidence, in addition to being highly idiosyncratic for each transaction, also tend to be non-public, and thus difficult for outside observers to assess when attempting to predict or critique our enforcement decisions.¹⁹³

Salop, on the other hand, asserts that because the eventual effect of a vertical merger is a “horizontal” one, the two types of mergers should be treated precisely the same way:

So, here, the upstream merging firm is supplying, in the premerger world, the downstream rival. So since it supports the downstream rival, helps the downstream rival keep its costs low... this competition implies that there is indirect competition at that level.

And if there is a merger and the upstream merging firm raises the price to the downstream merging firm or cuts them off, that indirect competition is reduced or eliminated. And that is the sense in which a vertical merger purely unilaterally can reduce so-called horizontal competition.¹⁹⁴

* * *

In the pre-merger market, the upstream merging firm that supplies a downstream firm is inherently an “indirect competitor” of the future downstream merging firm. That indirect competition is eliminated by merger. **This unilateral effect is exactly parallel to the unilateral effect from a horizontal merger.**¹⁹⁵

But the two are not the same, of course. To the extent that removal of vertical *indirect* or *potential* competitor is deemed analogous to horizontal competition, any analysis of that situation would have to account for the difference in effect between removing an existing, direct competitor and an

¹⁹³ *Id.* at 2-3.

¹⁹⁴ *FTC Hearing #5*, *supra* note 5, at 22 (Steve Salop, Professor, Georgetown Law).

¹⁹⁵ *Vertical Merger Slides*, *supra* note 150, at 15.

indirect or potential one. Indirect competition is not the same as direct competition. Even in Salop's telling, the mechanism by which it operates requires that the firm have market power and that, post-merger, the firm raises costs to the downstream firm's horizontal rivals. While this is possible, of course, it is not guaranteed, and, at the very least, would have to be conditioned by the likelihood of it occurring. A horizontal competitor, on the other hand, operates as an immediate and present constraint, the effect of the removal of which isn't a probabilistic matter. The size of the effect may be (and often is) small. But the effect is automatic.

Similarly, to the extent that, pre-merger, an upstream firm could actually merge with a rival instead of the target firm, or could facilitate entry by a new downstream rival, operates as a constraint on the merging firm. And, indeed, potential competitors are important constraints on existing markets. But by definition they do not generally offer the *same* degree of constraint. Any such analysis would have to incorporate the *probability* of entry. High-quality analysis of the effects of potential competition are few and far between. But, according to several studies, a potential competitor may have on the order of *one-quarter* to two percent the effect on competition as an actual competitor.¹⁹⁶

The net effect of all of this, as Dan O'Brien pointed out at the hearing, is that a vertical merger of complements is *not* the same as a horizontal merger of substitutes:

The theoretical literature in the area shows that the effects of vertical mergers and other combinations of complements depend on many, many details, and that makes it hard to identify robust principles as we have kind of seen.

The most well-established principle is that combining complements internalizes externalities in ways that go in the opposite direction of combining substitutes. So if I were to write guidelines . . . I would rely on foundational principles. **And the most important point to emphasize is that our usual notion that market power makes things worse does not apply in the case of vertical analysis. It is really a case-by-case analysis.**¹⁹⁷

While the loss of competition from a horizontal merger is automatic and unavoidable as a consequence of the merger, any efficiency gains from a horizontal merger are not automatic and must be established. On the other hand, the realization of vertical merger efficiencies resulting from the elimination of double marginalization at least (there are other efficiencies that may not be automatic) is automatic. As Dan O'Brien put it:

If two [horizontally] merging firms compete, then we say, all right, when you compete, you are going to act as one and you are going to stop the competition between the two

¹⁹⁶ See John Kwoka, *Mergers That Eliminate Potential Competition* (Dec. 16, 2009), in RESEARCH HANDBOOK ON THE ECONOMICS OF ANTITRUST LAWS (Einer Elhauge, ed.) ("All twelve studies [of airline markets] find that potential competition results in lower prices by incumbent carriers, in ten cases by statistically significant amounts. Except as noted below, the amounts range between one quarter of one percent to about two percent, and in all cases are less than the amount of the price decline from one additional actual competitor, specifically, from one eighth to one third as large.").

¹⁹⁷ *FTC Hearing #5*, *supra* note 5, at 47 (statement of Dan O'Brien, Executive Vice President, Compass Lexecon).

merging brands. If the merging parties said, oh, no, do not worry, because we are going to operate the two brands separately and they are going to continue to compete even though they are the same company, the agencies and the courts would say, no. The agencies would say, that is silly, and the courts would mention *Copperweld*.

What about vertical?... [W]e would say, look, you are going to operate the company as a single entity to maximize overall profits, and that inherently means that we get this elimination of double marginalization. Okay? That is automatic.... So that is an efficiency which is different than other types of efficiencies that might be claimed.¹⁹⁸

All else equal, if you remove a horizontal competitor the effect is automatic: less competition. That isn't necessarily bad, and it may be compensated for, and it may also enable innovation or more competition or other results that benefit consumers. But in the first instance, former head to head competitors that merge are no longer competing.

With vertical mergers, the effect is not to *automatically* reduce competition (indirect, potential, or otherwise). The claim is that a vertically integrated firm might choose to hurt unaffiliated competitors downstream. But nothing is automatic. Assessing the competitive effect means incorporating an added layer of uncertainty and distance between cause and effect. It can't be any other way.

In response, Baker, et al. say:

But the claim that vertical mergers are inherently unlikely to raise horizontal concerns fails to recognize that all theories of harm from vertical mergers posit a horizontal interaction that is the ultimate source of harm. Vertical mergers create an inherent exclusionary *incentive* as well as the *potential* for coordinated effects similar to those that occur in horizontal mergers.¹⁹⁹

But this fails to tell us anything. It is utterly uncontroversial (and far from “[un]recognized”) that “all theories of harm from vertical mergers posit a horizontal interaction that is the ultimate source of harm.” All this says is that there could be harm of the sort horizontal mergers might cause. But it does not acknowledge that the likelihood and extent of that harm are different in the vertical and horizontal contexts. Moreover, it does not note that the *mechanism* by which harm might arise is different. All in all, the probability of that outcome is lower in the case of a vertical merger where it is dependent on an additional step that may or may not arrive and that may or may not cause harm.

¹⁹⁸ *Id.* at 61-62.

¹⁹⁹ Baker, et al., *supra* note 159, at 8 (emphasis added).

3. *The AT&T/Time Warner merger enforcement does not support the inclusion of Salop's preferred, heightened process in the vertical merger guidelines*

Salop points to the DOJ's case in its challenge of the AT&T/Time Warner merger, and even Judge Leon's overall approach to the case, as a model for how vertical mergers should be assessed—claiming, in particular, that the approach is the same as that applied in the horizontal context:

I think we should basically be following the three-step rule of reason that is established in *Baker-Hughes* and *Heinz* for horizontal mergers, we should port that over to vertical mergers, as well.

That is the way Judge Leon wrote it in AT&T-Time Warner; that is the way DOJ argued it in AT&T-Time Warner. And I think an important point here is that the standard of proof builds in a greater concern with false negatives than with false positives. That is what the Clayton Act is all about, incipency in the Clayton Act. So that is another reason why... vertical merger law should follow horizontal merger law, and I personally hope or expect that the D.C. Circuit is going to come out that way in AT&T-Time Warner.²⁰⁰

There is, in fact, no objection to the claim that evaluation of vertical mergers should follow a familiar rule of reason approach. But, contra Salop, this does not mean that the application of presumptions or the extent and quality of sufficient evidence should be identical in every case. The rule of reason is perfectly consistent with the adoption of presumptions of legality where we know with confidence that the asserted theories of harm are unlikely to pan out—this is just the inverse of the adoption of the per se standard.²⁰¹

Most importantly, on his own terms—desire for vertical mergers to be evaluated under the standard rule of reason—there is no need to change the non-horizontal merger guidelines. They do not in their current form apply any sort of preference for vertical mergers, nor do they recommend adoption of a different procedure for vertical merger analysis.

Salop's main concern is with the specific operation of the presumptions and burden shifting that are a constituent part of a rule of reason analysis. And he wants to change the guidelines on the basis of one case: *DOJ v. AT&T*.

Yet the notion that *AT&T/Time Warner* shows the government pursuing a rule of reason case in the vertical context exactly as it would in a horizontal is manifestly incorrect. Any changes to the guidelines based on the DOJ's case and the court's process in *AT&T/Time Warner* would actually move them *away* from where Salop (and others) want them to go.

In fact, as Salop claims the government does and should *not* do with vertical mergers, the government conceded efficiencies. It began with the presumption that the merger was procompetitive, and then

²⁰⁰ *FTC Hearing #5*, *supra* note 5, at 30-31 (statement of Steve Salop, Professor, Georgetown Law).

²⁰¹ See generally, Alan J. Meese, *Price Theory, Competition and the Rule of Reason*, 2003 U. ILL. L. REV. 77 (2003).

offered what amounts to its rebuttal in making its initial case: inefficiencies arguments. Contra Salop, clearly the DOJ did this because it is exactly how it (and the courts) approach vertical merger cases.

The DC Circuit in reviewing Judge Leon’s decision both recognized the court’s acceptance of presumed efficiencies and ruled specifically that this was not error:

[T]he district court viewed the outcome of the litigation to “turn[] on whether, notwithstanding the proposed merger’s conceded procompetitive effects, the [g]overnment has met its burden of establishing, through ‘case-specific evidence,’ that the merger of AT&T and Time Warner, at this time and in this remarkably dynamic industry, is likely to substantially lessen competition in the manner it predicts.”

Several amici urge this court to speak definitively on the proper legal standard for evaluating vertical mergers.... But there is no need to opine on the proper legal standards for evaluating vertical mergers because, on appeal, neither party challenges the legal standards the district court applied, and no error is apparent in the district court’s choices.²⁰²

Neither Judge Leon nor the DOJ nor even the DC Circuit adopted Salop’s preferred approach to vertical mergers. Indeed, here’s what the D.C. Circuit said:

[T]he district court found that the quantitative model as presented through Professor Shapiro’s opinion testimony did not provide an adequate basis to conclude that the merger will lead to “any” raised costs for distributors or consumers, “much less consumer harms that outweigh the conceded \$350 million in annual cost savings to AT&T’s customers.”

* * *

It is true that the district court misstated that the government had not proven that any price increases would “outweigh the conceded \$350 million in annual cost saving to AT&T’s customers.” The \$352 million [] was not cost savings to consumers but to AT&T. **But the district court did not weigh increased prices for consumers against cost savings for consumers, and instead found that the government had not shown at the first level that the merger was likely to lead to any price increases for consumers because of the failure to show that costs for rival MVPDs would increase as a result of Turner Broadcasting’s increased leverage in affiliate negotiations after the merger.** Counsel for the government and AT&T agree the error regarding the consumer savings value alone would not require remand because **the district court’s opinion was not based on balancing any price increases against cost savings to consumers.** Consequently, because the government failed to meet its burden of proof under its increased leverage theory at the first level, the error regarding cost savings was harmless error.²⁰³

²⁰² United States v. AT&T, 916 F.3d 1029, 1037 (D.C. Cir. 2019) [hereinafter “AT&T/TWX”].

²⁰³ *Id.* at 1046-47 (emphasis added).

The process that was blessed by the D.C. Circuit was one in which the district court first assumed consumer welfare benefits, and then looked to the government to make out a case that corresponding inefficiencies undermined them. But the government could not make out the case that the inefficiencies were cognizable, and the presumption of benefit carried the day.

In this sense, this is not the standard rule of reason approach applied to horizontal mergers. Here the government conceded—and the court accepted—precisely what the defendants would have had to prove following a *prima facie* showing under a traditional balancing test.

This is not a minor thing. True, the court did not stop the trial then and declare judgment for the parties because of the existence of procompetitive benefits; this was not a finding of *per se* legality. But, as the DC Circuit noted above, nor did the court actually weigh benefits against costs; rather, it *assumed* benefits and then, without really doing a balancing, determined that the government hadn't rebutted and couldn't rebut the presumption of benefit. At the district court level this is a thorough refutation of Salop's characterization of Judge Leon's decision. That it was confirmed without objection from the parties or the D.C. Circuit is an abject rejection of his claims.

Salop claims that a “proper” burden-shifting approach to vertical mergers—of the sort he would like to see embodied in new merger guidelines—would require the following of defendants:

Defendants may rebut a *prima facie* case only by showing that competitive harm is not “reasonably probable.”

- Entry must be timely, likely, and sufficient to prevent competitive harm.
- Claimed efficiencies (which arguably cannot ever save a merger) must withstand “rigorous analysis.”
 - Defendants bear the burden of their efficiencies defense.
 - Efficiencies must be reasonably verifiable, merger-specific, and likely to benefit consumers in the affected markets, and must offset the harms of the merger.
 - The Court cannot credit Defendants' purported efficiencies.
 - A unilateral behavioral promise, such as an arbitration offer, cannot rebut a *prima facie* case.²⁰⁴

In point of fact, the court in *AT&T/Time Warner* rejected virtually all of these:

- It did not require “timely entry” because it adopted the position that the future was uncertain.

²⁰⁴ *Vertical Merger Slides*, *supra* note 150, at 32 (emphasis in original).

- It did not demand that the defendants bear the burden of their efficiencies defense; rather, it simply credited the efficiencies conceded by the DOJ.
- It did not weight the benefits to consumers versus harms to consumers, as the D.C. Circuit pointed out.
- And, most overtly, it found that, indeed, the companies' "unilateral behavioral promise, such as an arbitration offer," rebutted the government's prima facie case.

On this last point, the D.C. Circuit validated Judge Leon's reference to the consent order signed by the government in Comcast/NBCU, and put its own stamp of approval on the role of unilateral arbitration offers to alter the analysis:

[In Comcast/NBCU] the government had recognized, "especially in vertical mergers, that conduct remedies,' such as the ones proposed [in the Comcast case], 'can be a very useful tool to address the competitive problems while preserving competition and allowing efficiencies' that 'may result from the transaction.'" Like there, the district court concluded the Turner arbitration agreements would have "real-world effect."

* * *

Consequently, the government's challenges to the district court's treatment of its economic theories becomes largely irrelevant, at least during the seven-year period. [A]nd Professor Shapiro acknowledged that taking the arbitration agreements into account would require "a completely different model."

* * *

Neither Professor Shapiro's opinion testimony nor his quantitative model considered the effect of the post-litigation offer of arbitration agreements, something he acknowledged would require a new model. And the video programming and distribution industry had experienced "ever-increasing competitiveness" in recent years. Taken together, the government's clear-error contention therefore fails.²⁰⁵

The D.C. Circuit, like the lower court, found the unilateral promise of arbitration to be fatal to the government's case.

Perhaps most importantly, Judge Leon continually found (and the D.C. Circuit fully supported) that changing market conditions rendered the government's contentions unreliable and arguably inapplicable. This is not a "neutral" presumption, nor is it the sort of remarkably anti-merger presumption proposed in Salop's slides. Instead, it is a non-merger-specific acknowledgment that puts a thumb on the scale in favor of private actors on the assumption that such conduct is presumptively beneficial or impossible to refute because information to the contrary is unreliable.

²⁰⁵AT&T/TWX, 916 F.3d at 1046.

This is a far cry from what Salop suggests as a model for vertical merger guidelines that are supposed to reflect current practice on the basis of, essentially, a single case. If that’s the proper basis for evaluating the guidelines, then that single case demonstrates nothing so much as that the guidelines should strongly support a presumption of efficiencies from vertical mergers, and a heightened burden for plaintiffs.

Notably, this approach—the one that acknowledges the unreliability of future predictions—is utterly at odds with Salop’s preferred approach for the guidelines that would impose a *lessened* burden of proof on the government because the Clayton Act is an incipency statute:

And I think an important point here is that the standard of proof builds in a greater concern with false negatives than with false positives. That is what the Clayton Act is all about, incipency in the Clayton Act.

* * *

[The DOJ] buy[s] into the idea of incipency. They say the relevant standard should be reasonable probability.²⁰⁶

“Reasonable probability” as my proposed evidentiary standard: [] “Incipency” concern suggests a less demanding standard.²⁰⁷

In fact, it seems clear (and correct) that the error cost analysis would impose a *higher* burden on predictions of future outcomes precisely because they are uncertain. This is consistent with a general presumption in favor of such mergers, not against them. Of course, this does happen in horizontal merger cases, as well; there is, in fact, nothing vertical-specific about the skeptical treatment of incipency claims. In this regard, it is not only inappropriate for vertical merger guidelines to incorporate a lighter burden, but indeed the *horizontal* guidelines should do so, as well.

4. *The reliance on a contractual baseline against which to judge vertical mergers is misplaced*

A fundamental basis for Salop’s claims regarding heightened scrutiny of vertical mergers is his contention that virtually anything—any efficiencies—that can be realized by merger can typically be done by contract, and that prospective merging parties should have to overcome this presumption with considerable evidence before they are permitted to merge.

[T]here is vertical integration by contract. That is what we learned from Ronald Coase, 1937. If there is vertical integration by contract... [that] meant you could get all the

²⁰⁶ *Vertical Merger Slides*, *supra* note 150, at 34.

²⁰⁷ *FTC Hearing #5*, *supra* note 5, at 32-33 (statement of Steve Salop, Professor, Georgetown Law).

efficiencies from vertical integration with a contract. You did not actually need the vertical integration.²⁰⁸

The point was echoed by Carl Shapiro during the hearing, as well.

So, the key question then is, is it merger-specific...? So that is where I think guidelines and practice can evolve... Other people in this industry solve this through contract, two-part tariffs or other type of nonlinear pricing. They find a way to solve this inefficiency through contract, so you do not need a merger, so it is not going to count. In other words, you are going to achieve it from the merger, sure. That is a gimme. But you could have achieved it without the merger.²⁰⁹

But while there is truth to the assertion that Coase (and Williamson, and Klein) discussed the possibility of functional equivalence between contract and integration, the broad assertions made here that would purportedly justify adopting a heightened standard of proof for merger efficiencies is not justified. In particular, the fact that something can sometimes be done by contract does not mean that it is anticompetitive to *not* do it by contract. In fact, the Coase/Williamson/Klein framework here is, *a priori*, agnostic between the two.

Salop would impose a heightened burden on vertically merging parties to demonstrate efficiencies in the following fashion and for the following reasons:

- Efficiencies are not inevitable. Many firms are not vertically integrated, despite imperfect competition at both levels.
- Coase’s door swings both ways: **Efficiencies often can be achieved by vertical contracts, without the potential anticompetitive harms from merger.**
* * *
- **[Elimination of double marginalization] might be achieved with non-linear prices or quantity-forcing contracts.**
* * *
- **Failure to achieve efficiencies pre-merger does not prove merger-specificity**
 - Failure could suggest that they also would not be achieved post-merger.
- **A general claim of “bargaining frictions” is not sufficient evidence of merger-specificity.**
 - **Merging parties must provide rigorous explanation, identifying specific pre-merger impediments that are not themselves anticompetitive.**
 - **They must explain why impediments solved by the merger.**²¹⁰

²⁰⁸ *Id.* at 93 (statement of Steve Salop, Professor, Georgetown Law).

²⁰⁹ *FTC Hearing #5, supra* note 5, at 63 (statement of Carl Shapiro, Professor, University of California-Berkeley).

²¹⁰ *Vertical Merger Slides, supra* note 150, at 24 (emphasis added).

First, the claim that parties can generate *equal* efficiency from contract as from integration is pure speculation. The very existence of mergers, however, demonstrate that this is not always the case. Even where both approaches would generate *some* efficiency, there is no theory or evidence to say they are necessarily equivalent. As a result, the mere fact that parties might have shunned coordination by contract or that other parties chose to do so does not in any way demonstrate that a merger couldn't generate more efficiencies or wouldn't entail less transaction cost.

Salop is correct that, where contracts are observed, they are likely more efficient than merger. But, by the same token, it is also true that where *mergers* are observed they are likely more efficient than contracts. Indeed, the entire reason for integration is efficiency relative to what could be done by contract—this is the make-or-buy decision. A firm that decides to buy its own warehouse has determined that doing so is more efficient than renting warehouse space. Some of these efficiencies can be measured and quantified (e.g., carrying costs of ownership vs. the cost of rent), but many efficiencies cannot be easily measured or quantified (e.g., layout of the facility or site security). Under Salop's reasoning, the benefits of owning a warehouse can be achieved “very often” by renting warehouse space. But the fact that many firms using warehouses own some space and rent some space indicates the make or buy decision is often unique to each firm's idiosyncratic situation.

And there is no reason to presume in any given situation that the outcome from contracting would be the same as from merging—especially in the context of a bargaining leverage theory of harm. The two are, quite simply, different bargaining environments, each with a different risk allocation, different accounting treatment, different tax consequences, etc. Even if the parties accomplished “identical” outcomes, they would not, in fact, be identical.

Relatedly, it may be that the parties don't know what they don't know to such an extent that a contract would be too costly because it was too incomplete. But incomplete contracts and ambiguous control and ownership rights aren't an issue on an ongoing basis with a merger. There is no basis for assuming that the structure of a merger versus a contract would be identical. In the same way, there is no basis for assuming that the knowledge transfer that would result from a merger would be the same as that which would result from a contract—and in ways that the parties could even specify or reliably calculate in advance. Knowing that the prospect for knowledge “synergies” would be higher with a merger than a contract might be sufficient to induce the merger outcome. But asked to provide evidence that the parties could not engage in the same conduct via contract, the parties would be unable to do so. The consequence, then, would be the loss of potential gains from closer integration.

Second, the cavalier assumption that parties would be able—legally—to enter into an analogous contract in lieu of a merger is a bit rich, given that it would likely be *precisely* the form of contract (foreclosing downstream or upstream access) that is alleged to create problems with the merger in the first place.

So continuing on this notion that efficiencies are not merger-specific, I want to reemphasize that there are also rules against vertical restraints in antitrust laws, and so to say that the firms could achieve the mergers outcome by using vertical restraints is kind of putting them in a circular motion where we are telling them you cannot merge because you could do it by contract, and then we say, but these contract terms are not acceptable.²¹¹

Thus, legal risk is one of the reasons why a merger might be preferable to a contract. And the relevant markets here are oligopoly markets. It seems quite plausible that an exclusive agreement between two oligopolists would not simply be tolerated.

Third, and most important, the assumptions underlying this contention simply ignore the real world. Consider that one reason some takeovers are hostile is because incumbent managers don't want to merge, and often believe that they are running a company as well as it can be run—that a change of corporate control would not improve efficiency. The same presumptions may also underlie refusals to contract and, even more likely, may explain why, to the other firm, a contract would be ineffective.

But, while there is no way to contract without bilateral agreement, there is a corporate control mechanism to force a transaction. In this institutional environment a merger may be easier to realize than a contract. In this case, again, the assumption that contract should be the relevant baseline and the preferred mechanism for coordination is misplaced—even if other firms in the industry are successfully accomplishing the same thing via contract.

Meanwhile, what if the reason for failure to contract, or the reason to prefer merger has nothing to do with efficiency? What if there were no anticompetitive aim but there was tax advantage?²¹² What if one of the parties just wanted a larger firm in order to satisfy the CEO's ego? Etc. That these are not cognizable efficiencies under antitrust law is clear. But the adoption of a presumption of equivalence between contract and merger would entail their incorporation into antitrust law in much the same way, except in the negative. In other words, if the assumption is that contract and merger are equally efficient unless proven otherwise, but the law adopts a presumption against merger that can be rebutted only with highly burdensome evidence of net efficiency gain, this effectively deputizes antitrust law to enforce a preconceived notion of “merger appropriateness” that does not turn on efficiencies.

It is true, of course, that if past practice and economic theory and evidence clearly demonstrate that vertical mergers cause significantly more harm than exclusionary contracts, regardless of the motivation or even the ancillary benefits each might confer, there might be a basis for adopting such a presumption. But we simply do not have that knowledge across the board, nor even in most specific

²¹¹ *FTC Hearing #5*, *supra* note 5, at 73 (statement of Francine Lafontaine, Professor, Michigan-Ross).

²¹² See, e.g., Frederick R. Warren-Boulton, *Vertical Control of Markets: Business and Labor Practices*, Ballinger Pub. Co. (1978) (“Both vertical integration and tying arrangements have been used to avoid or reduce certain categories of taxation. The clearest example is a turnover tax, which is levied on all sales rather than on value-added or just final sales”).

cases. The preference for contract over merger is rooted in faulty assumptions about the consequences of each (and perfectly appropriate assumptions about the relative costs of remediating a false negative in each case—but these are contingent on the risk of a false negative in the first place, and they are most readily dealt with by behavioral remedies, which effectively put each type of transaction on the same footing (see below at Section 3.I.C)).

Finally, the assumption of equivalence is, indeed, faulty. As Margaret Slade discussed at the hearing:

So then why do firms integrate? Well, we have four Nobel Prize winners that have studied this question. On the other hand, they have not looked at oligopolies, which is the interest here. Mostly, it has either been perfect competition or monopoly. Nevertheless, **they focus on efficiencies like mitigating contract costs, facilitating specific investments, providing efficient incentives for effort or investment, and risk sharing.**

Now, **these, of course, are not related to product flows and pricing, but they are related to the transfer of intangibles,** which unfortunately are very hard to estimate.

* * *

Efficiencies, on the other hand, there is a huge literature, but most of the markets that are considered are not oligopolies. They might be fast food, hotels, retail, trucking. **The results are overwhelming support for the theories of organizational economics, except for risk sharing.**²¹³

Further, in a note attached to her presentation slides, Francine Lafontaine points out (following work by Williamson; Klein, Crawford & Alchian; etc.) that transaction costs arising from asset specificity are a common source of the decision to vertically integrate:

“[T]ransaction costs” arising from various types of asset specificity (physical capital; human capital; physical location) [affect] the propensity to vertically integrate. We already discussed this in the context of GM-Fisher Body. **The empirical literature strongly supports the prediction that asset specificity, and the attendant risks of post-contractual opportunism, will increase the degree of vertical integration.**²¹⁴

The problem from the perspective of Salop’s preferred evidentiary approach is that differentiating the risk of post-contractual opportunism from the “bargaining frictions” that Salop would not permit to suffice to demonstrate merger-specific efficiencies is potentially impossible.

²¹³ *FTC Hearing #5*, *supra* note 5, at 49-51 (statement of Margaret Slade, Professor, University of British Columbia) (emphasis added).

²¹⁴ *Vertical Merger Slides*, *supra* note 150, at note appended to slide 86.

5. *Unconsidered, unanticipated effects*

Of additional importance, the heightened evidentiary requirements can create problems for beneficial conduct that firms might undertake even when they are not yet contemplating merger.

For example, Salop, et al. would impose a heightened burden in cases where there is a substantial probability of one of the merging firms entering the other's market. But this requires merging firms to prove a negative: that they have no intention or ability to enter one or the other's market. This seems to be one of Salop's criticisms of the Live Nation/Ticketmaster merger, namely that Live Nation had experimented with ticket sales in some markets. A presumption of harm if one of the merging parties dips its toes in the water of the merger partner's market could trigger stricter scrutiny and have a chilling effect on innovation and experimentation.

Or, to take another example, one reason why a "disruptive or maverick" firm may seek a merger is a discovery that disruptive or maverick behavior is no longer profitable (or was not profitable to begin with). Presuming a vertical merger eliminates competition from a disruptive or maverick firm overlooks the probability that the behavior may have been eliminated by a change in the firm's business strategy or by exit from the industry. For example, vertically integrated Apple was once regarded as a maverick, but has seemingly lost that distinction.

Finally, Salop would impose a heightened burden where a merger would permit a firm to evade price regulation. But, as Frederick Warren-Boulton explains, vertical integration is an efficiency enhancing approach to circumventing anticompetitive and inefficient price controls:

Since markets do not clear if effective price controls are imposed in a competitive market, at least some downstream users must be rationed. The relevant price for the decision to integrate, therefore, is not the controlled price, but rather the scarcity value at the rationed quantity.²¹⁵

Similarly, George Stigler noted that vertical integration in the face of price controls *increases* both producer and consumer welfare:

In the United States during and immediately after World War II, . . . vertical integration was the simplest way of obtaining this [combined] gain [in buyers' and sellers' welfare]. This was the rationale of the integration of radio manufacturers into cabinet manufacture, of steel firms into fabricated products, etc.²¹⁶

²¹⁵ Frederick R. Warren-Boulton, *supra* note 212.

²¹⁶ George J. Stigler, *The Division of Labor is Limited by the Extent of the Market*, 59 J. POL. ECON. 185 (1951).

6. *The particular problem of unacknowledged transfers of knowledge and intangibles*

Of perhaps greatest significance, and as noted above, the impact of each organizational form on knowledge transfers creates a particularly strong division between integration and contract. As Enghin Atalay, Ali Hortaçsu & Chad Syverson (in a paper discussed at the hearing²¹⁷) point out:

That vertical integration is often about transfers of intangible inputs rather than physical ones may seem unusual at first glance. However, as observed by Arrow (1975) and Teece (1982), **it is precisely in the transfer of nonphysical knowledge inputs that the market, with its associated contractual framework, is most likely to fail to be a viable substitute for the firm.** Moreover, many theories of the firm, including the four “elemental” theories as identified by Gibbons (2005), do not explicitly invoke physical input transfers in their explanations for vertical integration.²¹⁸

Particularly in the high-tech setting, the role of intangible assets in encouraging merger over contracting (and, in turn, the dynamic consequences of mergers versus contracts) is both extremely important and woefully absent from antitrust law and theory. As Danny Sokol has written:

For the past thirty years, antitrust literature has largely ignored the significant literature within strategy related to vertical integration in the technology setting. Overall, this literature shows the important efficiency-enhancing effects of vertical mergers. These mergers are largely complementary, combining the strengths of the acquiring firm in process innovation with the product innovation of the target firms. This literature helps to push for a presumption for vertical merger law and policy to generally tolerate vertical mergers....

Many large firms acquire smaller firms in vertical mergers with the belief that the acquisition will allow the acquirer to create efficiencies that are not possible merely by licensing, strategic alliance, or joint venture.

Large firms need acquisitions to help with innovation. Innovation is critical for firms because greater innovation leads to improved financial returns.

* * *

A number of reasons explain this strategy of acquisition vis-à-vis internal growth. This includes lower entry barriers via acquisition, acquisition of intellectual property and research and development (R&D) that can be used strategically, knowledge, economies of scale and scope, and the ability to exert greater control rights through vertical integration via merger rather than via contract.²¹⁹

²¹⁷ See, e.g., *FTC Hearing #5*, *supra* note 5, at 48-49 (statement of Margaret Slade, Professor, University of British Columbia).

²¹⁸ Enghin Atalay, et al., *Vertical Integration and Input Flows*, 104 AM. ECON. REV. 1120, 1121-22 (2014) (emphasis added).

²¹⁹ D. Daniel Sokol, *Vertical Mergers and Entrepreneurial Exit*, 70 FLA. L. REV. 1357, 1371-73 (2018) (emphasis added).

Finally, although difficult to verbalize and often unappreciated by managers themselves, successful innovative businesses are characterized by “dynamic capabilities.” Among other things, these derive from close managerial control over a range of inputs and processes internal to a firm:

[D]ynamic capabilities are about doing the right things, at the right time, **based on unique managerial orchestration processes, a strong and change-oriented organizational culture, and a prescient assessment of the business environment and technological opportunities.**

* * *

Dynamic capabilities reside, in part, with individual managers and the top management team. At certain key junctures, the ability of a CEO and the top management team to recognize a key development or trend, then delineate a response and guide the firm in its co-creation activities, may be the most important element of the firm’s dynamic capabilities. **But the organization’s values, culture, and its collective ability to quickly implement a new business model or other changes are also integral to the strength or weakness of the firm’s dynamic capabilities.**

* * *

Because of their deep, enterprise-specific roots, signature processes are not so easily imitated by other firms that did not and cannot share this history and that may have a different, incompatible corporate culture as well. Moreover, the replicability of a process or business model is often confounded, particularly externally, by what Lippman and Rumelt (1982) call “uncertain imitability.”²²⁰

C. The FTC should not be so quick to eschew behavioral remedies in vertical mergers

Remedies are one of the more ambiguous issues in these hearings, with some commenters seemingly debating themselves, indicating that they prefer structural remedies, but recognize that behavioral remedies can be and have been effective. For example, Bruce Hoffman commented “we are also skeptical of behavioral remedies, but we also have used them and they have worked, at least as far as we can tell.”²²¹

It must be noted at the outset that taking behavioral remedies off the table limits the agency’s available responses to a proposed merger to 1) approve, 2) approve with structural remedies, or 2) challenge. Removing the behavioral remedy reduces the scope of the available solution set and alters the bargaining dynamic between agency and merging parties. That’s fine in the abstract, but if the agency

²²⁰ David J. Teece, *Intangible Assets and a Theory of Heterogeneous Firm*, in INTANGIBLES, MARKET FAILURE AND INNOVATION PERFORMANCE (Bounfour and Miyagawa eds., 2015) 217-39, at 20-22 in pre-proof version, available online at <https://escholarship.org/uc/item/6492g8vq>.

²²¹ FTC Hearing #5, *supra* note 5, at 145 (statement of Bruce Hoffman, Director, FTC Bureau of Competition).

is attempting to bolster or justify a preference for structural remedies and a rejection of behavioral ones, the constrained solution set becomes a problem and improperly pushes the agency toward challenging what should be acceptable mergers.

In particular, for mergers that should not obviously (both inside the agency and outside) be approved or challenged and for which the parties object to a structural remedy (as was apparently the case for AT&T/Time Warner) or for which a structural remedy isn't appropriate, the agency is extremely likely to err on the side of challenging the merger. The reason is that, having announced its policy to clarify its merger review and to favor structural remedies, the decision to clear an apparently questionable merger will be presumed to result precisely from the agency's invigorated policy of avoiding behavioral remedies. This will lead to criticism of the agency and a reduction in its perceived effectiveness. If it challenges such mergers, however, it can maintain its standing.

To be sure, the general concern over behavioral remedies is valid. There are, in fact, two kinds of behavioral remedies: the legal kind that address potential anticompetitive harms, and the illegal kind that amount to rent extraction. The agencies are clearly—and rightly—against the latter.

But with respect to the former, it is important that the objection to extractive remedies not preclude the valid use of perfectly appropriate behavioral remedies, lest the result be an excess of false positives.

At the same time, much of the literature on vertical mergers actually supports the imposition of behavioral conditions. While Salop concludes that behavioral remedies are difficult to monitor and enforce,²²² the reality is that the costs of monitoring and enforcing behavioral remedies should be the same as those required under the law anyway, if the agencies undertake enforcement and monitoring with the objective of deterring or halting anticompetitive conduct. Indeed, the enforcement of behavioral remedies should be easier, because in that case the problematic conduct is defined in advance and direct reporting obligations are typically in place. By contrast, the generalized enforcement against exclusionary conduct of the sort behavioral remedies are aimed at is much more amorphous and costly. But, in either case, if such conduct were to arise the agencies would, in theory, be obligated to find it and thwart it. It doesn't matter that enforcing behavioral remedies is costlier than enforcing structural remedies (at least not if the alternative is to reject a merger). Rather, the imposition of behavioral conditions makes the agencies' job easier relative the *appropriate* baseline of ongoing monitoring and enforcement against the now-non-merging firms.

Put simply, if an agency can properly identify what would be the harmful conduct to emerge from a merger, then the appropriate response is not to reject the merger; it is to prohibit the problematic conduct and allow the merger to proceed in order to realize any efficiency gains (while limiting or removing the risk of foreclosure). Indeed, at the very *most* the vertical merger literature—which everyone acknowledges is ambiguous to one degree or another, and which clearly identifies likely

²²² *Vertical Merger Slides*, *supra* note 150, at 40.

efficiencies (whether they outweigh possible anticompetitive exclusion or not) —supports the imposition of behavioral conditions.

In this sense, vertical merger review becomes something like an SEC no-action letter in which the parties effectively ask the agencies if a particular post-merger behavior is acceptable, and the agency either says no (i.e., approves the merger without conditions), or yes (i.e., prohibits the specific conduct at issue, and approves the merger with conditions).

It should be noted that the fact that specific, harmful forms of conduct can be policed *ex post* with behavioral remedies is another crucial reason why vertical mergers are less problematic than horizontal ones.

D. The underappreciated importance of dynamic considerations in vertical merger review

The general approach to vertical mergers, as noted above, is insufficiently attentive to dynamic effects. Not only should vertical merger review not be invigorated along the lines Salop and others have suggested, but the real upshot of the hearings and the literature is that vertical merger review should, if anything, be pared back out of recognition that the failure to account for dynamic effects (and inherent difficulty of doing so) means it is likely that procompetitive mergers are being over-deterred. As Jorde & Teece note:

For innovations to be commercialized, the economic system must somehow assemble all the relevant complementary assets and create a dynamically-efficient interactive system of learning and information exchange. The necessary complementary assets can conceivably be assembled by either administrative or market processes, as when the innovator simply licenses the technology to firms that already own or are willing to create the relevant assets. These organizational choices have received scant attention in the context of innovation. Indeed, the serial model relies on an implicit belief that arm's-length contracts between unaffiliated firms in the vertical chain from research to customer will suffice to commercialize technology. In particular, there has been little consideration of how complex contractual arrangements among firms can assist commercialization—that is, translating R&D capability into profitable new products and processes. The one partial exception is a tiny literature on joint R&D activity, but this literature addresses the organization of R&D and not the organization of innovation.

* * *

But in reality, the market for know-how is riddled with imperfections. Simple unilateral contracts where technology is sold for cash are unlikely to be efficient. Complex bilateral

and multilateral contracts, internal organization, or various hybrid structures are often required to shore up obvious market failures and create procompetitive efficiencies.²²³

Whatever the claimed price effects of increased concentration, if they are not accompanied by an assessment of industrywide increases in innovation and of quality improvements that may have accompanied the price increases, it is impossible to conclude that they are an indication of anticompetitive conduct—or even that they are harmful at all. Rather, price increases accompanied by concomitant or even greater quality increases, as well as increased market innovation (that may result in future quality improvements), are consistent with consumer-welfare-enhancing behavior, and these benefits must also be evaluated before any conclusions can legitimately be drawn.

As Allen Gibby and Geoffrey Manne have noted in the ag/biotech context (a decidedly and increasingly oligopolistic industry):

While the agriculture industry has a long history of successful cross-licensing arrangements between agricultural input providers, licensing talks can, of course, break down (and do so for any number of reasons), potentially thwarting a nascent product before research has even begun—or, possibly worse, well into its development. The cost of such a breakdown is not merely the loss of the intended product; it is also the opportunity cost of the foregone products Company A could have been developing, as well as the costs of negotiation.

To mitigate the risks inherent in these arm's-length negotiations, as well as to avoid other impediments to efficient R&D (like delays resulting from waiting years for Company B to fully develop and make available a chemical before it engages in negotiations with Company A), firms may merge to fully integrate their knowledge and capabilities. Where these and other impediments may arise, integration may well be the lowest-cost way of organizing assets in order to maximize their value. This is especially true for R&D-intensive industries where intellectual property and innovation are fundamental to obtaining or maintaining a competitive advantage. Absent integration, neither party would have an incentive to fully disclose the nature of its intellectual property and innovation pipeline. Integration can thus increase both the likelihood and the efficiency of information sharing, enabling managers to effectively evaluate and reorganize assets in ways that maximize return on investment.²²⁴

By contrast, an unstated implication of Salop's position is the imposition of an effective duty to deal upon vertically related firms—precisely the opposite of the strategic and nuanced forms of organization and coordination that innovative markets require. Put differently, an approach that rests on the loss of indirect competition to justify challenging a vertical merger must also rest on the *existence* of

²²³ Thomas M. Jorde & David J. Teece, *Rule of Reason Analysis of Horizontal Arrangements: Agreements Designed to Advance Innovation and Commercialize Technology*, 61 ANTITRUST L. J. 579, 591-2 (1993).

²²⁴ Geoffrey A. Manne & Allen Gibby, *A Brief Assessment of the Procompetitive Effects of Organizational Restructuring in the Ag-Biotech Industry*, ICLE Antitrust & Consumer Protection Program White Paper No. 2017-2 (May 9, 2017) at 7, available at http://laweconcenter.org/images/articles/icle-ag_mergers_short_paper_final.pdf.

that indirect competition in the but-for world. Because such competition (i.e., the supply of inputs (access to customers) to all competitors in the downstream (upstream) market) cannot be certain to arise, the theory implicitly presupposes the imposition of a mandatory duty to deal when it does not. If not, the claimed competitive forces that would be lost from a merger relative to the but-for world are not, in fact, lost.

II. Vertical discrimination

Over the past years, there has been a growing chorus of critics who argue that big tech platforms harm competition by favoring their own content over that of their complementors. From Lina Khan’s “Amazon’s Antitrust Paradox”, to the European Commission’s *Google Search* case, vertical discrimination has become the go-to argument for big tech’s opponents.²²⁵ Unfortunately this slew of self-preferencing accusations is largely untethered from mainstream economics.

The following sections offer an overview of these claims (Section 3.III.A). We argue that platforms rarely have an incentive to self-preference (Section 3.III.B) and that, when they do, this type of conduct is largely beneficial to consumers (Section 3.III.C). Finally, we show that vertical discrimination is a highly problematic legal standard that would effectively give antitrust authorities free rein over the digital economy (Section 3.III.C).

A. The claims

Throughout the FTC hearings and recent reports on competition in digital markets, numerous critics have voiced fears that digital platforms may use their dual role as platform operators and downstream competitors to exclude their rivals. According to critics, this ultimately harms consumer choice and innovation. These fears are perhaps best encapsulated by Hal Singer’s comments during the FTC hearings:

Dominant tech platforms have the incentive and ability to leverage their platform power into ancillary markets by vertically integrating and then favoring their affiliated content, applications, or wares with their algorithms and basic features. A platform owner should be concerned for the overall health of its ecosystem, which in theory should discourage it from squeezing complementors, but that calculus goes awry when a platform enjoys monopoly power and can take its customers for granted.²²⁶

Dominant tech platforms can also exploit the vast amounts of user data made available only to them by monitoring what their users do both on and off their platforms and then

²²⁵ See Lina M. Khan, *Amazon’s Antitrust Paradox*, 126 YALE L. J. 799 (2016). (“A nondiscrimination policy that prohibited Amazon from privileging its own goods and from discriminating among producers and consumers would be significant.”).

²²⁶ *Competition and Consumer Protection in the 21st Century: FTC Hearing #3 Day 3: Multi-Sided Platforms, Labor Markets, and Potential Competition; Before the FTC*, FTC Transcript 93 (Oct. 17, 2018)(statement of Hal Singer, Managing Director, Econ One) available at https://www.ftc.gov/system/files/documents/public_events/1413712/ftc_hearings_session_3_transcript_day_3_10-17-18_0.pdf.

appropriating the best performing ideas, functionality, and nonpatentable products pioneered by independent providers. If these practices are left unchecked, the resulting competitive landscape could become so inhospitable that independents might throw in the towel, leading to less innovation at the platform’s edges.²²⁷

And he is not alone. A recent report by the Stigler Center opined that

[s]ome regulations could apply only to firms that meet the DA’s [i.e. a Digital Authority which the report proposes to set up] definition for bottleneck power. Because the cost of false negatives is high and there is uncertainty, the public interest requires the DA to take a more interventionist approach in these settings [...] Nondiscrimination rules could protect against a complement that is a potential competitor of the platform itself, or one that operates only on the platform as a rival provider of content.²²⁸

Likewise, a European report concludes that

[t]he rules and institutions provided by a dominant platform must not anti-competitively exclude or discriminate. A dominant platform that sets up a marketplace must ensure a level playing field on this marketplace and must not use its rule-setting power to determine the outcome of the competition.²²⁹

These critiques are nothing new. For the past couple of years, numerous tech platforms have been under continued assault from antitrust populists (also frequently referred to as Neo-Brandeisians). Chief among them is Lina Khan who argued that Amazon was using its role as platform operator to undermine competitors:

By making itself indispensable to e-commerce, Amazon enjoys receiving business from its rivals, even as it competes with them. Moreover, Amazon gleans information from these competitors as a service provider that it may use to gain a further advantage over them as rivals—enabling it to further entrench its dominant position.²³⁰

This criticism may have been instrumental in bringing about the European Union’s probe into Amazon’s dealings. The commonality between Khan’s findings and EU Competition Commissioner Margrethe Vestager’s comments on the potential case are striking:

²²⁷ *Id.* (statement of Hal Singer, Managing Director, Econ One).

²²⁸ GEORGE J. STIGLER CENTER FOR THE STUDY OF THE ECONOMY AND THE STATE & THE UNIVERSITY OF CHICAGO BOOTH SCHOOL OF BUSINESS, COMMITTEE FOR THE STUDY OF DIGITAL PLATFORMS AND MARKET STRUCTURE AND ANTITRUST SUBCOMMITTEE 9 (May 15, 2019), <https://www.judiciary.senate.gov/imo/media/doc/market-structure-report%20-15-may-2019.pdf>.

²²⁹ JACQUES CRÉMER, YVES-ALEXANDRE DE MONTJOYE, HEIKE SCHWEITZER, EUROPEAN COMMISSION: COMPETITION POLICY FOR THE DIGITAL REPORT 62 (2019), available at <http://ec.europa.eu/competition/publications/reports/kd0419345enn.pdf>, p.62.

²³⁰ Khan, YALE LJ, 755 (2016).

The question here is about the data, because if you as Amazon get the data from the smaller merchants that you host [sic] [...] do you then also use this data to do your own calculations? What is the new big thing, what is it that people want, what kind of offers do they like to receive, what makes them buy things?²³¹

And it is not just Amazon that is being targeted with self-preferencing accusations. The European Commission notably fined Google €2.42 Billion for favorably placing its “Google Shopping” service.²³² In Commissioner Vestager’s words:

Google abused its market dominance as a search engine by promoting its own comparison shopping service in its search results, and demoting those of competitors [...] It denied other companies the chance to compete on the merits and to innovate. And most importantly, it denied European consumers a genuine choice of services and the full benefits of innovation.²³³

To summarize, there is a growing chorus of antitrust populists who claim that self-preferencing by digital platforms is hampering competition online. This criticism usually hinges upon two key claims: First, large digital platforms have an incentive to leverage their strong positions as platform operators to favor their downstream products/services at the expense of competitors. Second, when it occurs, this self-preferencing may lead to the exclusion of competitors, thus harming consumers. As we explain in this comment, neither of these assertions is supported by either theoretical or empirical evidence.

B. It is not clear that platforms have any incentive to vertically discriminate.

A first common misconception is the idea that platforms necessarily have an incentive to vertically discriminate and exclude their downstream rivals. In fact, the economic literature on this subject suggests the opposite. Firms cannot simply increase their profits by extending a monopoly in one market into the market for a complementary good. And this is even more true in a platform environment where success often hinges on a platform’s ability to retain key complementors. Put simply, firms will be unlikely to join a platform that systematically extracts the rents of successful complementors.

The first of our major objections goes back to the early “single monopoly profit” argument, put forward by early Chicago School scholars. The single monopoly profit theory broadly holds that, absent efficiencies, a monopolist in one line of commerce cannot increase its profits by entering the

²³¹ Mike Bloomberg, *EU Commissioner Margarethe Vestager on Tech and Global Growth*, YOUTUBE (Sept 26, 2018), <https://www.youtube.com/watch?v=T9HmscH4GI4>

²³² See Commission Decision No. AT.39740 (*Google Search (Shopping)*), C(2017) 4444 final, slip. op. (June 27, 2017).

²³³ Press Release, European Commission, Antitrust: Commission fines Google € 2.42 billion for abusing dominance as search engine by giving illegal advantage to own comparison shopping service (Jun. 27, 2017), available at http://europa.eu/rapid/press-release_IP-17-1784_en.htm

competitive market for a complementary good.²³⁴ Although the theory has drawn some criticism, it remains a crucial starting point with which enforcers must contend before they conclude that a monopolist's behavior is anticompetitive.²³⁵

Take the example of Amazon. The basic problem is the following. Assume that Amazon does indeed have a monopoly in the market for online retail platforms (or, in other words, that the Amazon marketplace is a bottleneck for online retailers). Why would it move into direct retail competition against its third-party sellers if it is less efficient than them?²³⁶ Amazon would either have to sell at a loss or hope that consumers saw something in its products that warrants a higher price. A more profitable alternative would be to stay put and increase its fees. It could thereby capture all the profits of its independent retailers.²³⁷ Not that Amazon would necessarily want to do so, as this could potentially deter other retailers from joining its platform. In other words, Amazon likely has at least some incentive to limit its platform fees in order to retain more efficient independent retailers, and to guarantee continued adoption by new ones. Doing so should ultimately enable it to capture more revenue than it could on its own. The upshot is that Amazon has little incentive to exclude more efficient retailers.²³⁸

So why does Amazon move into retail segments that are already occupied by its rivals? The most likely explanation is simply that it can source and sell these goods more efficiently than its rivals can and that these efficiencies cannot be efficiently or effectively achieved through contracts with said rivals. Moreover, in many cases Amazon also undertakes incremental product innovation when it enters rivals' markets, thus supplying products of different (surely often better) quality than its rivals do. This enhances not only price competition but also quality competition and/or the extent of product differentiation.

²³⁴ See Ward S. Bowman Jr, *Tying Arrangements and the Leverage Problem*, 67 YALE LJ, 21 (1957). See also, BORK, ANTITRUST PARADOX, *supra* note 45, at 373. See also, R.A. POSNER, ANTITRUST LAW, SECOND EDITION 199 (University of Chicago Press, 2009).

²³⁵ See J. TIROLE, THE THEORY OF INDUSTRIAL ORGANIZATION 179 (MIT Press, 1988). See also, Patrick Rey & Jean Tirole, *The logic of vertical restraints*, THE AM. ECON. REV. 937 (1986). ("Another major contribution of the earlier literature on vertical restraints is to have shown that per se illegality of such restraints has no economic foundations"). This reasoning can be applied by analogy to vertical integration. *Contra* Einer Elhauge, *Tying, Bundled Discounts, and the Death of the Single Monopoly Profit Theory*, 123 HARV. L. REV., 397 (2009).

²³⁶ For a detailed discussion of the complex tradeoff that platforms face when deciding between the retail and marketplace strategies, see Andrei Hagiu & Julian Wright, *Marketplace or reseller?*, 61 MANAGEMENT SCIENCE, 196 (2014). Though the tradeoff is complex, being more efficient than marketplace retailers cuts in favor of the reseller model.

²³⁷ See Michael D Whinston, *Tying, Foreclosure, and Exclusion*, 80 AM. ECON. REV. 850 (1990). ("The key point is that with complementary products used in fixed proportions, the monopolist can actually derive greater profits when its rival is in the market than when it is not because it can benefit through sales of its monopolized product from the additional surplus that its rival's presence generates (due to product differentiation).").

²³⁸ Potential reasons to do so are if Amazon has much better information than independent retailers, or if there are important spillovers between goods that are sold on the platform (which Amazon can thus internalize with a reseller model). See *id.*

Once we accept the possibility that Amazon is simply more efficient, the picture changes dramatically. The sooner it overthrows less efficient rivals the better. Doing so creates valuable surplus that can flow to either itself or its consumers. This is true regardless of whether Amazon has a marketplace monopoly or not. Even if it does have a monopoly (which is doubtful given competition from the likes of Walmart, Etsy, Target, Google Shopping, and eBay, e.g.), at least some of these efficiencies will likely be passed on to consumers in order to continue growing its customer base. Such a scenario is also perfectly compatible with increased profits for Amazon. The real test is whether output increases when Amazon enters segments that were previously occupied by rivals.

Of course, the usual critiques voiced against the “single monopoly profit” theory apply here. It is plausible that, by potentially “excluding” its retail rivals, Amazon is simply seeking to protect its alleged platform monopoly.²³⁹ However, the anecdotal evidence that has been raised thus far does not support this conclusion (there is scant evidence to support the conclusion that any of these disgruntled retailers might somehow have moved up in the distribution chain and set up their own retail platform).

A second important objection comes from the two-sided markets literature that has emerged over the past two decades.²⁴⁰ Many digital firms can be viewed as two-sided platforms that strive to bring two (or more) groups of users on board. For example, the Amazon Marketplace platform seeks to bring together consumers, on the one hand, and retailers, on the other. In these settings, it is often the case that the platform’s value to one group of users depends on the number (and quality) of users on the other side of the platform.²⁴¹ To be successful, platforms must thus achieve an optimal balance between users on both sides of the market, and this has important ramifications as far as vertical discrimination is concerned.

Imagine that a platform systematically discriminates against its complementors, thus capturing all of their economic rents. It is far from clear that this is a viable strategy for the platform operator.²⁴² By systematically hurting the profits of its complementors, the operator undermines their incentives to join its platform in the first place.²⁴³ This is fine if the platform can efficiently replace these excluded

²³⁹ Dennis W Carlton & Michael Waldman, *The Strategic Use of Tying to Preserve and Create Market Power in Evolving Industries*, 33 RAND J. ECON., 194 (2002).

²⁴⁰ See, e.g., Jean-Charles Rochet & Jean Tirole, *Platform Competition in Two-sided Markets*, 1 J. EUROPEAN ECON. ASSOC., 990-1029 (2003). See also, Jean-Charles Rochet & Jean Tirole, *Two-sided Markets: A Progress Report*, 37 RAND J. ECON. 645-67 (2006). See also, D.S. EVANS & R. SCHMALENSEE, *MATCHMAKERS: THE NEW ECONOMICS OF MULTISIDED PLATFORMS* (Harvard Business Review Press. 2016).

²⁴¹ See, e.g., Thomas Eisenmann, Geoffrey Parker & Marshall W Van Alstyne, *Strategies for Two-sided Markets*, 84 HARVARD BUS. REV., 2 (2006).

²⁴² For a discussion, see, e.g., Feng Zhu & Qihong Liu, *Competing with Complementors: An Empirical Look at Amazon.com*, 39 STRATEGIC MANAGEMENT J. 2619 (2018).

²⁴³ See, e.g., Annabelle Gawer & Rebecca Henderson, *Platform Owner Entry and Innovation in Complementary Markets: Evidence from Intel*, 16 J. ECON. & MANAGEMENT STRATEGY 26 (2007). (“We found that Intel did indeed experience incentives to enter and/or subsidize the market for complements to its core asset—the microprocessor. Both entry and subsidy, however,

firms (and consumers are likely to be no worse off as a result, *see infra*). But such a strategy may be ruinous when this is not the case. By losing key users (or goods) on one side of the market, the platform reduces its value on the other side, causing further users to depart. This may eventually lead to a “death spiral,” in which the platform effectively collapses as a result of its opportunistic behavior.²⁴⁴

And even if the platform does not collapse, opportunistically extracting the rents of its complementors may force the platform operator to shift away from the platform model and become a reseller. This may ultimately hurt its bottom line.²⁴⁵

In short, the single monopoly profit theory and the two-sided markets literature both show that platforms do not systematically have an incentive to leverage their strong position in the platform market in order to exclude competing retailers, downstream rivals, etc. Absent additional case-specific factors, the first part of the argument made by vertical discrimination critics is thus unfounded.

C. Even if firms did vertically discriminate, it is not clear that this would be bad for consumers

The second important misconception is that, when it occurs, the foreclosure of competing complementors necessarily (or presumptively) harms consumers. This need not be the case, however, and often the opposite appears to be true.

There is strong empirical evidence to support this view. Francine Lafontaine and Margaret Slade provide what is probably the most thorough survey concerning the economic impact of vertical integration.²⁴⁶ Summarizing the welfare effects observed in a number of empirical studies, the authors conclude that:

[T]he body of research that is reported... is highly supportive of the efficiency of vertical integration and mergers. In particular..., [the evidence] indicates that integration benefits consumers, or at least does not harm them. In addition, almost all of the positive findings are statistically significant. Finally..., many of the horizontal markets examined (e.g.,

were conditioned by the firm’s belief that because it could not match the capabilities of potential entrants, sustaining a credible commitment not to engage in the ex post squeeze of entrants was critical to its success.”). *See also*, Geoffrey Parker & Marshall Van Alstyne, *Innovation, openness, and platform control*, 64 *MANAGEMENT SCIENCE* 3026 (2017). (“Firms in our model find it privately rational to stimulate third-party innovation even at the cost of sacrificing rents from direct platform sales. The rule for optimal openness is to give away enough free access that its value in the current stage is proportional to developer elasticity of output in the next stage. Optimal openness declines in response to a rise in intrinsic platform value but rises in response to rising developer value, the sizes of developer and end user pools, and rising resource reuse. Interestingly, the level of openness and, equivalently, the size of the subsidy in our model can exceed the current value of the platform.”).

²⁴⁴ *See, e.g.*, DAVID S. EVANS & RICHARD SCHMALENSEE, *MATCHMAKERS: THE NEW ECONOMICS OF MULTISIDED PLATFORMS* 208 (2016).

²⁴⁵ *See* Andrei Hagiu & Julian Wright, *Marketplace or Resellers*, 61(1) *MANAGEMENT SCIENCE* 184, 192 (2015).

²⁴⁶ Lafontaine & Slade, *supra* note 169.

ready-mix concrete) are highly concentrated. Since these are exactly the type of markets where one might expect to find negative welfare effects from vertical mergers, it is particularly informative that the set of results... shows no such negative effects.²⁴⁷

The Global Antitrust Institute's comments offered in response to the Commission's hearing on exclusionary conduct extended this methodology to a more recent set of empirical studies.²⁴⁸ They reach a similar conclusion to that of Lafontaine and Slade:

We find that recent empirical evidence continues to support the proposition that vertical integration generates abundant efficiencies and is generally procompetitive. With regard to policy, we continue to agree with the conclusion reached by Lafontaine & Slade (2007): "[B]y highlighting the importance of the different efficiency motives, the empirical evidence that we have reviewed suggests that vertical-merger policy should be de minimus [sic] if it exists at all."²⁴⁹

From a more theoretical standpoint, the potential efficiencies associated with vertical integration (and the potential elimination of downstream rivals) are significant. Vertical integration may help firms to internalize transaction costs,²⁵⁰ prevent holdup²⁵¹ or moral hazard,²⁵² reduce double marginalization,²⁵³ and might allow the vertically integrated firm to efficiently price discriminate.²⁵⁴ All of these can ultimately benefit consumers.

These findings hold true in the digital economy. For instance, Feng Zhu and Qiong Lu reach a similar conclusion in an empirical paper that examines Amazon's incentives to launch products that compete with its merchants:

Although Amazon's entry can harm complementors and could reduce the number of innovative products consumers can find on the site, consumers nevertheless benefit from Amazon's efficient distribution systems and because of it are more likely to purchase the products. Consumer welfare may, hence, increase. Our empirical results suggest that Amazon's entry strategy is consistent with its objective of being a low-price player.²⁵⁵

²⁴⁷ *Id.*

²⁴⁸ GAI Comments, *supra* note 2.

²⁴⁹ *Id.*

²⁵⁰ See Ronald H. Coase, *The Nature of the Firm*, 4 *ECONOMICA* 386 (1937).

²⁵¹ See Benjamin Klein, Robert G. Crawford & Armen A. Alchian, *Vertical Integration, Appropriable Rents, and the Competitive Contracting Process*, 21 *J.L. & ECON.*, 297 (1978). See also, Benjamin Klein, *Vertical Integration as Organizational Ownership: The Fisher Body-General Motors Relationship Revisited*, 4 *J. L. ECON. & ORG.*, 199 (1988).

²⁵² See, e.g., Lafontaine & Slade, *supra* note 169, at 633.

²⁵³ See, e.g., Nicholas Economides, *Quality Choice and Vertical Integration*, 17 *INT'L J. INDUS. ORG.*, 903 (1999).

²⁵⁴ See, e.g., Lafontaine & Slade, *supra* note 169, at 666 (2007).

²⁵⁵ Feng Zhu & Qihong Liu, *Competing With Complementors: An Empirical Look at Amazon.com*, 39 *STRATEGIC MGMT. J.* 2618, 2619 (2018).

In short, there is a substantial body of both empirical and theoretical research which shows that vertical integration (and the potential vertical discrimination and exclusion to which it might give rise) is generally beneficial to consumers. In fact, this significant finding might explain why critics often turn their attention to other related arguments, such as the idea of “kill-zone mergers”, or the proposition that atomistic market structures are necessary to spur greater innovation. We cast serious doubts over both of these assertions in the following sections of this comment (Sections IV and V, respectively).

Section 4: Tech Platforms and Innovative Markets

Introduction and overview of Section 4

Are Google and Amazon in the same market? Superficially, it seems they are not. Google is a search engine and Amazon is an e-commerce platform. But traditional market definition analysis that infers future substitution possibilities from existing or past market conditions will systematically lead to overly narrow markets and an increased likelihood of erroneous market power determinations. Market definition and market power analyses should be improved to better account for out-of-market constraints on the exercise of market power and the constraints imposed by sequential product-innovation competition, rather than price competition alone.

Commenters focused their feedback on three key issues related to tech platforms:

5. **Killer Acquisitions.** Many of the participants concerned about “killer acquisitions” have fallen prey to hindsight bias. Most small acquisitions either fail outright or have a negligible impact on the acquirer’s business. In the small minority of cases where the acquisition becomes hugely successful, it is almost impossible to know whether the acquired company could have achieved the same level of success in the counterfactual scenario. Arguing that enforcers have missed one or two anticompetitive mergers in the tech market is insufficient evidence for overturning the entire system, as any substitute would also be imperfect.
6. **Network Effects.** Some participants claimed that network effects create winner-take-all markets for tech platforms. While it may be true that some markets are naturally winner-take-most, from the perspective of consumer welfare, this is not necessarily a negative outcome. In the case of communications networks, it is intuitively obvious why consumers would be better off participating in a few large networks than in many small ones. Furthermore, critics ignore the potential for Schumpeterian innovation, i.e., when innovation occurs at the platform level, and platform owners leapfrog each other, maintaining a temporary monopoly long enough to be compensated for putting startup capital at risk.
7. **Edge Innovation.** Lastly, participants seeking more regulation argued that platform owners were behaving anti-competitively by observing activity on the platform and then “appropriating” a feature or manufacturing a product—ostensibly reducing the returns to edge innovation. While these concerns sound alarming, they are entirely speculative and rooted in a non-falsifiable (and unsupported) claim that such conduct decreases innovation and is insufficiently accounted for in standard antitrust analysis. In fact, if such effects were to arise, they would do so only in a naively static analysis of platform competition. Platform owners understand that they are engaged in a repeated game with all sides of their platforms. Moreover, demand on each side is interdependent on the others. In other words, platform operators have an incentive *not* to choke off too much innovation. Of course, some “edge” features will be bundled with the core platform over

time, but this is at least as likely a benefit to consumers as it is a cost. Banning such conduct would be equivalent to a costly *per se* prohibition on innovation at the platform level.

I. Misconceptions of two-sided markets and platform competition

In presenting their arguments at the hearings, critics of modern digital platforms tended to rest their arguments on a number of inaccurate or unsupported assumptions. Among other things, they tend to rely on exceedingly narrow market definitions of relevant competitive markets, a misunderstanding of how network effects work in these contexts, and a flawed conception of the competitive dynamics of vertical integrated platforms.

A. The claims of the critics

As a first-order approximation, network effects are beneficial. That they also may complicate the analysis of how challengers can effectively compete is—or should be—secondary, and incorporating that insight entails considerable uncertainty and complexity. It makes no sense to try to eradicate networks simply because competing with them is more complicated. Yet critics are excessively prone to highlight the problems without proper consideration of the benefits—or of the true complex and nuanced competitive dynamics surrounding networks.

Thus, for example, Joseph Farrell expressed the view that network effects *by their very nature* “set things up for antitrust problems.”²⁵⁶ Among these problems are “vertical restraints, most favored nations clauses, and similar” as well as “non-neutrality of the relationship with complementers where some people might expect or want neutrality.”²⁵⁷

Other commentary offered views that network effects create a one-way ratchet where the firms that create the platforms become bound to the particular form in which they first emerged as successful enterprises. Eric Citron, for example, offered the opinion that platforms, by becoming successful, in effect build themselves into essential facilities:

the ability to market through these marketplaces has actually led a lot of people to come to market who couldn't have otherwise...That is a good thing in the world, but it's also evidence that... they need these markets in order to operate and they may be at their mercy.²⁵⁸

Other commentators offered a variety of views on how to understand the potential harms that vertically integrated platforms can engender. One common element was a certain level of comfort with the idea of relying on speculative future harms as a basis for restraining the conduct of platforms.

²⁵⁶ *Competition and Consumer Protection in the 21st Century: FTC Hearing #3 Day 1: Multi-Sided Platforms, Labor Markets, and Potential Competition; Before the FTC*, FTC Transcript 65 (Oct. 15, 2018) (statement of Joseph Farrell, Professor of Economics, University of California).

²⁵⁷ *Id.*

²⁵⁸ *FTC Hearing #3 Day 1, supra* note 256, at 273 (statement of Eric Citron, Partner, Goldstein Russell).

Hal Singer, for example, worried about harms that, in his view, necessarily must arise in the future by the very nature of a platform being dominant:

Dominant tech platforms have the incentive and ability to leverage their platform power into ancillary markets by vertically integrating and then favoring their affiliated content, applications, or wares with their algorithms and basic features. A platform owner should be concerned for the overall health of its ecosystem, which in theory should discourage it from squeezing complementers, but that calculus goes awry when a platform enjoys monopoly power and can take its customers for granted.²⁵⁹

Further, the nature of possessing large amount of data is taken to suggest that harms must occur, since platforms are in a position to “appropriate” new innovations before they can become threatening:

Dominant tech platforms can also exploit the vast amounts of user data made available only to them by monitoring what their users do both on and off their platforms and then appropriating the best performing ideas, functionality, and nonpatentable products pioneered by independent providers. If these practices are left unchecked, the resulting competitive landscape could become so inhospitable that independents might throw in the towel, leading to less innovation at the platform’s edges.²⁶⁰

Other commenters opined that sometimes when a large platform merely acquires relevant knowledge about a market opportunity, although not directly implicating actual competition concerns, it is cause for concern about *potential* competition:

[T]here may be acquisitions that don’t significantly undermine competition in the relevant market but that do structurally position the incumbent to detect nascent rivals much earlier, information that they can then go out and use to make early acquisitions. And so I think these acquisitions that don’t affect the relevant market but do structurally improve the position of an incumbent to make early acquisitions is something that should also be relevant to the agencies.²⁶¹

Closely related to concerns about an unknown amount of potential competition being stifled by the existence of large platforms, some commenters felt that the most likely source of real competition would come from today’s small start-ups that would one day become large competitors:

When I think about it... people often talk about Schumpeter and so long as... the next thing is on the horizon, everything is going to be fine, but the issue on platforms is that the next thing on the horizon is often this new nascent threat that comes on the

²⁵⁹ *FTC Hearing #3 Day 3*, *supra* note 226, at 93 (statement of Hal Singer, Director, Econ One).

²⁶⁰ *Id.* at 93-94 (statement of Hal Singer, Director, Econ One).

²⁶¹ Lina M. Khan, *supra*, note 225 at 208.

platform. And so you have to make sure that there is enough room on the platform for these new threats to emerge and to breathe.²⁶²

Moreover, in addition to relying on speculative future harms to support claims of constrained competition, some commentators were comfortable with simultaneously downplaying the possibility of efficiencies based on the same degree and type of speculation. Daniel Rubinfeld, for example, dismissively referred to one of the defenses that Microsoft raised in its famous antitrust case in response to the government’s monopolization arguments:

[T]he argument was raised by Microsoft in the case that that monopoly power could be overcome. There would be competition for the market that would be powerful. But what’s striking to me, and it turned out to be important in the case as the facts developed, was that it was very hard for Microsoft to specify what that competition was. And for me, one of the really striking exhibits in the case was a Microsoft exhibit saying we face substantial competition from known and unknown sources. And my view is when you have to rely on unknown, unnameable sources to defeat monopoly power, you really have a weak case.²⁶³

The common thread in these (admittedly selectively chosen examples) is an inherent hostility—inhospitality—to complex business arrangements based on a few speculative or simplified potential problems, and a corresponding lack of recognition of the possible benefits of such arrangements. Such positions are unjustified and unsupported, as the lack of evidence or even rigorous theory to back up such assertions on display at the hearings attests.

B. Platforms competition is much more dynamic than traditional notions of market definition allow

The best approach to competition available to us in a world of imperfect information is probably best described in Harold Demsetz’s seminal paper, *Information and Efficiency: Another Viewpoint*.²⁶⁴ Demsetz famously argued that policymakers should avoid the so-called “nirvana fallacy,” which occurs when government enforcement is based on discrepancies between real-world markets and some idealized and unachievable yardstick (rather than plausible alternatives).

The key insight is that there are limits to what can be achieved through state intervention, not least because of limitations on enforcers’ knowledge about the competitive dynamics of the markets they seek to regulate.²⁶⁵ In other words, policymakers should not ignore the potential drawbacks of

²⁶² *FTC Hearing #3 Day 3*, *supra* note 226, at 277 (statement of Jonathan Kanter, Partner, Paul Weiss).

²⁶³ *Competition and Consumer Protection in the 21st Century: FTC Hearing #3 Day 2: Vertical Merger Analysis and the Role of the Consumer Welfare Standard in U.S. Antitrust Law; Before the FTC*, FTC Transcript 178 (Oct. 16, 2018) (statement of Daniel Rubinfeld, Professor, NYU Law).

²⁶⁴ See Demsetz, *Information and Efficiency*, *supra* note 53.

²⁶⁵ As Richard Schmalensee writes, summing up the state of knowledge on the relationship between market structure and performance, “Inter-industry research has taught us much about how markets *look*... even if it has not shown us exactly how

enforcement. A practice's departure from a theoretical competitive benchmark may be inextricably linked to social benefits which it also generates. When this is the case, enforcement may do more harm than good, and effective remedies will prove elusive.

Yet, as noted, in many of the panels that occurred during these hearings, there was much commentary that relied on the nirvana fallacy.

One of the primary and most problematic ways that this manifested itself was in a view that preferences enforcement that purports to achieve competitive market structures extrapolated from historically known examples.

For example, Jonathan Kanter's declaration that "the next thing on the horizon is often [a] new nascent threat that comes on the platform"²⁶⁶ explicitly imagines competitive threats as most likely arising from modes of conduct identical to those of the platform itself. But the actual competitive threats to these platforms often, if not typically, arise from lateral, apparently unrelated firms.

Traditional market definition analysis that infers future substitution possibilities from existing or past market conditions will systematically lead to overly narrow markets and an increased likelihood of erroneous market power determinations. This is the problem of viewing Google as a "search engine" and Amazon as an "online retailer," and excluding each from the other's market.

In reality, of course, both are competing with each other for scarce user attention in digital environments. *The specific functionality they employ in order to do so is a red herring.*

Michael Salinger captured this reality well in his panel commentary:

[T]here's a temptation to say, okay, well, Bing is what looks most like Google, and maybe Yahoo looks a little bit like Google, and no one else looks very much like Google, and so that's the relevant market. And if you do that, you miss a huge amount of the competition that a company like Google faces.

So, for example, if you consider shopping search and ask the question who's the competition to Google in shopping search, it's not Bing; it's Amazon. And if you evaluate... allegations about Google shopping without recognizing the competitive constraint from Amazon, then you're missing the most important competitive constraint.²⁶⁷

Moreover, as Susan Creighton observed, increasingly sophisticated vertical integration has over time led to the creation of *more* competition among large platforms:

markets work." See Richard Schmalensee, *Inter-Industry Studies of Structure and Performance*, in 2 HANDBOOK OF INDUSTRIAL ORGANIZATION 951, 1000 (Richard Schmalensee & Robert Willig eds., 1989).

²⁶⁶ *FTC Hearing #3 Day 3*, *supra* note 226, at 277 (statement of Jonathan Kanter, Partner, Paul Weiss).

²⁶⁷ *FTC Hearing #3 Day 1*, *supra* note 256317, at 216 (statement of Michael A. Sallinger, Senior Academic Adviser, Charles River Associates).

[A] review of the history of tech platforms over the past several decades and... in the caricature of antitrust tech world... you would say you have gone from a caricature of IBM as the only company out there to the [Wintel] duopoly to the three big... [and the] sort of portals [like AOL] and how scary AOL looked, and now we're talking about big five... All through that, the arc of that history, we've seen vertical integration is a striking, pervasive, and distinctive feature of platform competition.²⁶⁸

Moreover, as Creighton had previously observed of the *Microsoft* case, viewing intermodal competition among superficially different sorts of services is completely consistent with contemporary anti-trust practice:

DOJ recognized the products that may have the potential to compete even if they don't look like each other. I think that's really important because even to this day, regulators can find it a challenge to recognize the company as maybe actual or potential competitors even if they look different or if in some respects they are complements. That tendency to narrow the set of competitors only to those that just look the same can result in under-enforcement, or over-enforcement, Microsoft itself being a great example of how if you had just looked at saying do browsers compete with operating systems, the answer is obviously no, end of case.²⁶⁹

AOL's "dominance" of instant messaging—once widely feared as an unassailable monopoly position²⁷⁰—wasn't even toppled by another digital tech platform: It was the advent of SMS and more widely affordable cellular plans from legacy telecom companies that seriously undermined AOL's market share.²⁷¹

C. Fears of platform “appropriation” are entirely speculative and undermined by a proper understanding of platform dynamics

This stands in stark contrast to the entirely speculative fears that Hal Singer offered: that vertically integrated firms are likely to “leverage their platform power into ancillary markets by vertically

²⁶⁸ *FTC Hearing #3 Day 3*, *supra* note 226, at 116 (statement of Susan Creighton, Partner, Wilson Sonsini Goodrich & Rosati).

²⁶⁹ *FTC Hearing #3 Day 2*, *infra* note 263, at 186 (statement of Susan Creighton, Partner, Wilson Sonsini Goodrich & Rosati).

²⁷⁰ See, e.g., Jim Hu, *AOL Instant Messaging Rivals File Complaint with FCC*, CNET (Jan. 2, 2002), <https://www.cnet.com/news/aol-instant-messaging-rivals-file-complaint-with-fcc/> (“We’re saying to the government that this is going to be a problem, and you can either solve it now or solve it later, and now is better,” said Blair Levin, a regulatory consultant to iCast and Tribal Voice.”).

²⁷¹ See Brad Jones, *Simplicity Breeds Success: The Lasting Impact of AOL Instant Messenger*, DIGITAL TRENDS (Oct. 22, 2016), <https://www.digitaltrends.com/computing/the-rise-and-fall-of-aol-instant-messenger/> (“What killed AIM, was text messaging,” argued Bosco. “All of a sudden, mobile took off—and even though we were very aggressive on the mobile front, with the pricing of SMS going dirt cheap, people started texting.”).

integrating and then favoring their affiliated content”²⁷² and that “[d]ominant tech platforms can also exploit the vast amounts of user data” to “appropriate” the innovations of others.²⁷³

The EU has recently voiced similarly unfounded concerns in opening its Amazon investigation.²⁷⁴ In a press conference where she discussed the preliminary investigation, Commission Vestager claimed that Amazon’s access to third party merchant data allows it to know “what is the new big thing, what is it that people want, what kind of offers do they like to receive, what makes them buy things.”²⁷⁵

What we know of the EU’s investigation into Amazon is instructive of the shortcomings of this worldview. In this view, Amazon’s use of platform data and vertically integrated services inherently “harms” smaller competitors who cannot make similar high-level observations and who are dependent upon Amazon’s vertically integrated services (like product search, fulfillment, etc).

But missing from Commissioner Vestager’s account (and likewise the story that Singer tells) is that the success of Amazon’s platform—success which is never readily replicated and widespread in a market—facilitates the very existence of those smaller competitors in the first place. Indeed, it is the entire point of competition to produce firms that can serve consumers with that level of acumen.

When a firm manages to piece together a successful vertically integrated platform that serves the ends of consumer welfare, turning around and using those procompetitive innovations as purported evidence of anticompetitive conduct upends the goals of our competition laws.

Moreover, the scale of the problem that is implicit in these criticisms of vertically integrated platforms is not even clear. According to research from Feng Zhu and Qihong Liu published through the Harvard Business School:

We find that Amazon enters three percent of complementors’ product spaces over a ten-month period, and is more likely to enter the spaces of products with higher sales and better reviews and that do not use Amazon’s fulfillment service.

We also find that Amazon is more likely to enter product spaces when the number of third-party sellers is large and when the product does not require much efforts from third-party sellers to grow.²⁷⁶

²⁷² *FTC Hearing #3 Day 3*, *supra* note 226, at 93 (statement of Hal Singer, Director, Econ One).

²⁷³ *Id.*

²⁷⁴ Waverly Colville, *EU Regulators Want to Make Sure Amazon Isn’t Undercutting Sellers, Commissioner Says*, CNBC, Sep. 28, 2018, available at <https://www.cnbc.com/2018/09/28/eu-competition-commissionermargrethe-vestager-on-amazon-investigation.html>.

²⁷⁵ Q&A with Commissioner Vestager, Press Conference by Margrethe Vestager, Member of the EC, on Luxembourg McDonalds’ State Aid case, Sept. 19, 2018, available at <https://audiovisual.ec.europa.eu/en/video/I-160574>.

²⁷⁶ Zhu & Liu, *supra* note 242, at 4. (emphasis added)

Thus, at least according to this study (which, incidentally, is regularly promoted by advocates for more invasive antitrust as evidence of Amazon’s harmful and widespread appropriation²⁷⁷), the incidence of displacement on one of the most, if not the most popular platform is actually quite rare, is less likely with firms that are more independent of the platform, and tends to arise in product categories that “require greater seller effort to grow.”²⁷⁸ This last point is open to interpretation, but one plausible reading is that the products in question are not subject to unique production constraints (e.g. protected by IPR or requiring great or unique skill to market), and thus that the real risk of displacement may be quite small and the possible deterrent effects on merchants’ marketing innovations minimal.

In fact, Singer gets it exactly backwards when he suggests that platforms fail to attend to their ecosystem and “squeeze complementers.”²⁷⁹ Amazon’s access to its third-party seller data—which may be (but also may not be, contra unsupported claims that it invariably is) highly useful information for finding product categories characterized by supranormal returns—is fully contingent on it maintaining a healthy pool of third party sellers from which to derive this data. If third party sellers cease to serve as an information discovery tool, Amazon has no competitive advantage over other large retailers, both online and offline. Further, the numbers show that not only are third-party sellers critical for Amazon’s direct sales, but for Amazon’s overall bottom line: for the last two years, third-party sellers have accounted for half or more of Amazon’s sales, and have been a huge share for much longer.²⁸⁰

Thus, even if we assume that Singer and Vestager are correct, this version of Amazon’s behavior would sooner or later (probably sooner) drive out of business the very firms that help it achieve its competitive advantage. Hardly a wise strategy and, assuming these fears of anticompetitive conduct are warranted, one that would ultimately reduce the value proposition of Amazon enough to inspire defection of consumers to other platforms that serve them better.

Whether or not Amazon relies on third-party sales data to plan its own retail strategy, the relationship with third-party sellers remains an overall benefit for both parties. As Amazon seeks new products to bring into one of its private label brands, into its FBA program,²⁸¹ or to purchase directly at wholesale prices, it may make it harder for some third-party merchants—but at the same time it also provides a large volume of business to others. Whether this is a net negative for sellers is not at all clear, despite the professed fears of critics who assume that it is. Whether this is a net negative for

²⁷⁷ See, e.g., *FTC Hearing #3 Day 3*, *supra* note 226, at 126 (statement of Hal Singer, Director, Econ One).

²⁷⁸ *Id.* (statement of Hal Singer, Director, Econ One).

²⁷⁹ *Id.* at 93.

²⁸⁰ *Percentage of Paid Units Sold by Third-party Sellers on Amazon Platform as of 1st Quarter 2019*, STATISTA, available at <https://www.statista.com/statistics/259782/third-party-seller-share-of-amazon-platform/>.

²⁸¹ *Fulfillment by Amazon*, AMAZON.COM (last visited Jun. 29, 2019), <https://services.amazon.com/fulfillment-by-amazon/benefits.html> (last visited June 28, 2019).

consumers is even less clear, and the innovation-related arguments that critics like Hal Singer offer to attempt to find consumer harm are utterly and entirely unsupported and speculative.²⁸²

In fact, the most likely outcome of such conduct (were it to occur) would be the fostering of a different—but by no means obviously better or worse—kind of firm (at least for firms that want to thrive). Firms that sell a variety of goods, or from a variety of differentiated brands, will most likely tend to do better as they can absorb sudden drops in volume for a particular product line as Amazon moves in.

Their job, in turn, is to continually source potential new lines of products that they can profitably sell through the platform using the analytics and other sales tools the platform provides. Indeed, it must be noted that, while there is surely some difference between the data that Amazon itself has access to and the data it makes available to third-parties, Amazon does, in fact, make data available to third parties for a fee.²⁸³ They are hardly left in the dark, despite the implications to the contrary that Amazon’s ability to use this data is absolute and that of third parties’ non-existent. To be sure, some firms may lose out, but many others will gain as a result of the massive reach and advanced tools the platform provides, coupled with the large pool of shoppers.

Zhu and Liu observe that this sort of aggregator business model is a likely and reasonable response for third-party sellers that wish to compete on products that are easily offered by Amazon and other competitors on platforms:

Our results... suggest a number of strategies complementors can employ to mitigate the risk of value misappropriation. Whereas platform owners tend to target popular products, complementors that build their businesses around aggregating non-blockbuster products or services... are less likely to face direct competition from platform owners. Complementors that choose to focus on popular products need to develop capabilities in new product discovery that enable them to continually bring innovative products to the platform.²⁸⁴

²⁸² See *FTC Hearing #3 Day 3*, *supra* note 226, at 94 (statement of Hal Singer, Director, Econ One) (“the resulting competitive landscape could become so inhospitable that independents might throw in the towel, leading to less innovation at the platform’s edges.”).

²⁸³ See, e.g., What is Amazon Retail Analytics Premium?, AMZ BLOG (Apr. 26, 2017), <https://amzadvisers.com/amazon-retail-analytics-premium/>. Among other things, the tool apparently allows sellers to:

- Track category performance in general or per title and over time
- See your share of each category and its subcategories and track growth
- Compare your products’ rank and unit growth against Amazon’s fastest selling products
- Spot growing categories that you can leverage
- See your top 100 products per category by sales and units
- Track the products that drive performance
- Analyze marketing campaigns from performance data over time.

²⁸⁴ Zhu & Liu, *supra* note 242, at 27.

And there will also exist some truly unique brands that Amazon can't profitably displace with an imitation or direct wholesale purchase (see, e.g. the bargaining power that brands like PopSockets,²⁸⁵ Apple²⁸⁶ and Nike²⁸⁷ have maintained against being listed on Amazon).

Finally, concerns about platform appropriation of edge innovations (or other advantages) simply discount to zero the benefits of *platform* innovation. But the consequence of policy based on such arguments would be a reduction in platform innovation, much to the cost of consumers.

Consumers benefit when platforms innovate, at least as much as they benefit from edge innovation. In fact, when a platform implements a new technology or business process, those benefits are conferred on all platform users; when an edge company does so the benefits are conferred only on the subset of platform users who interact with the particular edge provider.

At a more fundamental level, however, it is the platform that, in the first place, enables innovative edge providers (or, in the case of Amazon, e.g., manufacturers) to reach a larger audience at lower cost. Maintaining and improving this access platform-wide entails platform innovation, of course. At the same time, while the allocative efficiency effects of platform appropriation are likely to be larger than the counterfactual, the *distributive* effects are not an antitrust issue. Yet, it is likely that the only effects of any significance are merely distributive. Appropriation does not significantly impair the ability of edge providers (or, again, third-party sellers, in the case of Amazon) to maintain their (presumably) profitable positions on the platform. And, in fact, to the extent that platform appropriation might permit the platform to better manage the risk of strategic behavior by edge providers (as could, in fact, sometimes be the case—for example, by allowing a platform like Amazon to enable other sellers to manage broad selling strategies using loss-leaders or sales without strategic disruption by other platform competitors), appropriation can lead to more optimal distributive effects.

D. Speculative theories of harm must be balanced with potential benefits

It is further concerning that advocates for more enforcement are willing to rely on speculative theories of harm to justify intervention, but are simultaneously unwilling to admit that speculative theories of harm should be counterbalanced with potential procompetitive benefits. For example, as noted above, Daniel Rubinfeld felt that the Microsoft defense's use of "unknown, unnameable

²⁸⁵ Jason Del Rey, *An Amazon revolt could be brewing as the tech giant exerts more control over brands*, RECODE (Nov. 29, 2018), available at <https://www.vox.com/2018/11/29/18023132/amazon-brand-policy-changes-marketplace-control-one-vendor>.

²⁸⁶ Jeffrey Dastin, *Amazon Strikes Deal with Apple to Sell iPhones, iPads*, REUTERS (Nov. 9, 2018), available at <https://www.reuters.com/article/us-amazon-com-apple/amazon-strikes-deal-with-apple-to-sell-iphones-ipads-idUSKCN1NE2HV>.

²⁸⁷ Nick Statt, *Amazon Will Start Selling Nike Shoes Directly for the First Time*, THE VERGE (June 21, 2017), available at <https://www.theverge.com/2017/6/21/15847700/amazon-nike-shoes-deal-e-commerce-zappos>.

sources to defeat monopoly power”²⁸⁸ was inappropriate in the *Microsoft* case. Yet, Rubinfeld also acknowledged that, as an innovation case, *Microsoft* was essentially founded on speculation:

[T]he characterization of the [Microsoft] case as an innovation case would be accurate. What motivated me and I believe the decision to bring the case was the concern that absent some of the practices that we’ve been talking about, there would have been a substantial innovation. But... it’s very hard to say exactly what the future will be in a highly rapidly changing world.²⁸⁹

The harms, by their very nature, were speculative and to this day the exact ramifications of the DC Circuit decision are ambiguous, at best. Even Tim Wu expressed hesitation about how much we can really know about avoiding “harms” that are speculative:

It’s always—also very important to look at Microsoft in the context of a big trilogy of cases, IBM, AT&T, and Microsoft, which effectively, were the United States’ tech policy for almost 20 or 30 years and had, I think, really substantial effects. **And this stuff is very hard to—you know, it’s all anecdote, how do we prove that how much of, you know, the big boom in tech and the return to American dominance had to do with these three antitrust cases.**²⁹⁰

But logical consistency demands that if you open the door to highly speculative theories of harm, enforcers should also be obligated to reckon with similarly forward-looking—and sometimes *less* speculative—procompetitive benefits. As Nicolas Petit observed during one of the hearings:

[O]n first principles, I think there’s no reason to exclude as a principle the ability for the agency to advance on a capability or likely effects theory. But if you do that... **the first principle is you need to provide symmetry to the defendant...** [W]here you are saying the effects are uncertain but we go for it, and... [litigation] is probabilistic... then, you should allow the defendant to also say that there is competition but it’s probabilistic... Schumpeter has written about... the intensity of competition that you can’t locate in a market, but it might be there somewhere. And so I think when we think about its likely effects, we also need to provide the defendant symmetry to advance probabilistic competition as a defense.²⁹¹

Paul Denis sounded a similar note, opining that

As the agencies sharpen their focus on nascent and potential competition... the burdens of proof and evidentiary standards that are imposed on that analysis [should] be imposed in a symmetric way, so that we’re equally likely to consider and recognize and credit a

²⁸⁸ *FTC Hearing #3 Day 2, infra* note 263, at 178 (statement of Daniel Rubinfeld, Professor, NYU Law).

²⁸⁹ *Id.* at 202 (statement of Daniel Rubinfeld, Professor, NYU Law).

²⁹⁰ *Id.* at 232 (statement of Tim Wu, Professor, Columbia Law School).

²⁹¹ *Id.* at 316 (statement of Nicolas Petit, Professor, University of Leige, Belgium).

nascent or potential competitor as a market participant as we are to look at it as a market force of interest in... traditional horizontal merger analysis.²⁹²

And, as Denis noted, the preference for a presumption that reduced innovation incentives arise in the face of mergers while completely discounting the potential for increased innovation “is perplexing... because despite all the focus on innovation, we do not have a generally applicable theory of innovation that links innovation to mergers or links innovation to market structure.”²⁹³

E. Network effects are complicated

As noted above, some commenters expressed concerns that the presence of network effects would lead to unassailable monopolists perpetually dominating sectors of the economy – a phenomenon sometimes referred to as “tipping.”

Network effects occur when a consumer’s utility for a good is, at least in part, a function of the expected number (and quality) of other agents using the same product.²⁹⁴ These valuable users may be located in the same market or on the opposite side of a platform.²⁹⁵ In either case, as the definition suggests, network effects *improve* the quality of a service for its users. While, as noted, they may complicate traditional conceptions of competition, they do not inherently or automatically cause harm.

Not all markets with network effects will eventually tip towards a single winning firm,²⁹⁶ and multi-homing is common, especially among many high-tech platforms including social networks, online marketplaces, online search, and online advertising. Of crucial importance, the presence of network effects and even a lopsided market distribution need not result in anticompetitive effects if there is potential competition from smaller competitors or new entrants. And even where consumer lock-in seems high and multi-homing low (say, across different OS app stores), supplier multi-homing may be common (as it is among developers of the most popular apps), thus enhancing competition “for the market.”²⁹⁷

Indeed, the presence of network effects does not necessarily prevent entry by more-efficient and/or innovative rivals.²⁹⁸ Nor, importantly, do they preclude the creation of another market entirely

²⁹² *FTC Hearing #3 Day 3*, *supra* note 226, at 191-92 (statement of Paul Denis, Partner, Dechert LLP).

²⁹³ *Id.* at 197 (statement of Paul Denis, Partner, Dechert LLP).

²⁹⁴ See, e.g., Michael L. Katz & Carl Shapiro, *Systems Competition and Network Effects*, 8 J. ECON. PERSP. 93, 96 (1994).

²⁹⁵ See, e.g., Jean-Charles Rochet & Jean Tirole, *Platform Competition in Two-Sided Markets*, 1 J. EUR. ECON. ASS’N 990 (2003).

²⁹⁶ This is especially true in the presence of heterogeneous consumer preferences and differentiated products. See Shapiro & Katz, *supra* note 294, at 106.

²⁹⁷ See Sami Hyrynsalmi, Arho Suominen & Matti Mäntymäki, *The Influence of Developer Multi-homing on Competition Between Software Ecosystems*, 111 J. SYS. & SOFTWARE 119, 119-27 (2016).

²⁹⁸ See E. Glen Weyl & Alexander White, *Let the Best “One” Win: Policy Lessons from the New Economics of Platforms*, 10 COMPETITION POL’Y INT’L, 28 (2014).

through disruptive innovation.²⁹⁹ On the contrary, network effects are a double-edged sword that can sometimes *hasten* the decline of dominant platforms.³⁰⁰

Another crucial point is that, even if tipping does occur, one cannot assume that society will be worse-off as a result. As Howard Shelanski observed during these proceedings:

So I think we can acknowledge that at any given moment a platform might have very large market position, and that large market position might reflect not just share but market power or even dominance in some lines of commerce. Obviously, the fact that somebody has large market share may not reflect market power. They may be innovating at every moment, fighting for customers who are at any moment ready to defect, and so you can, from a large and dominant firm, get very competitive outcomes, but you also often do not.³⁰¹

Moreover, the consequence of deterring the creation and maintenance of network effects is invariably the creation of a fragmented market characterized by relatively smaller and less efficient firms. And fragmentation may be just as harmful as monopoly when markets present network effects.³⁰² A corollary is that higher prices are perfectly compatible with increased output and consumer surplus. These striking features have even led some scholars to call for a policy that would *subsidize* the formation of “monopoly” platforms, rather than prevent their appearance.³⁰³

A particular instance of network effects concerns two-sided markets where output is related not only to the overall, platform-wide price level, but also to the *distribution* of prices across the two sides.³⁰⁴ Multi-sided platforms must routinely balance the various sides of the market such that, in many cases, one side subsidizes another.³⁰⁵

Contemporary economics provides no basis for assuming that a demonstration of price effects on one side of a two-sided market accurately represents the market-wide effects of a course of conduct.³⁰⁶ Rather, economics predicts that market-wide welfare might increase, decrease, or remain neutral given price effects. Only an analysis of the market as a whole can illuminate the true competitive

²⁹⁹ See, e.g., Thibault Schrepel, *L'innovation de Rupture: De Nouveaux Défis Pour le Droit de la Concurrence*, 42 REVUE LAMY CONCURRENCE 141, 143 (2015).

³⁰⁰ See, e.g., David S. Evans & Richard Schmalensee, *Debunking the Network Effects Bogeyman*, 40 REGULATION 36 (2017).

³⁰¹ *FTC Hearing #3 Day 1*, *supra* note 317, at 73-74 (statement of Howard Shelanski, Professor, Georgetown Law).

³⁰² See Volker Nocke, Martin Peitz & Konrad Stahl, *Platform Ownership*, 5 J. EUR. ECON. ASS'N 1130 (2007).

³⁰³ See Weyl & White, *supra*, note 455.

³⁰⁴ See Jean-Charles Rochet & Jean Tirole, *Two-Sided Markets: A Progress Report*, 35 RAND J. ECON. 645, 646 (2006).

³⁰⁵ See David S. Evans & Michael Noel, *Defining Antitrust Markets When Firms Operate Two-Sided Platforms*, 2005 COLUM. BUS. L. REV. 667, 668, 682, 688 (2005).

³⁰⁶ See Benjamin Klein, *et al.*, *Competition in Two-Sided Markets: The Antitrust Economics of Payment Card Interchange Fees*, 73 ANTITRUST L.J. 571, 599 (2006).

implications. As a result, the proper metric by which to judge competitive effects in a two-sided market is market-wide *output*.³⁰⁷

This two-sided analysis should also extend beyond mere price effects particularly as, often, some platform users may pay a zero price. One side of the market may experience some burden from a rule or practice – such as the collection of personal data – but a significant benefit on the other may more than offset this inconvenience. Accordingly, it is *necessary* to consider what is happening on both sides of a two-sided platform in order to understand properly the implications of the platform’s conduct.

The upshot is that demonstrating harm on one side of a two-sided platform is not sufficient to establish any presumption that *market-wide* consumer welfare has decreased. The simple reallocation of costs and benefits across the two sides of a two-sided market can be output increasing, output reducing, or output neutral. Looking at effects on one side simply cannot distinguish between these scenarios. Failing to adopt this holistic approach would significantly raise error costs, as authorities risk inferring anticompetitive harm (say, in the form of a price increase on one side of the market) from procompetitive conduct (i.e., conduct that increases output market-wide).

Overall, the real lesson that economics has taught us, as Howard Shelanski observed during his panel, is that

the answer [as to whether large platforms are necessarily anticompetitive or procompetitive] is not obvious. I don’t think we can presume from... few recent historical episodes that any platform that [] out there today is vulnerable and may have actually fleeting market power... but nor do I think we can assume from the current market power that we’re seeing today... [that it] will necessarily endure.³⁰⁸

In short, even with firms characterized as two-sided markets and whose business model is driven by network effects, enforcers should look to the facts of each particular case and tread carefully lest they do more harm than good. Sadly, this straightforward conclusion is at odds with the “inhospitality” expressed by the critics of these markets who rely on rank speculation to infer problems and to imply solutions with an entirely unwarranted certainty.

None of the arguments offered by these critics during the Commission’s hearings provide any basis for concluding otherwise, and the proponents of more aggressive antitrust enforcement against “Big Tech” have entirely failed to meet their burden of demonstrating the need for any such intervention.

³⁰⁷ The US Supreme Court reached this same conclusion in *Ohio v. Am. Express Co.*, 138 S. Ct. 2274 (2018).

³⁰⁸ *FTC Hearing #3 Day 1*, *supra* note 317, at 78-79 (statement Howard Shelanski, Professor, Georgetown Law).

II. Is there a kill-zone in tech markets?

During the hearings and in recent reports, some commentators have expressed concern that large incumbents in the technology industry are behaving anticompetitively by serving as an innovation bottleneck. Two of the most notable were an article in the *Economist*³⁰⁹ and a piece by Bloomberg opinion writer Noah Smith.³¹⁰ The crux of these allegations is that large incumbents conduct “killer acquisitions” by purchasing potential competitors and co-opting their developing networks and platforms. This, so the argument goes, chills investments in markets adjacent to the large incumbents, thereby creating investment “kill zones.” Further, it is alleged that incumbents then leverage their existing networks to facilitate “spying” on potential competitors through data surveillance.

A. Kill-zone mergers

Carl Shapiro, for example, has advocated applying tougher standards to merger enforcement to address these alleged “kill-zone” mergers. In his 2018 paper ‘Antitrust in the Time of Populism’ he wrote:

One promising way to tighten up on merger enforcement would be to apply tougher standards to mergers that may lessen competition in the future, even if they do not lessen competition right away. In the language of antitrust, these cases involve a loss of potential competition. One common fact pattern that can involve a loss of future competition occurs when a large incumbent firm acquires a highly capable firm operating in an adjacent space. This happens frequently in the technology sector. Prominent examples include Google’s acquisition of YouTube in 2006 and DoubleClick in 2007, Facebook’s acquisition of Instagram in 2012 and of the virtual reality firm Oculus VR in 2014, and Microsoft’s acquisition of LinkedIn in 2016.³¹¹

Potential competition is always an important consideration in antitrust analysis. However, the examples Shapiro provides also highlight the importance of not falling prey to hindsight bias. In the case of Facebook, the social media company has made 92 acquisitions since 2007.³¹² Of those, Shapiro cites two cases as being potentially anticompetitive, one of which is an odd inclusion: Oculus VR. Facebook has yet to integrate Oculus VR into its ecosystem, and the virtual reality industry remains largely in its infancy.

³⁰⁹ *American Tech Giants are Making Life Tough for Startups*, THE ECONOMIST (Jun. 2, 2018), <https://www.economist.com/business/2018/06/02/american-tech-giants-are-making-life-tough-for-startups>.

³¹⁰ Noah Smith, *Big Tech Sets Up a ‘Kill Zone’ for Industry Upstarts*, BLOOMBERG (Nov. 7, 2018), <https://www.bloomberg.com/opinion/articles/2018-11-07/big-tech-sets-up-a-kill-zone-for-industry-upstarts>.

³¹¹ Carl Shapiro, *Antitrust in the Time of Populism*, 61 INT’L J. OF INDUS. ORG. 714 (2018).

³¹² Tim Wu & Stuart A. Thompson, *The Roots of Big Tech Run Disturbingly Deep*, NY TIMES (Jun. 7, 2019), <https://www.nytimes.com/interactive/2019/06/07/opinion/google-facebook-mergers-acquisitions-antitrust.html>

In the case of Google, the company has acquired 270 companies over the last two decades.³¹³ Shapiro cites the YouTube and DoubleClick mergers as potentially anticompetitive, but this was far from clear at the time. How would anyone in 2006 see video streaming as competitively adjacent to web searches? If anything, Google created the notion of stored and easily searchable videos, and only later included that material in its own search engine. It seems obvious from our contemporary perspective that web searches and online video are natural complements. But that’s only because of Google’s work in developing a generalized approach to information retrieval.

Again, the real test for regulators is whether they could identify, for example, the two potentially anticompetitive mergers out of Google’s 270 acquisitions and, under an error cost analysis,³¹⁴ do less harm to consumers with false positives than false negatives. If the anticompetitive mergers are such a tiny percentage of the total mergers—and identifying them *a priori* is difficult—then a precautionary principle strategy that results in many false positives for enforcement would likely not merit the benefits from blocking one or two anticompetitive mergers. Furthermore, but for Google and Facebook’s investments in YouTube and Instagram, it is far from clear that a mere “video-hosting service” or “photo-sharing app” would have grown into the competitor that advocates assume.

In his testimony before the FTC, Hal Singer shared data on aggregate investing in the tech industry:

A 2017 survey of two dozen Silicon Valley investors suggests that Facebook’s appropriation of app functionality from edge rivals is “having a profound impact on innovation in Silicon Valley.” Some new findings are consistent with independents throwing in the towel or not getting funded. Per Crunchbase data, VC investing inside of tech, as measured by the number of deals, has declined since 2015 on average by 23 percent in the United States and by 21 percent globally.

In contrast, VC investing outside of tech increased over that same period, suggesting the problem might be tech-specific, and new research using PitchBook data reveals that broadly defined industries... inside the Amazon, Google, and Facebook orbit experienced a collapse in venture capital first financing since 2015, a reduction not observed in comparable tech sectors.³¹⁵

The data that Singer relies on, however, is problematic and does little to reveal the actual behavior of VC’s and startups relative to large tech companies. In particular, the PitchBook data is coarse, and does not adequately define which firms are in the orbit of large tech companies and which aren’t. As the author of the PitchBook study notes,

[T]o be transparent, my analysis here is not without important limits. **For example, it doesn’t take a look at adjacent industries that are reliant upon access to these very platforms... It’s also worth noting that even the most detailed industries available in**

³¹³ *Id.*

³¹⁴ See Easterbrook, *The Limits of Antitrust*, *supra* note 45.

³¹⁵ *FTC Hearing #3 Day 3*, *supra* note 226, at 94-95 (statement of Hal Singer, Director, Econ One).

the PitchBook database are still too coarse for a precision analysis of the impacts of [Facebook, Google, and Amazon] companies on venture-backed startups in those spaces. To do that, one would need to build competitor lists from the bottom up, by going into the details of what individual companies do. That task will have to be for another day.³¹⁶

The limitations of the PitchBook study mean that it is impossible to accurately determine which firms outside of the “orbit” of Facebook, Google, and Amazon actually constitute adjacent markets that feed into the ecosystem of these incumbent firms. Thus, the PitchBook study could just as easily be read to indicate that *new* markets are opening by virtue of their ability to subsequently serve as inputs into the GAFAs ecosystem, even if some direct competitors (e.g. direct clones of dominant services) are being acquired or otherwise stifled. The bottom line, however, is that given the coarseness of the analysis all we can reliably say is that VC patterns appear to have *shifted*, not that there is a definite decline in tech-related VC activity.

As Scott Kapor said in his testimony during the hearings:

[T]hese large players play a significant role as acquirers of venture-backed startup companies, which is an important part of the overall health of the venture ecosystem.³¹⁷

Moreover, acquisitions by large incumbents are known to provide a crucial channel for liquidity in the venture capital and startup communities. As investor and serial entrepreneur Leonard Speiser said recently, “If the DOJ starts going after tech companies for making acquisitions, venture investors will be much less likely to invest in new startups, thereby reducing competition in a far more harmful way.”³¹⁸ Startups generally have two methods for achieving liquidity for their shareholders: IPOs or acquisitions. According to the latest data from Orrick and Crunchbase, between 2010 and 2018 there were 21,844 acquisitions of tech startups for a total deal value of \$1.193 trillion.³¹⁹ By comparison, according to data compiled by Jay R. Ritter, a professor at the University of Florida, there were 331 tech IPOs for a total market capitalization of \$649.6 billion over the same period.³²⁰

Scott Kapor shared similar data in his testimony:

We know and understand this risk, of course, but nonetheless require that a small number of companies have to yield high returns on capital to make the ultimate venture

³¹⁶ Ian Hathaway, *Platform Giants and Venture-Backed Startups*, IAN HATHAWAY BLOG (Oct. 12, 2018), <http://www.ianhathaway.org/blog/2018/10/12/platform-giants-and-venture-backed-startups> (emphasis added).

³¹⁷ *FTC Hearing #3 Day 1*, *supra* note 256, at 183 (statement of Scott Kapor, Managing Partner, Andreesen Horowitz).

³¹⁸ Leonard Speiser (@leonardspeiser), Twitter (Jun. 11, 2019, 2:59 PM), <https://twitter.com/leonardspeiser/status/1138566502250999809>.

³¹⁹ MIND THE BRIDGE & CRUNCHBASE, *TECH STARTUP M&As 2018 REPORT* (2018) available at <https://s3.amazonaws.com/cdn.orrick.com/files/MTBCrunchbaseTechStartupMAs2018.pdf>.

³²⁰ Jay R. Ritter, *Initial Public Offerings: Technology Stock IPOs* (Dec. 31, 2018), available at <https://site.warrington.ufl.edu/ritter/files/2019/04/IPOs2018Tech-Stock.pdf>.

business succeed. To that end, about 15 to 20 years ago, the venture in business enjoyed what we called liquidity events, which is basically the ability to convert an investment into a real economic return, in the form of about 50 percent IPOs and 50 percent M&A activity.

Today that math is closer to about 80 percent M&A and about 20 percent IPOs. The reasons for this are beyond the scope of this hearing, but this trend plays a very important role in the potential actions that the Commission might be considering with respect to the large platform players in this industry.³²¹

Thus, regulatory intervention that reduces the likelihood of reaching a profitable exit could reduce the incentive for venture capitalists to invest in startups and may inhibit new business formation. A research paper by Gordon Phillips and Alexei Zhdanov analyzed data on venture capital investments and mergers and acquisitions activity in 48 countries to study this relationship rigorously. They found that

subsequent VC activity responds to both [positive and negative] shocks. First, the passage of a pro-takeover law in a country is associated with more subsequent VC deals in that country, while the enactment of a business combination antitakeover law in the U.S. has a negative effect on subsequent VC investment.³²²

While venture capital may be relatively small in total size—\$130.9 billion in 2018³²³—the market punches above its weight in terms of its effect on the broader economy. According to the National Venture Capital Association, “While venture capital investments amounted to less than 0.2% of US GDP in 2010, revenues from venture-backed companies accounted for 21% of US GDP and 11% of private sector employment.”³²⁴ In recent years, about 60 percent of all IPOs were VC-backed companies.³²⁵ A research paper from Stanford University found “public companies with venture capital backing employ four million people and account for one-fifth of the market capitalization and 44% of the research and development spending of U.S. public companies.”³²⁶

Changing competition standards with the intention of reducing the number of tech acquisitions would therefore risk disabling the mechanism that currently provides roughly two-thirds of the

³²¹ *FTC Hearing #3 Day 1*, *supra* note 317, at 187-88 (statement of Scott Kupor, Managing Partner, Andreessen Horowitz).

³²² Gordon M. Phillips & Alexei Zhdanov, *Venture Capital Investments and Merger and Acquisition Activity Around the World*, (Turk Sch. of Bus., Working Paper No. 3072665, 2017), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3072665.

³²³ Press Release, PitchBook, US Venture Capital Investment Reached \$130.9 Billion in 2018, Surpassing Dot-Com Era (Jan. 10, 2019), available at <https://pitchbook.com/media/press-releases/us-venture-capital-investment-reached-1309-billion-in-2018-surpassing-dot-com-era>.

³²⁴ Amicus Brief of National Venture Capital Association in support at 3, *Rapid Litig. Mgmt. v. CellzDirect, Inc.*, 827 F.3d 1042 (Fed. Cir. 2016), available at <https://www.pbwt.com/content/uploads/2016/09/NVCA-brief.pdf>.

³²⁵ Ritter, *supra* note 320.

³²⁶ Will Gornall & Ilya A. Strebulaev, *The Economic Impact of Venture Capital: Evidence from Public Companies* (Stan. U. Graduate Sch. Of Bus. Research Paper No. 15-55, 2015), available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2681841.

liquidity for startups and one-fifth of GDP. *Perhaps* some other set of market conditions might provide a more optimal set of incentives for entrepreneurs, but the burden should certainly be on the advocates to compellingly demonstrate why their preferred vision for the economy is superior to the status quo.

Lastly, Scott Kuper pointed out that targeted advertising on large platforms also *enables* startups in other sectors of the economy via efficient customer acquisition:

It's the existence of these platforms that in many ways explains the significant growth we've seen in the last seven to ten years in consumer startup and VC financing activity. Simply put, the math works. Companies can experiment with customer acquisition via these channels and fund their marketing companies iteratively based on which yields the highest return on capital.

Without these platforms, I would venture that the economics of customer acquisition might be cost prohibitive for most startups and, thus, that the venture capital economy would shift its investment into other more cost-effective areas.³²⁷

B. The threat of entry

In addition to chilling investment and killer acquisitions, proponents of the kill-zone theory of harm believe that large incumbents deter potential competition in their “zones” by vertically integrating a product, service, or feature into the platform. A study by Wen Wen and Feng Zhu of the mobile app market, however, illustrates the true complexity that involved in the creation and marketing of potentially competing apps. For example, the study finds that

after Google's entry threat increases, affected developers reduce innovation and raise the prices for the affected apps. Once Google enters, the developers reduce innovation and increase prices further. However, app developers' incentives to innovate are not completely suppressed; rather, they shift innovation to unaffected and new apps. Given many apps already offering similar features, Google's entry may reduce social inefficiency.³²⁸

Thus, a variety of effects, often running in different directions, attend Google's decision to incorporate a feature into Android that was hitherto handled by third-party app providers.

Proponents of the kill zone theory focus on the link between entry threat and prices and innovation for the affected apps. Ironically, this is an unduly static view of the market, however, and the behavior of the app makers and Google are open to several interpretations. One plausible reading of this data suggests that app makers are attempting to obtain monopoly rents to the maximal extent while they still maintain control over an app niche. Once Google integrates the feature, the monopoly rents

³²⁷ *FTC Hearing #3 Day 1*, *supra* note 317, at 185 (statement of Scott Kuper, Managing Partner, Andreesen Horowitz).

³²⁸ Wen Wen & Feng Zhu, *Threat of Platform-Owner Entry and Complementor Responses: Evidence from the Mobile App Market*, STRATEGIC MGMT J. (forthcoming), <https://www.hbs.edu/faculty/Pages/item.aspx?num=55899>.

are no longer possible, however, and so the app makers continue to extract whatever rents they can from their inframarginal, highly-loyal app users.

But that is certainly not the extent of the story that the data tell. Although prices from app developers dominant in specific niches rise for the few users who continue to purchase that app, the integration of popular features into the OS means that Google effectively lowers the price of those features to zero for a much larger set of users. Further, as the study points out, “app developers’ incentives to innovate are not completely suppressed.... [T]hey shift innovation to unaffected and new apps. Given many apps already offering similar features, Google’s entry may reduce social inefficiency.”

Thus, when considering a larger view of welfare effects, consumers are better off on an even more important dimension: potential *innovation*. Firms that successfully build and sell apps for Android develop generalized skills and techniques for their operation, such that they can reuse their expertise to build apps in subsequent app niches. In this sense, developers are incentivized not only to build apps, but to continually discover future niches that meet consumer demand, resulting in a higher total level of innovative behavior.

Total prices fall, total output increases, and more consumer demand is met. For policymakers considering consumer welfare, the story of the Android app ecosystem is one of overall success.

More generally, the assumption that we need more enforcement to preserve potential competitors—i.e., that FB/Instagram should have been stopped—is taken as a matter of faith. And yet there is virtually no economic literature on the topic—on how you identify if a given firm is a potential competitor, how you estimate the probability of entry or competitive significance, how you estimate the magnitude of a potential entrant’s constraining effects, how you incorporate inevitable dynamic changes over time (possibly before entry) in such an analysis, how you measure error costs, etc.

To be sure it must be the case that potential competition in the abstract helps to restrain firm conduct—some of us have been screaming this for years, while arguing that it should be part of market definition /effects analysis. Meanwhile, the same people now calling for consideration of potential competition have all the while refused to acknowledge that it exists and rejected it out of hand. We are all “contestable marketeers” now, apparently.

Those who advocate for potential competition merger enforcement think they see potential competitors everywhere, even though they are the same people who have maintained that big tech platforms are unassailable. These aren’t necessarily inconsistent if one assigns a probability of entry/competitive constraint to each and those actually line up with the assumptions. But that’s not how it’s offered. Rather, it’s an inconsistent, very poorly specified thing—but the one thing that’s clear is that the probability assigned to possible entry by a would-be merging party is everywhere and always larger than the probability that out-of-market entry would restrain incumbent conduct. *This* is, indeed, an inconsistent and logically unsupportable position.

The approach advocated by critics to address potential competition in mergers seems to assign the full benefit of potential entry to a single firm. But that's not how it works. Sure, they say—if *anyone* was going to be a competitor to Facebook it was Instagram. But they don't actually know that; it's post hoc rationalization. And the reality is that new potential competitors arise from unexpected quarters all the time. So while that overall effect of potential competition in the abstract may be to constrain potentially anticompetitive conduct by some amount, the effect of removing even what appears to be the “most promising” competitor is, by definition, less than that, and quite possibly considerably less.

C. Corporate espionage or business intelligence?

The Stigler Center Report also promotes the kill-zone theory of harm by focusing on the alleged importance of monitoring and surveillance tools in entrenching dominant incumbents:

Facebook... acquired a mobile phone monitoring app, Onavo, which allows it to spot up-and-coming rivals and buy them or snuff them out. While investment in innovation will continue, the type of innovation that will be funded will be broadly determined by the incumbent and its strategies. Disruptive innovation in markets that are characterized by high concentration levels and network effects is likely to be reduced compared to a competitive market. One of the few sources of entry in digital platforms comes from rival platforms that enter each other's markets, as these large firms are more able to overcome entry barriers of all kinds.³²⁹

The concern about mobile phone monitoring is a difference of degree, not kind. Businesses have always collected information about their competitors (often via their customers). Brick-and-mortar retailers have scanner data from their checkout terminals that tell them the time, location, price, and quantity of each stock-keeping unit (SKU) sold. Moreover, stores with loyalty programs also know the identity of the individual who made each purchase. These programs help retailers better understand consumer tastes and preferences, leading to higher quality products and services. In many cases, the retailer realizes it can satisfy consumer demand most efficiently by producing the product directly. At virtually every large retailer in the US, these private label goods are a significant source of revenue. And since store-brand goods tend to be priced lower than national-brand goods, consumers benefit as well.

It is far from clear where regulators should draw the line between procompetitive market research and anticompetitive corporate espionage. Learning what consumers want by monitoring their behavior is just as likely an avenue for serving them better as it is for “snuffing” out competitors.

The companies are not, after all, accused of stealing trade secrets of proprietary information, but of using data they are entitled to access in order to make competitively appropriate decisions. And it is worth considering the full picture of these accusations. Platforms are essentially accused of using

³²⁹ STIGLER CENTER REPORT, *supra* note 228, at 54.

observational data from their platforms to optimize their own strategic decisions about what products and services to offer. This is to say that these firms are tailoring their own output to consumer preferences, thereby enabling them to expand production at theoretically lower prices (a theory which appears to be empirically verifiable for anyone using one of these platforms). Thus, the remedy that would be imposed—prohibiting firms from acting upon information that would optimize their production processes—is equivalent to demanding that production of goods and services be less efficient, and consumers thereby pay higher prices and have less choice.

A strange policy prescription, to say the least. This is particularly strange when one considers the nature of these platforms. Amazon, for example, is a marketplace to which third-party sellers willingly come to sell their goods. They voluntarily enter into agreements with Amazon to sell their products on known terms. They are entirely at liberty to remove their goods from Amazon and sell them either one of Amazon’s online competitors, or else choose to use any number of well-developed offline channels for selling their goods. And defecting to a competitor or offline channel would remove all competitively-useful information from Amazon. Thus, if the true value of maintaining privacy around sales data actually outweighed the value of selling goods through Amazon’s marketplace, those third-party sellers would defect. That they have not yet defected en masse speaks volumes.

Moreover, even the so-called “kill zones” may *actually* be highly innovative and procompetitive. Offering a take on “kill zone” theory inspired by similar phenomena in the pharmaceutical industry, the Report opines that the presence of “kill zones”

calls for a new innovation-based theory of harm in merger control. Essentially, the Commission should explore whether the merger brings about a risk of a “cannibalisation effect”: is there a plausible scenario in which the target, using its innovation, could “eat into the market of the acquirer”? If yes, would the acquirer then have an incentive to delay or cancel potential innovation?³³⁰

But as the report itself goes on to note, these acquisitions in the tech industry are distinct in nature from those in the pharmaceutical industry:

There may indeed be cases in the digital realm where a dominant acquirer buys up innovative targets but later shuts down the relevant innovation. This is, however, not the typical scenario. **Frequently, the project of the bought-up start-up is integrated into the “ecosystem” of the acquirer or into one of their existing products. Such acquisitions are different from killer acquisitions as the integration of innovative complementary services often has a plausible efficiency rationale. In these cases, the theory of harm becomes more complex.**

³³⁰ Crémer et al., *supra* note 229, at 117, available at <http://ec.europa.eu/competition/publications/reports/kd0419345enn.pdf>.

Thus, although some of the innovative developments that originate from outside of a dominant firm are brought within that firm, it is not done so to *kill* those innovations but to *integrate* them into existing service offerings. There are certainly benefits and costs to this approach—one benefit being that a firm with large scope and scale and a large amount of capital can help introduce new innovations to a ready consumer base. But, no matter what, it’s simply a mistake to say that acquisitions *kill* innovation—they at worst transform the way that the production of innovation is undertaken.

It is common for entrepreneurs to explicitly include an acquisition by an incumbent as part of their “exit” strategy when they are discussing their business plan with potential investors. Insofar as startups may avoid directly competing with the core product offerings of large incumbents, they also consider how their technology might fit into an incumbent’s broader platform or ecosystem (and therefore make their companies ripe for acquisition). One startup co-founder described how some startups “identify what’s missing in someone’s portfolio and they build a company around it,” noting that “[m]any startups build their companies around an exit strategy.”³³¹ There are even comprehensive guides available online for founders who want to better understand the acquisition strategies of the most acquisitive tech giants.³³²

To make out a real case that a kill-zone exists, and that it is harming competition, critics of the current standard need to show that total innovation, both in large firms and startups, is decreasing. It would be a mistake for policymakers to pursue what amounts to industrial policy by favoring innovation within small firms over innovation within large firms, without demonstrating the necessary connection between firm size and innovative capacity. Consumer welfare is agnostic to firm size holding all else equal. The goal then should be to maximize innovation in the aggregate.

III. Market structure and innovation

At the heart of the previous sections lies a key underlying question: how does a market’s structure affect innovation? This crucial question has occupied the world’s brightest economists for almost a century, from Schumpeter who found that monopoly was optimal,³³³ through Arrow who concluded that competitive market structures were key,³³⁴ to the endogenous growth scholars who empirically derived an inverted-U relationship between market concentration and innovation.³³⁵ Despite these pioneering contributions to our understanding of competition and innovation, if the past century

³³¹ Val Stepanova, *Startup Acquisitions: What’s Grace Got To Do With It?*, CRUNCHBASE (Jun. 18, 2018), <https://about.crunchbase.com/blog/startup-acquisitions-exit-strategy/>.

³³² Conner Forrest, *The M&A Strategies of 10 Tech Giants: A Founder’s Guide to Selling Your Start Up*, TECHREPUBLIC (May 29, 2015), <https://www.techrepublic.com/article/the-m-a-strategies-of-the-top-10-tech-companies/>.

³³³ See J.A. SCHUMPETER, *CAPITALISM, SOCIALISM AND DEMOCRACY* 72 (1976).

³³⁴ See Kenneth Arrow, *Economic Welfare and the Allocation of Resources for Invention*, in *THE RATE AND DIRECTION OF INVENTIVE ACTIVITY: ECONOMIC AND SOCIAL FACTORS* 620 (Richard R. Nelson ed., 1962).

³³⁵ See, e.g., Philippe Aghion, Nick Bloom, Richard Blundell, Rachel Griffith & Peter Howitt, *Competition and Innovation: An Inverted-U Relationship*, 120 Q. J. ECON. 702 (2005).

of innovation economics has taught us anything it is that no market structure is strictly superior at generating innovation. Just as the SCP paradigm ultimately faltered because structural presumptions were a weak predictor of market outcomes,³³⁶ so too have dreams of divining the optimal market structure for innovation.³³⁷ Instead, in any given case, the right market structure likely depends on a plethora of sector- and firm-specific characteristics that range from the size and riskiness of innovation-related investments to the appropriability mechanisms used by firms, regulatory compliance costs, and the rate of technological change, among many others.

Given these economic findings, it may come as a surprise that numerous critics of the antitrust status quo believe they have cracked the innovation market structure conundrum. In a series of scholarly articles,³³⁸ reports,³³⁹ and responses to the FTC’s hearings, these critics wrongly conclude that more firms in any given market will systematically lead to greater choice and more innovation for consumers. We call this the “Structuralist Innovation Presumption.” And it is not just scholars who are calling for this type of presumption. In Europe, for instance, this type of reasoning seems to have played a pivotal role in the recent *Google Android* decision (although the text of the Commission’s decision is not yet publicly available), as well as numerous other decisions.³⁴⁰

A. The structuralist innovation delusion

The Structuralist Innovation Presumption is a misguided heuristic that the FTC would do well to avoid. Although it has been almost unequivocally endorsed by some scholars and competition authorities in foreign jurisdictions, notably the European Commission³⁴¹, the presumption is at odds

³³⁶ See generally INDUSTRIAL CONCENTRATION: THE NEW LEARNING (Harvey J. Goldschmid, H. Michael Mann, and J. Fred Weston eds., 1974), and see especially Harold Demsetz, *Two Systems of Belief About Monopoly*, in *id.* at 164-184. See also Sam Peltzman, *The Gains and Losses from Industrial Concentration*, 20 J. L. & ECON. 229 (1977); Yale Brozen, *The Concentration-Collusion Doctrine*, 46 ANTITRUST L. J. 826 (1978).

³³⁷ See, e.g. Michael L. Katz & Howard A. Shelanski, *Mergers and Innovation*, 74 ANTITRUST L. J. 1, 22 (2007) (“The literature addressing how market structure affects innovation (and vice versa) in the end reveals an ambiguous relationship in which factors unrelated to competition play an important role.”).

³³⁸ See, e.g., Carl Shapiro, *Competition and Innovation: Did Arrow Hit the Bull’s Eye?*, in THE RATE AND DIRECTION OF INVENTIVE ACTIVITY REVISITED 361-404, (2011). See also, Giulio Federico, Fiona Scott Morton & Carl Shapiro, *Antitrust and Innovation: Welcoming and Protecting Disruption*, in INNOVATION POLICY AND THE ECONOMY, VOLUME 20 (2019). See also, Kevin W Caves & Hal J Singer, *When the Econometrician Shrugged: Identifying and Plugging Gaps in the Consumer Welfare Standard*, 26 GEROGE MASON LAW REVIEW, Forthcoming (2018).

³³⁹ See STIGLER CENTER REPORT, *supra* note 228; DIGITAL COMPETITION EXPERT PANEL, UNLOCKING DIGITAL COMPETITION (Mar. 2019), https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/785547/unlocking_digital_competition_furman_review_web.pdf.

³⁴⁰ See Dirk Auer, *Structuralist Innovation: A Shaky Legal Presumption in Need of an Overhaul*, CPI ANTITRUST CHRONICLE, DECEMBER, 3 (2018).

³⁴¹ *Id.*

with the mainstream economics of innovation.³⁴² To make matters worse, structuralist innovation also ignores the complex second-order effects that may arise when antitrust intervention tampers with rapidly evolving markets.

The concept of structuralist innovation is best illustrated in a recent speech, given by European Commissioner for Competition Margrethe Vestager. Speaking of the *Google Shopping* case, she surmised that:

“[Google’s behavior] got in the way of the competition that drives innovation forward.... [B]y making sure these markets are open for competition, our decision will help innovation to thrive.”³⁴³

Her conclusion is clear: A larger number of competitors in a market leads to more innovation.

Other commentators have voiced similar opinions. Most notably, the report published by the Stigler Center (citing a working paper by Giulio Federico, Fiona Scott Morton and Carl Shapiro) claims that:

There is significant theoretical and empirical research that concludes that anticompetitive creation or maintenance of market power will cause a reduction in the pace of innovation. This result is intuitive in the sense that firms “run faster” when they face competitors; competing firms will try to offer a better product on any dimension consumers care about, including innovation.³⁴⁴

Mischaracterizing the complex literature concerning the interplay between competition and innovation, the Furman Report reaches a similar conclusion:

Concentration in digital markets can have benefits but also can give rise to substantial costs [...] Most concerning, it could impede innovation as larger companies have less to fear from new entrants and new entrants have a harder time bringing their products to

³⁴² This is not to say that some economists do not believe that more competitive market structures generally lead to more innovation. But rather that these writings have (i) not garnered a wide consensus among the economics profession, and (ii) often rest on narrow assumptions that reduce their application to specific settings. See, e.g. Carl Shapiro, *Competition and Innovation: Did Arrow Hit the Bull’s Eye?*, in *THE RATE AND DIRECTION OF INVENTIVE ACTIVITY REVISITED* 400 (Josh Lerner and Scott Stern eds., 2011). See also Ilya Segal & Michael D. Whinston, *Antitrust in Innovative Industries*, 97 *AM. ECON. REV.* 1712 (2007). For instance, both of the above papers conclude that exclusivity, though it may increase innovator’s *ex-post* profits, is unlikely to increase incentives to innovate because it prevents entry by more innovative rivals. To reach this conclusion, the authors notably assume that consumers that are bound by exclusivity contracts never find it profitable to purchase the innovation of a second firm (they assume the innovation costs more to produce than the value to consumers of its incremental improvement). There is no reason to believe that this is, or is not, a good reflection of reality.

³⁴³ See Margrethe Vestager, European Comm’r for Competition, Lisbon Web Summit (Nov. 7, 2017), available at https://ec.europa.eu/commission/commissioners/2014-2019/vestager/announcements/clearing-path-innovation_en.

³⁴⁴ GEORGE J. STIGLER CENTER FOR THE STUDY OF THE ECONOMY AND THE STATE & THE UNIVERSITY OF CHICAGO BOOTH SCHOOL OF BUSINESS, COMMITTEE FOR THE STUDY OF DIGITAL PLATFORMS AND MARKET STRUCTURE AND ANTITRUST SUBCOMMITTEE 53 (May 15, 2019), <https://www.judiciary.senate.gov/imo/media/doc/market-structure-report%20-15-may-2019.pdf>.

market – creating a trade-off where the potential dynamic costs of concentration outweigh any static benefits.³⁴⁵

Likewise, during the FTC’s hearings, Roger McNamee surmised that:

The effect of this is that for the first time in 60 years, the country is relying on monopolists for innovation. This is demonstrably suboptimal.³⁴⁶

Meanwhile, quoting Douglas Melamed, Cristina Caffara opined that:

[I]n a probabilistic sense, markets in which you have more competition, more active competition, tend to favor more innovation rather than markets where we just sat around a very strong monopoly and a dominant firm.³⁴⁷

The commonality between these positions is readily apparent. Proponents assume that reducing the number of rival firms in a market will, by the same token, also harm innovation. In other words, it is alleged that numerically increasing competitors *in the market* systematically produces more innovation, to the benefit of consumers.

B. A presumption at odds with mainstream economics

Despite the superficial allure of connecting innovation and the quantity of competitors by a simplistic linear relationship, the actual presence of innovation in a market is related to a much richer set of conditions. To begin to understand the dynamics of innovation, it is first necessary to understand a crucial distinction between competition *for the market* and competition *in the market*.

On some basic level, the idea that competition is a key driver of innovation is undoubtedly true. Ever since the writings of Schumpeter, it has been uncontroversial that competition to attract consumers may spur firms to innovate. In this light, the invention of the automobile can be seen as a competitive response to horses; consumer air travel initially vied for the same consumers that used trains and boats; etc. As Schumpeter wisely observed, this type of creative destruction is not necessarily the fruit of old incumbents.³⁴⁸ Instead, it is often down to aspiring firms that seek to displace the incumbent, rather than languish in its shadow.

³⁴⁵ DIGITAL COMPETITION EXPERT PANEL, UNLOCKING DIGITAL COMPETITION 4 (Mar. 2019), https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/785547/unlocking_digital_competition_furman_review_web.pdf.

³⁴⁶ FTC Hearing #3 Day 1, *supra* note 317, at 182, https://www.ftc.gov/system/files/documents/public_events/1413712/ftc_hearings_session_3_transcript_day_1_10-15-18.pdf.

³⁴⁷ FTC Hearing #3 Day 2, *infra* note 263, at 287 (statement of Christa Caffara, Vice President, Charles River Associates).

³⁴⁸ See J.A. SCHUMPETER, THE THEORY OF ECONOMIC DEVELOPMENT: AN INQUIRY INTO PROFITS, CAPITAL, CREDIT, INTEREST, AND THE BUSINESS CYCLE 66 (1934) (“On the contrary, new combinations are, as a rule, embodied, as it were, in new firms which in general do not arise out of the old ones but start producing beside them... in general it is not the owner of stage-coaches who builds railways.”).

This vision is one of competition *for the market*, where monopoly power is transitory, and where firms compete to overthrow incumbents in apparently different markets, potentially moving industries towards new standards or paradigms in the process.³⁴⁹ This is not to say that incumbents cannot also be highly innovative, but rather that (i) entrants do not need to be present in a market before they innovate, or induce innovation by incumbents; and (ii) it is not clear what competition authorities (or entrenched incumbents, for that matter) can do to manage (or prevent) this type of innovation. To take just one of innumerable examples: Blackberry was unable to prevent Apple from disrupting its business, even though Apple had never sold a mobile handset before the iPhone, and Blackberry had a commanding position on the market.³⁵⁰

Although *competition for the market* is frequently a crucial driver of innovation, it can only be (and is) tangentially addressed by current antitrust regimes. Instead, these laws tend to focus more heavily on competition *within* well-defined markets—that is, on *competition in the market*.³⁵¹ In that regard, the indicia of competition upon which current antitrust regimes tend to focus may, when considered within the context of innovation, point in the wrong direction. Indeed, whereas *competition for the market* is a key driver of innovation, it does not follow that ever-more competition in each and every market is necessary, or even desirable, to achieve the optimal rate of innovation in an economy. As Harold Demsetz put it:

Once perfect knowledge of technology and price is abandoned, [competitive intensity] may increase, decrease, or remain unchanged as the number of firms in the market is increased.... [I]t is presumptuous to conclude.... that markets populated by fewer firms perform less well or offer competition that is less intense.³⁵²

In the more circumscribed realm of antitrust law, and *competition in the market*, economists have long fretted over the type of market structure that would be most conducive to the production of innovations. The Schumpeterian view suggests that monopolies are naturally better suited to innovating because they have superior access to capital and, presumably, are not hampered by the free-riding that plagues competing innovators.³⁵³ In turn, these monopolies compete against each other to create new markets and disrupt existing ones.³⁵⁴ At the other end of the spectrum, Arrow considered that competitive market structures are indeed necessary for firms to produce the second-best rate of innovation (according to him, markets necessarily produce suboptimal incentives to innovate,

³⁴⁹ See, e.g., David J. Teece, *Strategies for Managing Knowledge Assets: The Role of Firm Structure and Industrial Context*, 33 LONG RANGE PLANNING 47 (2000).

³⁵⁰ See Vlad Savov, *BlackBerry's Success Led to Its Failure*, THE VERGE (Sep. 30, 2016), <https://www.theverge.com/2016/9/30/13119924/blackberry-failure-success>.

³⁵¹ See William M. Landes & Richard A. Posner, *Market Power in Antitrust Cases*, 94 HARV. L. REV. 960 (1981).

³⁵² See Harold Demsetz, *The Intensity and Dimensionality of Competition*, in HAROLD DEMSETZ, *THE ECONOMICS OF THE BUSINESS FIRM: SEVEN CRITICAL COMMENTARIES* 137, 140-41 (1995).

³⁵³ See Schumpeter, *supra* note 348, at 72, 91 & 396.

³⁵⁴ *Id.* at 66. See also, Nicolas Petit, *Technology Giants, the M oligopoly Hypothesis and Holistic Competition: A Primer*, WORKING PAPER (2016).

prompting a stern rebuttal from Harold Demsetz).³⁵⁵ Taking a more empirical perspective, the endogenous growth scholars have shown that intermediate market structures tend to produce higher rates of innovation, though endogenous factors affect the optimal market structure in any given case, and optimal firm size changes over time.³⁵⁶

Do any of these views support the Structuralist Innovation Presumption? The answer is clearly no. Take the point of view that is most favorable to the Structuralist Innovation Presumption. Arrow did indeed suggest that perfectly competitive markets would produce more innovation than monopolies.³⁵⁷ But the story did not stop there. Because the prospect of monopoly profits was necessary to spur these competitors to innovate, Arrow was immediately faced with a time consistency problem. *Ex-ante*, a benevolent social planner would want to give the winning innovator a monopoly over its creation, but *ex-post* the same planner would remove all protections in order to spur further innovation.³⁵⁸ Under Arrow's model, an economy where perfect competition is enforced in every market would produce no innovation whatsoever. Moreover, his model ignores the potential for firms active in different markets to compete against each other and introduce innovations in markets that are yet to be created or in which they don't yet compete. When this is the case, a monopolist (either threatened by entry or vying to enter an unrelated market) will act as a firm in a "competitive" market would, because innovating does not cannibalize its current sales.³⁵⁹ In short, promoting innovation is a balancing act that is simply incompatible with the idea that atomistic market structures invariably increase innovation.

Likewise, scholars have also cited the endogenous growth literature to support the conclusion that greater competition in the market produces greater innovation. Quoting his own previous work (which cites the endogenous growth literature), Carl Shapiro and his co-authors conclude that:

³⁵⁵ See Arrow, *supra* note 334 **Error! Bookmark not defined.**, at 620. See also Demsetz, *Information and Efficiency*, *supra* note 53, at 19 (arguing that, under modest changes in assumptions, monopoly is more favorable to innovation and that antitrust law should thus be pursued less diligently).

³⁵⁶ See Aghion et al., *supra* note 335, at 702 ("The essence of the inverted-U relationship between competition and innovation is that the fraction of sectors with neck-and-neck competitors is itself endogenous, and depends upon equilibrium innovation intensities in the different types of sectors."). See also Robert E. Lucas Jr., *On the Size Distribution of Business Firms*, BELL J. ECON. 508 (1978). (showing that average size of firms increases with GDP. This is because a firm's size is a reflection of economic agents' ability to manage, and because more advanced economies are better at fostering the human capital necessary to produce good managers.). The upshot is that the relationship between industry concentration and innovation might be expected to veer further towards large firms as economies continue to grow.

³⁵⁷ See Arrow, *supra* note 334, at 620.

³⁵⁸ *Id.* at 617 ("[I]n a free enterprise economy the profitability of invention requires a nonoptimal allocation of resources.").

³⁵⁹ The importance of this incremental increase in post-innovation rents, rather than *ex-ante* market structures, was notably stressed by Aghion and his co-authors. See Aghion et al., *supra* note 335, at 702 ("Innovation incentives depend... upon the difference between postinnovation and preinnovation rents of incumbent firms.").

Shapiro (2012) addresses in detail the proposition that “too much competition might be bad for innovation.” He highlights the considerable empirical evidence that greater competition – meaning that future sales are more contestable – spurs innovation.³⁶⁰

But the endogenous growth literature is far more nuanced than Shapiro his co-authors care to acknowledge. One key finding is that there is an inverted-U relationship between market structure and innovation. This rests upon a straightforward intuition: incentives to innovate are mostly driven by the difference between pre- and post-innovation rents. Reducing firms’ market power, for example through antitrust intervention, thus has an ambiguous effect on innovation (it reduces both pre and post innovation rents). The upshot is that, contrary to what Shapiro and his co-authors claim, there are indeed situations where reduced competition *in the market* can be expected to boost innovation:

Innovation incentives depend not so much upon postinnovation rents, as in previous endogenous growth models where all innovations are made by outsiders, but upon the difference between postinnovation and preinnovation rents of incumbent firms. In this case, more competition may foster innovation and growth, because it may reduce a firm’s preinnovation rents by more than it reduces its postinnovation rents. In other words, competition may increase the incremental profits from innovating, and thereby encourage R&D investments aimed at “escaping competition.” This should be particularly true in sectors where incumbent firms are operating at similar technological levels; in these “neck-and-neck” sectors, preinnovation rents should be especially reduced by product market competition. On the other hand, **in sectors where innovations are made by laggard firms with already low initial profits, product market competition will mainly affect postinnovation rents, and therefore the Schumpeterian effect of competition should dominate.**³⁶¹

Presumably summarizing this vast and diverse economic literature, during his FTC testimony, Paul Denis surmised that:

Here again, this asymmetry issue that I mentioned earlier comes into play, with agency practice seeming to reflect an expectation that reduced innovation incentives are the more likely outcome resulting from mergers, rather than an increase in innovation. The source of this asymmetry is perplexing to me, because despite all the focus on innovation, we do not have a generally applicable theory of innovation that links innovation to mergers or links innovation to market structure. Economists have written countless models that attempt to predict innovation, and within the confines of the assumptions of those models, they work, but determining which of these countless models to apply in a given

³⁶⁰ See Federico, et al., *Antitrust and Innovation: Welcoming and Protecting Disruption* 10. 2019. See also, Shapiro, *Competition and Innovation: Did Arrow Hit the Bull’s Eye?* 362. 2011.

³⁶¹ See Philippe Aghion, Nick Bloom, Richard Blundell, Rachel Griffith & Peter Howitt, *Competition and innovation: An inverted-U relationship*, 120 Q. J. ECON., 702 (2005).

real world situation, where the real world situation doesn't conform to the assumption of any of the models precisely, remains a dark art at best.³⁶²

Indeed, even if the Structuralist Innovation Presumption were in line with the mainstream economics of innovation – and it is not – it would still likely fail as a heuristic for antitrust decision-making. As Schumpeter famously noted (referring to the notion that competitive market structures produce more innovation):

The conclusions... are almost completely false. Yet they follow from observations and theorems that are almost completely true.³⁶³

Schumpeter's point (like Yde's) is that the world is infinitely more complex than an economic model, and it is rarely possible for authorities to modify a single parameter of competition without giving rise to complex second-order effects. Unlike economic models, antitrust authorities cannot maintain other things equal when they operate. Once these secondary effects are accounted for, it becomes even more speculative to suggest that atomistic market structures necessarily increase innovation.

C. Appropriability: A more sophisticated tool

As soon as these nuanced findings are accounted for, antitrust reform advocates must contend with a significant challenge. Not only must they seek to protect competition, but they must also ensure that their interventions do not chill innovation by preventing firms from earning a positive expected return on their inventions. Whether firms will be able to do so notably hinges on appropriability – that is, the extent to which an innovator can capture the social benefits of its innovation. The higher the level of appropriability, the more likely a firm is to earn a positive return on its investments in innovation.

The notion of appropriability, at least as is it currently understood, owes a great debt to the works of David Teece. In a seminal paper, Teece showed that appropriability is affected not just by intellectual property but by a wide array of other factors.³⁶⁴ These include the ease with which rivals can copy or reverse-engineer an innovation, whether the knowledge that underpins it is tacit or codified, and whether the innovator owns complementary assets, among others.³⁶⁵ Teece's work also provides another critical insight: appropriability is not given by nature; instead it is up to firms to shape their business environment so as to earn a return on their inventions.

Firms' attempts to generate appropriability for themselves will inevitably raise competition issues, as protecting their profits will generally imply the exclusion of at least some potential competitors. For

³⁶² *FTC Hearing #3 Day 3, supra* note 226, at 196 (statement of Paul Denis, Partner, Dechert LLP).

³⁶³ See Schumpeter, *supra* note 2, at 72.

³⁶⁴ See David J. Teece, *Profiting From Technological Innovation: Implications for Integration, Collaboration, Licensing and Public Policy*, 15 RESEARCH POL'Y 285 (1986).

³⁶⁵ *Id.*

example, keeping an innovation secret may prevent a firm's rivals from using the underlying information to compete against it in the market. Likewise, using monopoly power over a complementary good to make an innovation profitable implies that rivals may be excluded from both the monopoly market and the innovation market (the latter because they may not have access to a complementary good in order to generate some appropriability). It is this sort of appropriability through complementary goods that was at stake in the European Commission's *Google Android* decision.³⁶⁶

Accordingly, policymakers must decide whether firms should be given some leeway to engage in nominally anticompetitive conduct when this increases appropriability over their innovations, or whether this type of exclusion is solely the domain of intellectual property protection.³⁶⁷ The abundant empirical literature on this topic is unambiguous: Except for some patent-heavy industries like pharmaceutical and chemical goods, intellectual property protection is far from being the most important source of appropriability for innovators.³⁶⁸ Instead, firms tend to rank lead-time and secrecy as being more important than patents. Owning complementary assets is also high on the list of appropriability mechanisms.³⁶⁹

The upshot is that, based on our current understanding of economic science, it is impossible to identify a single type of market structure that is strictly superior at producing innovations.³⁷⁰ On the contrary, the optimal setting for innovation depends upon numerous factors, most notably the way in which firms in each industry manage to appropriate the benefits of their innovations. These appropriation strategies will inevitably affect a market's structure. Authorities thus cannot dismiss the possibility that, in some cases at least, tolerating behavior that increases a market's concentration will also foster innovation, because the increased concentration is a direct consequence of firms' appropriability decisions. The Structuralist Innovation Presumption ignores this complex interplay.

³⁶⁶ See Dirk Auer, *Appropriability and the European Commission's Android Investigation*, 23 COLUM. J. EUR. L. 647 (2017).

³⁶⁷ Even then, they also need to decide when business conduct surrounding IP itself is problematic, most obviously in the context of standard setting organizations and SEPs. See, e.g. Mark A. Lemley & Carl Shapiro, *Patent Holdup and Royalty Stacking*, 85 TEX. L. REV. 1991 (2006).

³⁶⁸ See Edwin Mansfield, *Patents and Innovation: An Empirical Study*, 32 MANAGEMENT SCI. 175-176 (1986). See also Richard C. Levin, Alvin K. Klevorick, Richard R. Nelson, Sidney G. Winter, Richard Gilbert & Zvi Griliches, *Appropriating the Returns From Industrial Research and Development*, 1987 BROOKINGS PAPERS ON ECON. ACTIVITY 797 (1987); Najib Harabi, *Appropriability of Technical Innovations an Empirical Analysis*, 24 RESEARCH POL'Y 981 (1995).

³⁶⁹ See Wesley M. Cohen, Richard R. Nelson & John P. Walsh, *Protecting Their Intellectual Assets: Appropriability Conditions and Why US Manufacturing Firms Patent (Or Not)*, No. w7552 NBER 5 (2000).

³⁷⁰ See Katz & Shelanski, *supra* note 337, at 14 (“[T]he linkage between *current* concentration and *future* price and output competition and resulting welfare may be weak in some circumstances, notably when there is significant, ongoing innovation. This is so because innovation may be unrelated to the concentration of current sales and may make future market structures hard to predict. In other words, in markets in which innovation is significant, the traditional concentration-competition relationship is on a weaker or more nuanced empirical and theoretical footing than otherwise.”).

IV. Concluding remarks: Digital competition and the Nirvana fallacy

Given all that precedes, one of the most glaring flaws with recent reports, as well as much of the criticism voiced during the FTC hearings, lies in the failure to acknowledge the acute potential for regulatory failure in digital markets. Critics thus fall prey to the Nirvana fallacy because they assess perceived flaws in digital markets against an idealized competitive benchmark, rather than the likely real-world results of antitrust intervention.³⁷¹

For a start, both common sense and empirical evidence shows that digital markets are currently providing swaths of consumer surplus to users. Empirical research by Eric Brynjolfsson and his co-authors shows that consumers often attach tremendous value to online services which they can currently use “free of charge”. Some of the most glaring examples include WhatsApp, Facebook and digital maps, which median users are only willing to forgo, for one month, in exchange for €536, €97 and €59, respectively.³⁷² Likewise, groundbreaking research by, among others, Steven Levitt and Robert Metcalfe, estimated that Uber generated \$2.9 Billion in consumer surplus in the United States, in the year 2015.³⁷³ In short, although critics may quibble about the exact amount of consumer surplus generated by digital goods, it is undeniably the case that consumers are currently enjoying vast amounts of consumer surplus.

A second important point is that previous antitrust interventions in high-tech industries have often ended with disappointing results. In Europe, competition intervention against Microsoft led to two remedies, both of which were completely rejected by the market.³⁷⁴ The US’s antitrust case against IBM, in the 1980s, dragged on for years and drew massive agency resources with no tangible results. Robert Bork dubbed it the DOJ’s Vietnam.³⁷⁵ Finally, the European Commission’s multiple decisions against Google seem to be going in exactly the same direction.³⁷⁶ The upshot is that, even on

³⁷¹ See Demsetz, *Information and Efficiency*, *supra* note 53.

³⁷² See, e.g., Erik Brynjolfsson, Avinash Collis & Felix Eggers, *Using Massive Online Choice Experiments to Measure Changes in Well-being*, 116 PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES 7252 (2019).

³⁷³ See Peter Cohen, Robert Hahn, Jonathan Hall, Steven Levitt & Robert Metcalfe, *Using Big Data to Estimate Consumer Surplus: The Case of Uber*, NBER WORKING PAPER SERIES, 1 (2016).

³⁷⁴ One of the remedies which the EU Commission imposed upon Microsoft was to sell a version of the Windows OS without the Windows Media Player bundled. Only 1,787 copies were ever sold. See Christian Ahlborn & David S. Evans, *The Microsoft Judgment and its Implications for Competition Policy Towards Dominant Firms in Europe*, 75 ANTITRUST LJ, 24 (2008). Microsoft spontaneously stopped implementing another one of the remedies imposed by the EU. It took more than a year for anyone to notice. See, e.g., Gregg Keizer, *Microsoft nixes EU browser ballot screen*, COMPUTERWORLD (Dec. 18, 2014), <https://www.computerworld.com/article/2860886/microsoft-nixes-eu-browser-ballot-screen.html>.

³⁷⁵ See BORK, ANTITRUST PARADOX, *supra* note 45, at 432.

³⁷⁶ See, e.g., Katie Collins, *Google accused of failing to comply with EU shopping ruling by rivals*, CNET (Nov. 23, 2018), <https://www.cnet.com/news/google-accused-of-failing-to-comply-with-eu-shopping-ruling-by-rivals/>. See also, Aoife White, *Google Struggles to Give Android Users App Choices, EU Says*, BLOOMBERG (June 11, 2019), https://www.bloomberg.com/news/articles/2019-06-11/google-struggles-to-give-android-users-choice-of-apps-eu-says?utm_source=google&utm_medium=bd&cmpid=google.

the assumption that a practice is harming consumer welfare, it is notoriously hard to devise a remedy that improves rather than exacerbates the situation.

Given the substantial consumer surplus gains generated by digital goods and the difficulty associated with designing effective remedies in high-tech markets, it is critical that authorities do not throw the baby out with the bathwater. As has already been mentioned, at a first order of approximation, network effects and increasing returns to scale imply that market concentration is more, not less, desirable from of social welfare standpoint. The FTC should thus avoid knee-jerk calls to “do something”, and instead rely on the tried and tested consumer welfare standard and error-cost framework³⁷⁷ that have guided it for decades. So far, there has simply not been any proof that these lodestars fail to deliver strong outcomes for consumers.

It is important to understand the limits of the claims discussed here: Just as there is no reason to believe that more-atomistic market structures are systematically more conducive to innovation than concentrated ones, it is equally uncertain that monopolies are necessarily superior. Rather, the crucial point is that a sound reading of economic science calls for meticulous assessments in actual cases to determine whether restrictions on a firm’s practices will improve or hamper innovation. Although this may seem like a daunting task, it is better than the alternative, which is to rely on presumptions that have no basis in either theoretical science or fact.

A central theme of the FTC’s hearings is the question of how antitrust authorities should deal with the fast-moving world of digital platforms, and how they can protect consumers without harming innovation. In that regard, our report suggests that authorities concerned with safeguarding innovation should at all costs steer clear of naïve heuristics, such as the Structuralist Innovation Presumption discussed above. Although applying this type of presupposition might appear to make enforcement “easier,” reducing the burden of proof they must meet to show anti-innovative effects would turn successfully prosecuted cases into pyrrhic victories, with consumers losing the most. Intervention risks doing more harm than good by shackling firms’ ability to offer consumers the best possible products. A more nuanced approach is thus required.

³⁷⁷ See Easterbrook, *The Limits of Antitrust*, *supra* note 45.

Section 5: Data Competition and Privacy

Introduction and Overview of Section 5

We are by now well-accustomed to speaking about data as a special case in the context of antitrust questions in the “new economy.”³⁷⁸ But the analysis of the antitrust implications of “big data” cannot be limited to data standing on its own. Data is generally quite useless on its own. This is why, following Machlup, economists have sought to distinguish data from information and information from knowledge (*infra*, Section III A).³⁷⁹

To be sure, data is an input into other economic processes, and, in that sense, in some circumstances, there may even be a relevant market for data or the possibility of data foreclosure or exclusionary conduct surrounding it.³⁸⁰ But even in these cases it is impossible to assess the consequences of business (and consumer) conduct surrounding data without understanding and assessing how data is used to generate more organized, more useful outputs.

Nonetheless, during the Commission’s sessions on the role of data in antitrust, numerous commenters offered a variety of opinions that consistently suggested:

1. Antitrust enforcers should regard the possession of large pools of data as unique, novel problems for competition policy;
2. Firms that offer zero-priced services to consumers but rely on leveraging data processing in order to make money on the converse side of their platform present a novel, unmanageable threat for existing antitrust law; and
3. Not only are large pools of privately held data a unique threat, but there are scant or nonexistent procompetitive reasons to justify business models that rely on gathering user data.

These views are deeply flawed and, as we discuss *infra*, are soundly refuted by the relevant literature. In short, data is not, as some claims, “the new oil”—it is neither rivalrous, nor exclusionary—and “possession” of *relevant* data is only by virtue of a firm applying its own business acumen to create information out of what is otherwise nearly valueless pieces of disconnected data.

Moreover, there is nothing particularly special about the presence of data on platforms characterized by strong network effects that warrants the outsized fear of data collection and usage evidenced by commenters. And not only is the fear unwarranted, those who voice it consistently neglect to include

³⁷⁸ See *Competition and Consumer Protection in the 21st Century: FTC Hearing #6 Day 2: Privacy, Big Data and Competition; Before the FTC*, FTC Transcript 117 (Nov. 7, 2018).

³⁷⁹ Charlotte Hess and Elinor Ostrom, *Introduction: An Overview of the Knowledge Commons*, in *UNDERSTANDING KNOWLEDGE AS A COMMONS: FROM THEORY TO PRACTICE* (Hess & Ostrom, eds. 2007).

³⁸⁰ See, e.g., *Competition and Consumer Protection in the 21st Century: FTC Hearing #6 Day 1: Privacy, Big Data and Competition; Before the FTC*, FTC Transcript 98 (Nov. 6, 2018) at 264 (statement of Haidee Schwartz, Partner, Akin Gump).

the benefits of data collection and processing by platforms, not least of which is that incredibly useful, highly tailored services exist to make life easier for countless millions that would not otherwise be possible.

Finally, when considering the “remedies” suggested by advocated for radical changes to the way data is treated in antitrust-relevant contexts, the commenters consistently neglect the very real possibility of regulatory failure that is highly probable in such fast-moving, dynamic markets as those in which many of the digital platforms today operate.

For the foregoing reasons, the Commission should take care to tread lightly on intrusive interventions that seek to penalize innovative business models that make extensive use of user data.

I. Contentions of the critics

One of the most common tropes about big data is that it is an entirely new form of economic input that creates unique challenges for antitrust enforcers. Along these lines, critics often claim that Big Data is “the new oil,” that it creates significant barriers to entry and, therefore, data creates a unique competitive threat.³⁸¹

Along these lines, in his testimony during the hearings, Nicholas Economides argued that the collection of data by Facebook and Google was a unique phenomenon:

One of the areas in which it seems that there is a market failure and antitrust cannot fix the problem is in the collection of data by companies such as Facebook or Google or others, without payment. So usually you would expect when some exchange happens that there is actually a price, but here the price is—has been set to zero.³⁸²

Perhaps the most common misconception about competition in digital markets concerns alleged data-related incumbency advantages (sometimes referred to as so-called “data network effects”). In a nutshell, critics argue that these features lead to winner-take-all markets where incumbents are unassailable (despite clear evidence that incumbents in digital markets routinely do get overthrown).³⁸³ They thus declare that antitrust authorities are currently ill-equipped to effectively police anticompetitive behavior in these markets. In the words of Jason Furman:

³⁸¹ See, e.g., Gabriel J.X. Dance, Michael LaForgia, & Nicholas Confessore, *As Facebook Raised a Privacy Wall, It Carved an Opening for Tech Giants*, NY Times (Dec. 18, 2018), <https://www.nytimes.com/2018/12/18/technology/facebook-privacy.html> (“Personal data is the oil of the 21st century, a resource worth billions to those who can most effectively extract and refine it.”) ; see also *The world’s most valuable resource is no longer oil, but data*, THE ECONOMIST (May 6, 2017), Louise Matsakis, *The Wired Guide To Your Personal Data (And Who Is Using It)*, WIRED (Feb. 15, 2019), <https://www.wired.com/story/wired-guide-personal-data-collection/>.

³⁸² *FTC Hearing #3 Day 2*, *supra* note 263, at 305 (statement of Nicholas Economides, Professor, NYU).

³⁸³ See, e.g., Geoffrey Manne & Alec Stapp, *This Too Shall Pass: Unassailable Monopolies That Were, in Hindsight, Eminently Assailable*, TRUTH ON THE MARKET BLOG (Apr. 1, 2019), <https://truthonthemarket.com/2019/04/01/this-too-shall-pass-unassailable-monopolies-that-were-in-hindsight-eminently-assailable/>.

If you look at something like the tech sector, you have seen a lot of innovation, but you also have platforms with network effects that lend themselves to scale, that might say that it is efficient to have a single producer at scale. It is also efficient to have a single municipal water company, but that does not mean we would want to let it go off and charge whatever it wanted to charge.

The cost of production of digital services is much less than proportional to the number of customers served. While this aspect is not novel as such (bigger factories or retailers are often more efficient than smaller ones), the digital world pushes it to the extreme and this can result in a significant competitive advantage for incumbents.³⁸⁴

During the hearing on big data, Jonathan Baker offered a possible theory of harm surrounding data built around this intuition:

I want to talk about a fourth potential competitive concern..., and that concern is exclusionary [conduct]. It supposes that a dominant firm has access to more or better data about customers or suppliers than do its rivals, and the concern is that the dominant firm will use that advantage to obtain, maintain, or extend its market power by excluding rivals.³⁸⁵

According to some, the data-related advantages of incumbency are related to the network effects common on platforms. For instance, during the FTC hearings, Jason Furman concluded that:

I think the big empirical question that I do not know the answer to [...] is if you think there is diminishing returns to data then you are a lot less worried about it then if you think there is some region of increasing returns. There is [sic] some people that deal with computer science that say, with machine learning, when you get past a certain point you get to this place where you can, you know, do the AI in a certain way that you could not do before you get to that scale.³⁸⁶

Many commenters focused on harms without referring to countervailing benefits, but some commenters went so far as to try to discredit potential benefits that can flow from data collection and use. In its comments on the topic, for example, Public Knowledge asserts that

[t]he available data bear out that this sort of “personalized pricing” is often not welfare enhancing for consumers. For example, “the lowest prices are more likely to be found in

³⁸⁴ *Competition and Consumer Protection in the 21st Century, FTC Hearing #1: The Current Landscape of Competition and Privacy Law and Policy, Before the FTC*, FTC Transcript 23-24 (Sept. 13, 2018) (statement of Jason Furman, Frmr. Chair, Council of Economic Advisers), available at https://www.ftc.gov/system/files/documents/public_events/1398386/ftc_hearings_session_1_transcript_9-13-18_0.pdf.

³⁸⁵ *FTC Hearing #6 Day 2*, *supra* note 378, at 16 (statement of Jon Baker, Professor, American University).

³⁸⁶ *FTC Hearing #1*, *supra* note 384, at 92 (statement of Jason Furman, Frmr. Chair, Council of Economic Advisers), https://www.ftc.gov/system/files/documents/public_events/1398386/ftc_hearings_session_1_transcript_9-13-18_0.pdf.

organic search results rather than in sponsored search results,” which are more likely to be “personalized.”³⁸⁷

Therefore, according to Public Knowledge, “there are ‘distributional’ effects of big data and personalized pricing, and those effects disproportionately benefit firms over individual consumers.”³⁸⁸

II. Is Big Data the “new oil”?

Before discussing the many problems contained in the comments relating to the antitrust analysis of data, it is important to first clear up a basic misconception. Neither the factual claim that “data is the new oil”³⁸⁹ nor the legal conclusions related to the claim stand up to even minimal scrutiny.

The “data as oil” metaphor fails on several dimensions. First, oil is rivalrous, while data is non-rivalrous.³⁹⁰ Second, oil is fungible, while data is nonfungible. Oil is a commodity so, by definition, one barrel of oil of a given grade is equivalent to any other barrel of that grade. Data, on the other hand, are heterogeneous: each person’s data are unique and may consist of a practically unlimited number of different attributes that can be collected into a profile.

Third, oil has positive marginal costs of production and distribution, while data collection and retention have near-zero marginal costs. Finally, oil is a search good (i.e., value can be assessed before purchase) while data are something more like an experience good. Data, in raw form, are nearly worthless. It is only when *relevant* data are gathered, combined with other relevant data, and that combination is then employed in business-relevant algorithms that value is derived.³⁹¹

³⁸⁷ Comments of Public Knowledge, FTC Hearings on Competition and Consumer Protection in the 21st Century, at 3 (Dec. 20, 2018) (citing Alessandro Acquisti, *The Economics of Big Data and Personal Information*, Testimony before the FTC Hearings on Big Data, Privacy, and Competition (Nov. 6, 2018)) [hereinafter “PK Comments”].

³⁸⁸ *Id.*

³⁸⁹ See, e.g., Gabriel J.X. Dance, Michael LaForgia, & Nicholas Confessore, *As Facebook Raised a Privacy Wall, It Carved an Opening for Tech Giants*, NY TIMES (Dec. 18, 2018), <https://www.nytimes.com/2018/12/18/technology/facebook-privacy.html> (“Personal data is the oil of the 21st century, a resource worth billions to those who can most effectively extract and refine it.”); see also *The world’s most valuable resource is no longer oil, but data*, THE ECONOMIST (May 6, 2017), <https://www.economist.com/leaders/2017/05/06/the-worlds-most-valuable-resource-is-no-longer-oil-but-data>; Louise Matsakis, *The Wired Guide To Your Personal Data (And Who Is Using It)*, WIRED (Feb. 15, 2019), <https://www.wired.com/story/wired-guide-personal-data-collection/>

³⁹⁰ Alan McQuinn, *No, Internet Users Are Not Paying With Their Data*, INSIDESOURCES (Aug. 07, 2018), <https://www.insidesources.com/no-internet-users-not-paying-data/>; see also Antonio Garcia Martinez, *No Data is Not the New Oil*, WIRED (Feb. 26, 2019), <https://www.wired.com/story/no-data-is-not-the-new-oil/> (“when consumers ‘pay with data’ to access a website, they still have the same amount of data after the transaction as before. As a result, users have an infinite resource available to them to access free online services”).

³⁹¹ MIT Technology Review Insights, *Data’s Identity in Today’s Economy*, MIT Technology Review, last accessed June 29, 2019, <https://www.technologyreview.com/s/601207/datas-identity-in-todays-economy/>.

A. Data is often worthless, but *information* is critical

In fact, “data” is a much more complicated concept than is often acknowledged. Fritz Machlup introduced the “data-information-knowledge” hierarchy, in which data is the raw, unprocessed material; information is data that has been organized in context, and knowledge is “the assimilation of the information and understanding of how to use it.”³⁹² Data may thus be processed into information, which in turn may become useful knowledge; it is in this transformation that value is created.

Thus, like any other production input, any particular set of data may have any number of substitutes from which the same (or substitute) knowledge can be drawn. As important, different processes of transforming data may yield the same or substitute knowledge using different data or different amounts of data.

The first implication of this simple—but often overlooked—understanding of data is that competition over any given set of data is not particularly important unless that data set is uniquely important to the production of certain (valuable) knowledge or products—regardless of process, and in the absence of reasonable substitutes. This situation is rare in the relevant “data platform” markets on which antitrust is particularly focused today. As such, concerns about foreclosure of access to particular sets of data are overblown.

The second implication is that the crucial competitive dynamics will often be identified not by superficial similarities between the mechanisms for collecting data, but by substitute sets of data, substitute mechanisms for obtaining knowledge from data, or substitute end products that may or may not require any data to create. Thus, for example, targeted advertising may be effectively provided by firms that collect data in completely distinct ways (e.g., a search engine vs a social network).

As John Yun pointed out at the hearing on exclusionary conduct:

It is inevitably going to be brought up that Google and Facebook have big data and that sort of creates and enforces their market power. And then the question is, how is data being used? Is it just the existence of data or is it part of a larger production function along with other inputs?... [M]aybe data is a big part of it, but those other inputs are as well, including the algorithm, the quality of the employees and the other technologies that evolve around that data.³⁹³

B. “Big data” is good, but rarely is it “essential”

Even on its own terms, the argument advanced by critics of platforms possessing data are self-contradictory. Many of the assertions and claims made by proponents of enhanced antitrust

³⁹² Ostrom *supra* note 379 at 8 (citing Fritz Machlup, *Semantic Quirks in Studies of Information*, in *THE STUDY OF INFORMATION: INTERDISCIPLINARY MESSAGE* (Machlup & Mansfield, eds. 1983))

³⁹³ *FTC Hearing #3 Day 3*, *supra* note 226, at 299 (statement of John Yun, Associate Professor, Antonin Scalia Law School).

enforcement in data-intensive markets generally collapse into “big [data] is bad,” even though the basis for that argument is the assumption that firms compete more effectively with larger amounts of data—thus suggesting that, to a first approximation, big data is *good*. Assessing any net harm that might arise from large agglomerations of data requires also evaluating the benefits that arise from them.³⁹⁴ But most critics of big data downplay or simply fail to consider the corresponding benefits:

Both [Alphabet and Facebook] rely on selling advertising to survive. Data is the essential input to their business, so they have each designed systems to gather all the consumer data they can get. They then use this data to create barriers to entry for competitors, barriers to exit for users, and to undermine the business models of content suppliers.

* * *

This might be excusable if Alphabet and Facebook added value to that content or increased the economic pie. Unfortunately, they do just the opposite. The algorithms and business models of Facebook and Alphabet prioritize trending over substance, undermining the business model of news, video, music, and other high-value and high-cost forms of content.³⁹⁵

The problem with this sort of assertion—used to justify greater antitrust intervention—is that it treats improvements in quality arising from (in part) greater amounts of data as a *problem*: success erects barriers to entry that impede (assumed) competitors. Not only does this subvert the very purpose of competition (and of antitrust law’s role in preserving competition) by inveighing *against* welfare-increasing conduct, but it also dramatically underplays the extent of those welfare increases.

Moreover, just because Facebook and Google are able to build successful businesses on the particular data sets they have amassed does not mean that building a business on those data sets is the *only* way to succeed (not least because each has very different sets of data but both have managed to succeed without the other’s data). The implicit assumption that a data set is inherently “essential” simply because it is large (either in terms of scale or scope) is simply false. This is only more true as technological advances like artificial intelligence, synthetic data, machine learning, and the like, as well as the ever-increasing availability of data³⁹⁶ and the ever-decreasing cost of data collection, have dramatically reduced the size and cost of data sets needed for the production of useful knowledge.

Of course, to complicate things further, as noted above, it’s not only how much or what type of data a firm has, but how well it uses it and what it uses it for. And yet a number of commenters offer assessments like this:

³⁹⁴ See, e.g., *FTC Hearing #6 Day 2*, *supra* note 378, at 10-15 (statement of Mike Baye, Professor, Indiana University).

³⁹⁵ *FTC Hearing #3 Day 1*, *supra* note 317, at 177-79 (statement of Robert McNamee, Founding Partner, Elevation Partners).

³⁹⁶ According to at least one participant in the hearings, some 99 percent of the world’s data goes completely unused today. See *FTC Hearing #3 Day 3*, *supra* note 226, at 164 (statement of Susan Creighton, Partner, Wilson Sonsini Goodrich & Rosati) (“I think it’s been estimated that something like 99 percent of all data currently is unused.”).

I think that data is very, very important and it is certainly not ubiquitous in this sense.

And we have seen this, by the way, in the search engine wars from a number of years ago, **how hard it was for people like Bing to catch up or compete adequately with Google, simply based on the volume of data that they had in order to improve their searches.**³⁹⁷

Eliding over all of the other relevant differences between Microsoft Bing and Google Search to suggest that the amount of data collected by each is the sole or most significant determinative factor is unsupported. But even if that were true about Bing (and it is by no means clear that it is), the presumption that the extent of competition and a market's consumer welfare effects are *generally* a function of the discrepancy between the amount of data held by incumbents and entrants is unwarranted. As Danny Sokol noted:

Overall, we've seen that it's not so easy for companies to utilize their data effectively. It's not... how much data you have, it's what you do with the data, where there seem to be diminishing returns on data size, and we've seen that in terms of companies that have lots of data but don't use most of it.

* * *

[I]t actually turns out it's really difficult to combine different types of data, so that's sort of the first premise. And then even when you do combine it, again, it doesn't always work the way you think it does.³⁹⁸

Moreover, some research has suggested that there is diminishing returns to larger data sets, especially when that data is comprised of different vintages (i.e. older data tends to be less valuable). According to research that Catherine Tucker and Lesley Chiou conducted on the size and age of data sets used by search providers,

we were looking to see how some changes in European regulation about how much data you have stored about search results, whether it affected the quality of search results, and we measured that by something called a bounceback rate, whether, that is, someone had to search again, refine their search. And we found absolutely no change whether you had six months of data, three months of data, nine months of data, and, you know, it was one of those "oh" moments.³⁹⁹

For all of the claims of harm (and asserted, corresponding need for increased antitrust intervention) surrounding big data, no analysis offered by proponents adequately or accurately assesses the welfare

³⁹⁷ See *FTC Hearing #6 Day 1*, *supra* note 380, at 98 (statement of Florian Zettelmeyer, Professor, Northwestern University) (emphasis added).

³⁹⁸ *FTC Hearing #6 Day 2*, *supra* note 378, at 7-8 (statement of Danny Sokol, Professor, UF Law).

³⁹⁹ See Lesley Chiou & Catherine Tucker, *Search Engines and Data Retention: Implications for Privacy and Antitrust*, 1 (2017).

effects of the business models and products offered by companies that rely on large agglomerations of data.

C. Data does not present a unique challenge for competition analysis

Despite Nicholas Economides' assertion that there is something unique about the data collection of firms like Facebook and Google,⁴⁰⁰ using data to improve business processes is not unique to zero-priced, online platforms. As the Global Antitrust Institute noted in its comments on data, “[w]hile the volume and speed of data available to retailers today is dramatic, businesses have been using customer data to increase efficiency and create value for a long time.”⁴⁰¹

Similarly, asserting that data has structural implications for markets—one where data possession determines which firms can dominate a market and where data poverty dooms a firm to languish—is a vestige of outmoded analytical methods:

[B]ig data is not an exogenous factor that dictates the number of firms in a market, which in turn determines the degree of competition and the rate of return. The contrary view is a vestige of the discarded structure-conduct-performance paradigm. Rather big data is endogenous, as are other dimensions of nonprice competition.⁴⁰²

III. Can data constitute a barrier to entry?

Claims that data inevitably constitutes a barrier to entry are equally dubious. Access to large amounts of data does not, by itself, represent an anticompetitive barrier to entry. Data is simply one input in a panoply of inputs necessary for a firm to compete effectively:

Information is important to companies because of the value that can be drawn from it, not for the inherent value of the data itself...

Consider companies like Uber, Lyft, and Sidecar that had no customer data when they began to challenge established cab companies that did possess such data. If data were really so significant, they could never have competed successfully. But Uber, Lyft, and Sidecar have been able to effectively compete because they built products that users wanted to use—they came up with an idea for a better mousetrap. The data they have accrued came after they innovated, entered the market, and mounted their successful challenges—not before.

In reality, those who complain about data facilitating unassailable competitive advantages have it backward. Companies need to innovate to attract consumer data,

⁴⁰⁰ *FTC Hearing #3 Day 2*, *supra* note 263, at 305 (statement of Nicholas Economides, Professor, NYU).

⁴⁰¹ Comment of the Global Antitrust Institute, Antonin Scalia Law School, George Mason University, The Federal Trade Commission's Hearings on Competition and Consumer Protection in the 21st Century, Privacy, Big Data, and Competition (Nov. 5 2018) at 3.

⁴⁰² *Id.* at 7.

otherwise consumers will switch to competitors (including both new entrants and established incumbents). As a result, the desire to make use of more and better data drives competitive innovation, with manifestly impressive results: the continued explosion of new products, services, and apps is evidence that data is not a bottleneck to competition but a spur to drive it.⁴⁰³

Moreover, the existence of a barrier to entry is not, in itself, a spur to antitrust enforcement. To one degree or another every market has barriers to entry in the sense claimed by proponents (the existence of start-up costs). As GAI notes in its comments:

[W]e find that it is best to avoid suggesting that big data is or is not a barrier to entry. Rather, it is one potential factor when examining “the timeliness, likelihood, and sufficiency of entry efforts an entrant might practically employ.” There are clearly impediments that an entrant must overcome in order to compete effectively.... Some obstacles are substantial. Attempting to classify these impediments as entry barriers or not creates the conflation mentioned by Carlton. If this classification exercise is undertaken, however, it is important to clarify whether the discussion regards either the time required to reach a new equilibrium or a cost that is preventing socially desirable entry.

* * *

[B]ig data does not represent a barrier to entry but rather a factor of production much like any other input. It should therefore be treated as such.⁴⁰⁴

The crucial question is whether the impediment reduces social welfare by artificially limiting entry (where the presence of a cost borne by all entrants is not an artificial limitation⁴⁰⁵). By the same token, even where there is restricted entry because costs are high, the consequences of artificially removing the barrier must be considered:

[Y]ou can say, okay, in the oil refinery industry you need a lot of investment to start and that means we need to break up the oil companies. I think there is a leap of logic there when you say sort of the barrier to entry is very high. Whether it is in physical assets or in data assets, there is a question we have to ask about the investment that firms are putting into these kind of algorithms or data collections, and they cost money, they cost efforts, they cost talents. And to what extent that is—we should think that all that should be available to everybody and how would that undermine the investment incentive for the firms to really improve the algorithms and improve the data collection, I think that is a hard question.⁴⁰⁶

⁴⁰³ Geoffrey Manne & Ben Sperry, *The Problems and Perils of Bootstrapping Privacy and Data into an Antitrust Framework*, CPI ANTITRUST CHRONICLE, 9 (May 2015), <https://ssrn.com/abstract=2617685>.

⁴⁰⁴ GAI Data Comments, *supra* note 401, at 7-9.

⁴⁰⁵ See GEORGE STIGLER, *THE ORGANIZATION OF INDUSTRY* 67 (1968).

⁴⁰⁶ *FTC Hearing #6 Day 1*, *supra* note 380, at 99-100 (statement of Ginger Jin, Professor, University of Maryland).

As Anja Lambrecht, an assistant professor at London Business School, and Catherine E. Tucker, a professor at MIT Sloan School of Management, argue in a recent paper, in order for “big data” to provide a sustainable competitive advantage, it would need to be inimitable, rare, valuable, and non-substitutable. It fails on all counts.⁴⁰⁷

First, big data is neither inimitable nor rare. As discussed above, since data is nonrivalrous and has near-zero marginal costs, data owned by one firm can be replicated by a competitor. “Data brokers,” such as Experian, Epsilon, and Acxiom, play an important role here. They sell data to their customers (who might not have proprietary datasets of their own) for targeted advertising campaigns, people searches, and risk mitigation via identity verification and fraud detection.⁴⁰⁸ Advances in the on-demand cloud computing industry have also drastically reduced costs for computing, storing, and analyzing big data—making the possession of large data sets for ever more firms that much easier to develop.

Second, there are three challenges to ensuring big data is valuable for firms: integrating new data into the business and making it compatible with pre-existing data; extracting value from unstructured data; and establishing causal relationships from the data.⁴⁰⁹ But “it is only when combined with managerial, engineering and analytic skill in determining the experiment or algorithm to apply to such data that it proves valuable to firms.”⁴¹⁰ During the hearings, Ben Thompson also made this point:

And this is where I kind of push back on the, like, well, how much is your data worth at Facebook? That’s actually very difficult, because Facebook, from an economic perspective, adds tremendous value to user data. The data that Facebook gets from you is worth very little if you could give that to another company, but once Facebook combines that with all the other data they get, and then has the scale on the advertising side to take advantage of that, it is a massive, meaningful economic difference, where Facebook is really adding tremendous value and is appropriately valued because of that.⁴¹¹

Finally, there are well known cases where new entrants have broken into markets where big data was supposed to have created an impenetrable moat, including WhatsApp in the communications

⁴⁰⁷ Ana Lambrecht & Catherine E. Tucker, *Can Big Data Protect A Firm From Competition*, CPI ANTITRUST CHRONICLE (Jan. 2017), <https://www.competitionpolicyinternational.com/wp-content/uploads/2017/01/CPI-Lambrecht-Tucker.pdf>.

⁴⁰⁸ Jeremy B. Merrill, *How to Wrestle Your Data From Data Brokers, Silicon Valley—and Cambridge Analytica*, PROPUBLICA, April 30, 2018, <https://www.propublica.org/article/how-to-wrestle-your-data-from-data-brokers-silicon-valley-and-cambridge-analytica>.

⁴⁰⁹ Lambrecht & Tucker, *supra* note 407, at 3.

⁴¹⁰ *Id.* at 5.

⁴¹¹ *FTC Hearing #3 Day 1*, *supra* note 317, at 201 (statement of Ben Thompson, Founder and Author, Stratechery).

market, King Digital Entertainment in the online gaming market, and Tinder in the online dating market.⁴¹² Joshua Gans said this much during his FTC hearing testimony:

So just to put this in a historical context, we've had already a situation of significant entry by a startup into the search space starting from no data or market share, and that was Google. Google did it. And it did it because it scraped the web itself for information and was able to, you know, through page rank and other means, contextualize it.⁴¹³

In the end, it's not the data that makes the difference, but the "superior ability to understand and meet customer needs."⁴¹⁴

Indeed, data is typically generated by companies *after* they enter markets, as a by-product (or intended consequence) of their operations, or else in some case it is purchased beforehand.⁴¹⁵ It cannot be the case that doing so in the abstract creates an entry barrier, or else every market would be marked by entry barriers and the risk of antitrust liability for incumbents—including offline markets.

What seems to be required in order that data may be treated as a potential entry barriers is that the data at issue be some combination of essential, unique, exclusive, and rivalrous. If a suitable dataset can be created by new entrants or obtained elsewhere, or if other data can be used in its stead, or if alternatives other than data can be used (e.g., synthetic data or artificial intelligence), then it is hard to see any relevant competitive significance from data, regardless of the amount.

A key aspect of the mistake here is a sort of availability heuristic: It is often assumed that the successful way something has been done, and is done today, is the *only* way to do it, or the only way new entrants can do it and be competitive.

But of course that's never actually true. Facebook uses a very different method and different data than does Google to match advertisers and users—and yet it entered the online advertising/match-making market and became enormously successful. Uber entered the transportation network market with a business model that didn't require capital outlay on a large fleet of vehicles. Digital cameras made film irrelevant and didn't need to rely on suppliers of film to enter. Fax machines went through a series of improvements—until email and cloud services completely replaced them.

The examples are endless. But they are key to understanding the non-essentiality of data: For some entrants—those adopting incumbents' business models, minimizing their own innovations, or even piggy-backing on incumbents—it *seems* indispensable. And they may find a willing ear at some

⁴¹² *Id.* at 6 (statement of Rohit Chopra, Comm'r, FTC).

⁴¹³ *Competition and Consumer Protection in the 21st Century: FTC Hearing #7 Day 1: Competition and Consumer Protection Issues of Algorithms, Artificial Intelligence and Predictive Analytics; Before the FTC*, FTC Transcript 159 (Nov. 13, 2018) (statement of Joshua Gans, Professor, University of Toronto).

⁴¹⁴ *Id.* p.7

⁴¹⁵ Daniel L. Rubinfeld and Michal S. Gal, *Access Barriers to Big Data*, 59 ARIZ. L. REV. 339, 357 (2017) ("More commonly, data are collected as a (valuable) side-effect of other productive activities.").

antitrust agencies. But innovation has never required implementation of the same business model as incumbents, and especially not access to the particular, proprietary inputs incumbents have created.

A. Data as a pathway to entry

The confusion surrounding the meaning of “barriers to entry” often results because the precise consequence of having an entry barrier is unclear. If there are such “barriers,” is anticompetitive conduct a result of the barriers? The proper analysis doesn’t end with entry barriers; it starts with analysis of what would happen without barriers, and then assesses whether barriers changes anything. In so doing, it must also account for the benefits of existing conduct, including barriers. Where it does not, it again tends the assessment toward protection of the *status quo*.

A key *status quo* bias problem in the analysis of entry barriers is the assumption of essentiality of inputs or other relationships created by the early movers:

Consider this error in the *Microsoft* court’s analysis of entry barriers: The court pointed out that new entrants face a barrier that Microsoft didn’t face, in that Microsoft didn’t have to contend with a powerful incumbent impeding its entry by tying up application developers.⁴¹⁶

But while this may be true, Microsoft did face the *absence* of any developers at all, and had to essentially create (or encourage the creation of) businesses that didn’t previously exist. In fact, although the court dismissed this argument in a slightly different context, it noted that, “[a]ccording to Microsoft, it had to make major investments to convince software developers to write for its new operating system, and it continues to ‘evangelize’ the Windows platform today.”⁴¹⁷ Yet, the court also notes:

Because the applications barrier to entry protects a dominant operating system irrespective of quality, it gives Microsoft power to stave off even superior new rivals. The barrier is thus a characteristic of the operating system market, not of Microsoft’s popularity, or, as asserted by a Microsoft witness, the company’s efficiency.⁴¹⁸

The point about quality may be true, and it may even be true that the extent of the purported barrier didn’t correlate with Microsoft’s popularity or efficiency. But it is not true that the applications barrier to entry was independent of Microsoft’s efforts or investment; it was not merely a “characteristic of the operating system market,” as if exogenous to any conduct undertaken by Microsoft in

⁴¹⁶ *United States v. Microsoft Corp.*, 253 F.3d at 56 (“When Microsoft entered the operating system market with MS-DOS and the first version of Windows, it did not confront a dominant rival operating system with as massive an installed base and as vast an existing array of applications as the Windows operating systems have since enjoyed.”).

⁴¹⁷ *Id.*

⁴¹⁸ *Id.*

order to obtain its scale in the first place. Rather, as noted, Microsoft invested heavily to create the network of developers in the first place.

Moreover, having done so, Microsoft created a huge positive externality for new entrants: existing knowledge and organizations devoted to development, industry knowledge, reputation, awareness, incentive for schools to offer courses, etc. It could well be that new entrants in fact faced *lower* barriers with respect to app developers than did Microsoft when it entered.

The same argument can be made with respect to those companies that led the way in the increased use and importance of data. Even without access to their specific data sets, the overall ease with which challengers can obtain data and the human capital needed to analyze it is *increased* by the incumbents' conduct.

IV. Is big data exclusionary?

There is an unfortunate tendency among many proponents of heightened antitrust scrutiny for data platforms to assume that the presence of data converts otherwise unobjectionable conduct into something problematic. The reality is that data is a production input just like any other—although it is perhaps less scarce than, say, the most valuable human capital. Constructing an anticompetitive story around data requires differentiating it from superior skill or effective competition, or else establishing that it is an essential facility or that it has some other characteristic that makes competition depend upon it being shared.

And yet advocates rarely do so. Thus, Jonathan Baker recommended treating dominant firms that possessed data as unique threats.⁴¹⁹

In Baker's telling, a platform with a data advantage could target its competitors' best customers and offer them price cuts without fear of retaliation and at less cost to itself than an across-the-board price cut would entail. According to Baker, although this "might seem like a pure benefit to competition..., it could also harm competition when it was employed by a dominant platform to exclude."⁴²⁰

Except this is not recognizable as anticompetitive exclusionary conduct; it is simply vigorous competition. Most importantly, imagine making these claims without resort to the confounding involvement of data. Would it be anticompetitive for a firm to enjoy a locational advantage its competitors couldn't match? Would it be anticompetitive for a dominant firm to "overpay" to hire the very most talented employees in the areas where human capital was most scarce, ensuring that its competitors would have difficulty matching its talent? And so on.

⁴¹⁹ *FTC Hearing #6 Day 2*, *supra* note 378, at 16 (statement of Jon Baker, Professor, American University).

⁴²⁰ *Id.* at 17-18 (statement of Jon Baker, Professor, American University).

In all of these cases, the conduct certainly makes things more difficult for competitors. But it is not, in fact, anticompetitive, and any effort to treat it as such would engender significant chilling effects and costly errors.

V. Network effects, increasing returns to scale, and data-related incumbency advantages

Network effects, economies of scale, and large collections of data lead critics to assert that digital platforms operate in “winner take all” markets that create unassailable monopolies, despite clear evidence to the contrary.⁴²¹ Jason Furman is not alone in his claim that “the digital world pushes [the impact of network effects] to the extreme and this can result in a significant competitive advantage for incumbents.”⁴²²

The EU Commission’s report on “competition policy for the digital era” reaches a similar conclusion, arguing that “extreme returns to scale”, “network externalities”, and “the role of data” make digital incumbents “very difficult to dislodge”.⁴²³ They thus call for the adoption of significant reforms to European competition policy.⁴²⁴ Margrethe Vestager, the current head of DG Competition (the EU’s main antitrust authority), made similar claims in a recent speech:

It’s not just that digitisation has made economies of scale more important than before. It’s also that the huge amount of data that some platforms have, and the huge networks behind them, can give them an edge that smaller rivals can’t match.⁴²⁵

This raises three critical questions, none of which are anywhere near as clear-cut as the above authors make them out to be. First, are digital markets necessarily prone to extreme returns to scale, network effects, and data-related incumbency advantages? Second, would it necessarily be a problem if this were the case?

A. The weak case for increasing returns to scale, network effects and consolidation through data

Much of the impetus for antitrust reform in digital markets is premised on the assumption that the firms operating in these industries necessarily present some combination of increasing returns to

⁴²¹ See, e.g., Geoffrey Manne & Alec Stapp, *This Too Shall Pass: Unassailable Monopolies That Were, in Hindsight Eminently Assailable*, TRUTH ON THE MARKET BLOG, Apr. 1, 2019, <https://truthonthemarket.com/2019/04/01/this-too-shall-pass-unassailable-monopolies-that-were-in-hindsight-eminently-assailable/>

⁴²² *FTC Hearing #1*, supra note 384, at 23-24 (statement of Jason Furman, Frmr. Chair, Council of Economic Advisers), https://www.ftc.gov/system/files/documents/public_events/1398386/ftc_hearings_session_1_transcript_9-13-18_0.pdf

⁴²³ Jacques Crémer et al., supra note 229, at 2, <http://ec.europa.eu/competition/publications/reports/kd0419345enn.pdf>

⁴²⁴ *Id.*

⁴²⁵ Margrethe Vestager, Comm’r for Competition, European Commission, Competition and the digital economy at OECD/G7 Conference (Jun. 3, 2019), available at https://ec.europa.eu/commission/commissioners/2014-2019/vestager/announcements/competition-and-digital-economy_en

scale, network effects, and data-related incumbency advantages. However, critics fail to provide anything more than anecdotal evidence to support such claims.⁴²⁶

A first question concerns increasing returns to scale in the digital economy, in particular those relating to the use of data.⁴²⁷ Indeed, critics often argue that digital platforms benefit from increasing returns to scale on all ranges of output. In other words, because of their scale, they require less units of economic inputs per unit of output, which allegedly gives them an unassailable advantage over rivals. For example, as Ben Thompson asserted in his remarks, “Google is not limited by the number of people they can serve... [because] on a marginal basis, every additional user is effectively free.”⁴²⁸

In practice, however, the evidence for these increasing returns is particularly thin. A look at the annual reports of many large tech firms is particularly revealing in this regard.

Google’s most recent 10-k, for example, shows that many of the company’s costs are unlikely to become smaller (in relative terms) as its output increases. This cuts against the existence of extreme returns to scale. For a start, more than 50% of Google’s total expenditures concern so-called “cost of revenues.”⁴²⁹ Of these, roughly half involve traffic acquisition costs (TAC), whereby Google pays other firms for the placement of its contents (be it advertisements or access points).⁴³⁰ In Google’s own words,

TAC which are paid to Google Network Members primarily for ads displayed on their properties and amounts paid to our distribution partners who make available our search access points and services. Our distribution partners include browser providers, mobile carriers, original equipment manufacturers, and software developers.⁴³¹

At first glance, there is nothing to suggest that these expenditures become relatively less burdensome as a company increases in scale. In fact, the opposite may well be true: It is probably more costly to gain access to marginal users than inframarginal ones. This might explain why, for years, Google’s TAC-related expenditures have been steadily increasing.⁴³² Google’s single largest expenditure thus fails to fit the increasing returns to scale pattern.

⁴²⁶ Jacques Crémer et al., *supra* note 229, at 20, <http://ec.europa.eu/competition/publications/reports/kd0419345enn.pdf>.

⁴²⁷ For an introduction to the concept of increasing returns to scale, *see, e.g.*, H.R. VARIAN, MICROECONOMIC ANALYSIS 16 (W.W. Norton. 1992).

⁴²⁸ *FTC Hearing #3 Day 1*, *supra* note 317, at 147-148 (statement of Ben Thompson, Founder and Author, Stratechery), available at https://www.ftc.gov/system/files/documents/public_events/1413712/ftc_hearings_session_3_transcript_day_1_10-15-18.pdf.

⁴²⁹ Alphabet Inc., Annual Report (Form 10-K) at 36 (Feb. 04, 2019), available at (https://abc.xyz/investor/static/pdf/20180204_alphabet_10K.pdf?cache=11336e3).

⁴³⁰ *Id.* at 32.

⁴³¹ *Id.*

⁴³² *Id.*

And much the same can be said about many of the company's other large outlays. These include the acquisition of bandwidth, the operation of data centers (which rivals can outsource), general administration, and sales and marketing costs.⁴³³ This leaves R&D, which represents roughly a fifth of Google's expenditures, as a potential source of increasing returns to scale. But, here too, the case for increasing returns to scale is far from clear-cut. Much of the economic literature on the topic considers that R&D is characterized by decreasing – and not increasing – returns to scale.⁴³⁴ At the very least, there can be no presumption that Google's heavy reliance on R&D is necessarily a source of increasing returns. In short, for most of Google's expenditures, there is no obvious reason to believe that greater economic output would necessarily result in disproportionate decreases to economic inputs.

The story is very similar for other large tech firms, such as Amazon and Facebook. Roughly three quarters of Amazon's expenditures involve “cost of sales” and “fulfilment” costs.⁴³⁵ These notably include costs associated with the purchase and shipping of goods. There is little to suggest that either of these is a source of “extreme” returns to scale. They mostly involve the same capacity utilization challenges that brick and mortar retailers must contend with.⁴³⁶ If these potential returns to scale were indeed insurmountable, Amazon would arguably have been unable to effectively compete against incumbent brick and mortar retailers.

Likewise, roughly two-thirds of Facebook's expenditures fall under the “cost of revenue”, “marketing and sales”, and “general and administrative” categories.⁴³⁷ Again, there is little to suggest that increased output would be associated with a less than proportional increase to inputs.

Although it is debatable (and doubtful) that there is any such thing as an unlimited return to scale, critics try to make out an argument that such increasing returns stem from the use of data⁴³⁸ (this is

⁴³³ *Id.* at 36.

⁴³⁴ See, e.g., Claude d'Aspremont & Alexis Jacquemin, *Cooperative and noncooperative R & D in duopoly with spillovers*, 78 THE AM. ECON. REV., 1133 (1988). See also, Partha Dasgupta, *The theory of technological competition*, in NEW DEVELOPMENTS IN THE ANALYSIS OF MARKET STRUCTURE 523, (1986). *Contra*, Rabah Amir, Jim Y Jin & Michael Troege, *On additive spillovers and returns to scale in R&D*, 26 INTERNATIONAL JOURNAL OF INDUSTRIAL ORGANIZATION, 696 (2008). (The authors broadly that there should be no presumption either for or against decreasing returns to scale in R&D).

⁴³⁵ Amazon.com, Inc., Annual Report at 37 (Jan. 31, 2019), <https://www.sec.gov/Archives/edgar/data/1018724/000101872419000004/amzn-20181231x10k.htm#sB4CED683083F59A8917E158CFF7A442F>

⁴³⁶ Note capacity utilization is sometimes cited as a source of potential increasing returns to scale. See, e.g., Randy A Nelson, *On the measurement of capacity utilization*, THE JOURNAL OF INDUSTRIAL ECONOMICS, 282 (1989). (Arguing that the capacity utilization of electric utilities may be a source of moderate increasing returns to scale).

⁴³⁷ Facebook, Annual Report (10-K) at 42-43 (Jan. 31, 2019), https://s21.q4cdn.com/399680738/files/doc_financials/annual_reports/2018-Annual-Report.pdf.

⁴³⁸ See, e.g., Maurice E Stucke & Allen P Grunes, *Introduction: Big Data and Competition Policy*, BIG DATA AND COMPETITION POLICY, OXFORD UNIVERSITY PRESS (2016), 7 (2016).

sometimes mistakenly referred to as “data network effects”⁴³⁹). Thus, Jason Furman’s assertion that “when you get past a certain point you get to this place where you can, you know, do the AI in a certain way that you could not do before you get to that scale.”⁴⁴⁰

Unfortunately for critics, the existence of data-driven increasing returns to scale (or other data-related incumbency advantages) is not borne out by the burgeoning empirical literature on the topic. Summarizing these empirical findings, Catherine Tucker concludes that “empirically there is little evidence of economies of scale and scope in digital data in the instances where one would expect to find them.”⁴⁴¹

There are numerous pieces of evidence to support Tucker’s claim. For instance, Patrick Bajari and his co-authors use data from Amazon to show that (i) data on a wider range of products does not improve demand forecasting, and that (ii) increasing the timescale of data improves forecasting, but with diminishing returns.⁴⁴² Likewise, in a paper co-authored with Lesley Chiou, Catherine Tucker finds that storing search engine results for shorter periods does not affect the accuracy of subsequent search results.⁴⁴³ Again, this cuts against the existence of increasing returns to scale. In another paper, Tucker and her co-authors cast doubts on the overall accuracy of digital profiling, and thus the competitive edge that firms might obtain by acquiring larger amounts of data.⁴⁴⁴ Finally, a recent study argues that additional data improves algorithmic prediction with decreasing returns to scale.⁴⁴⁵ Using data from a large German news outlet, the authors show that the number of times a user visits a website improves the site’s prediction algorithm with decreasing returns (the algorithm optimizes the news articles that are presented to each individual user).⁴⁴⁶

In short, available evidence suggests that stories of “extreme” returns to scale in the tech sector are greatly overblown. Not only are the largest expenditures of digital platforms unlikely to become, proportionally, less important as output increases, but empirical research suggests that even data does not give rise to increasing returns to scale (despite routinely being cited as the source of such effects). This is not to say that these economic properties are never present in digital markets, but

⁴³⁹ See Catherine Tucker, *Digital Data, Platforms and the Usual [Antitrust] Suspects: Network Effects, Switching Costs, Essential Facility*, 54 REV. INDUS. ORG., 685 (2019).

⁴⁴⁰ *FTC Hearing #1*, *supra* note 384, at 92 (statement of Jason Furman, Frmr. Chair, Council of Economic Advisers), available at https://www.ftc.gov/system/files/documents/public_events/1398386/ftc_hearings_session_1_transcript_9-13-18_0.pdf

⁴⁴¹ See Tucker, REVIEW OF INDUSTRIAL ORGANIZATION, 686 (2019).

⁴⁴² See Patrick Bajari, Victor Chernozhukov, Ali Hortaçsu & Junichi Suzuki, *The Impact of Big Data on Firm Performance: An Empirical Investigation*, 109 AEA PAPERS AND PROCEEDINGS, 1 (2019).

⁴⁴³ See Lesley Chiou & Catherine Tucker, *Search Engines and Data Retention: Implications for Privacy and Antitrust*, 1 (2017).

⁴⁴⁴ See Nico Neumann, Catherine E. Tucker & Timothy Whitfield, *How Effective is Black-box Digital Consumer Profiling and Audience Delivery?: Evidence from Field Studies*, 1 (2018).

⁴⁴⁵ See Jörg Claussen, Christian Peukert & Ananya Sen, *The Editor vs. the Algorithm: Targeting, Data and Externalities in Online News*, 1-18 (2019).

⁴⁴⁶ *Id.* at 11.

rather than, barring empirical (as opposed to anecdotal) evidence, it is hard to take critics' claims seriously.

Another recurring, and equally misguided, trope is that network effects inevitably lead to market tipping and prevent more efficient rivals from overthrowing incumbents. Network effects occur when a consumer's utility for a good is, at least in part, a function of the expected number (and quality) of other agents using the same product.⁴⁴⁷ These valuable users may be located in the same market or on the opposite side of a platform.⁴⁴⁸ From a policy standpoint, some scholars have voiced fears that these network effects may lead to highly concentrated markets when incumbents are impossible to overthrow.⁴⁴⁹ These concerns have notably been echoed by a series of recent reports concerning competition in digital markets (commissioned by authorities in the UK, EU, Australia). According to the authors of these reports, the presence of network effects almost inevitably weakens competition in digital markets. For instance, the report commissioned by the European Commission mentions that:

Because of very strong network externalities (especially in multi-sided platforms), incumbency advantage is important and strict scrutiny is appropriate.⁴⁵⁰

The Australian Competition & Consumer Commission concludes that:

There are considerable barriers to entry and expansion for search platforms and social media platforms that reinforce and entrench Google and Facebook's market power. These include barriers arising from same-side and cross-side network effects, branding, consumer inertia and switching costs, economies of scale and sunk costs.⁴⁵¹

Finally, a panel of experts in the United Kingdom found that:

Today, network effects and returns to scale of data appear to be even more entrenched and the market seems to have stabilised quickly compared to the much larger degree of churn in the early days of the World Wide Web.⁴⁵²

But not all markets with network effects will eventually tip towards a single winning firm.⁴⁵³ For a start, multi-homing is common, especially among many high-tech platforms including social

⁴⁴⁷ See, e.g., Michael L. Katz & Carl Shapiro, *Systems Competition and Network Effects*, 8 J. ECON. PERSP. 93, 96 (1994).

⁴⁴⁸ See, e.g., Jean-Charles Rochet & Jean Tirole, *Platform Competition in Two-Sided Markets*, 1 J. EUR. ECON. ASS'N 990 (2003).

⁴⁴⁹ See, e.g. Ariel Ezrachi & Maurice E Stucke, *Virtual competition* 133 (Oxford University Press 2016).

⁴⁵⁰ Jacques Crémer et al., *supra* note 229, at 5.

⁴⁵¹ Digital Platforms Inquiry, Preliminary Report, Australian Competition & Consumer Commission, <https://www.accc.gov.au/system/files/ACCC%20Digital%20Platforms%20Inquiry%20-%20Preliminary%20Report.pdf>, p.35.

⁴⁵² DIGITAL COMPETITION EXPERT PANEL, *supra* note 339 .

⁴⁵³ This is especially true in the presence of heterogeneous consumer preferences and differentiated products. See Shapiro & Katz, *supra* note 337, at 106.

networks, online marketplaces, online search, and online advertising. This may be a sign that switching costs are not significant. Likewise, the presence of network effects and even a lopsided market distribution need not result in anticompetitive effects if there is potential competition from smaller competitors or new entrants. And even where consumer lock-in seems high and multi-homing low (say, across different OS app stores), supplier multi-homing may be common (as it is among developers of the most popular apps), thus enhancing competition “for the market”.⁴⁵⁴ Lastly, the presence of network effects does not necessarily prevent entry by more-efficient and/or innovative rivals.⁴⁵⁵ Nor, importantly, do they preclude the creation of another market entirely through disruptive innovation.⁴⁵⁶ On the contrary, network effects are a double-edged sword that can sometimes hasten the decline of dominant platforms.⁴⁵⁷

Other factors may also weaken the anticompetitive potential of network effects. For instance, almost none of the foundational network effects papers pay any notice to the application of the Coase theorem (though it has been well-recognized in the two-sided markets literature⁴⁵⁸). Take a purported market failure that is commonly associated with network effects: an installed base of users prevents the market from switching towards a new standard, even if it is superior (this is broadly referred to as “excess inertia”, while the opposite scenario is referred to as “excess momentum”⁴⁵⁹). The failure of the DVORAK keyboard is often cited as an example – even though this reading of history has been thoroughly debunked.⁴⁶⁰ Astute readers will quickly recognize that this externality problem is not fundamentally different from those discussed in Ronald Coase’s masterpiece, “The Problem of Social Cost”⁴⁶¹ or Steven Cheung’s “The Fable of the Bees”⁴⁶². In both cases, the lesson is that private parties often do find ingenious ways to overcome complex coordination problems.

With this in mind, it is far from clear that consumers and firms can never come up with solutions to collectively switch towards their preferred network. As Daniel Spulber has suggested, referral

⁴⁵⁴ See Sami Hyrynsalmi, Arho Suominen & Matti Mäntymäki, *The Influence of Developer Multi-homing on Competition Between Software Ecosystems*, 111 J. SYS. & SOFTWARE 119, 119-27 (2016).

⁴⁵⁵ See E. Glen Weyl & Alexander White, *Let the Best “One” Win: Policy Lessons from the New Economics of Platforms*, 10 COMPETITION POL’Y INT’L, 28 (2014).

⁴⁵⁶ See, e.g., Thibault Schrepel, *L’innovation de Rupture: De Nouveaux Défis Pour le Droit de la Concurrence*, 42 REVUE LAMY CONCURRENCE 141, 143 (2015).

⁴⁵⁷ See, e.g., David S. Evans & Richard Schmalensee, *Debunking the Network Effects Bogyman*, 40 REGULATION 36 (2017).

⁴⁵⁸ See Jean-Charles Rochet & Jean Tirole, *Two-sided markets: a progress report*, 37 THE RAND JOURNAL OF ECONOMICS, 645 (2006).

⁴⁵⁹ See Joseph Farrell & Garth Saloner, *Installed base and compatibility: Innovation, product preannouncements, and predation*, THE AM.ECON. REV.940 (1986).

⁴⁶⁰ See Stan J. Liebowitz & Stephen E Margolis, *The fable of the keys*, 33 J. L. & ECON. 1 (1990).

⁴⁶¹ See Ronald Harry Coase, *The Problem of Social Cost*, 3 J.L. & ECON. 87 (1960).

⁴⁶² See Steven NS Cheung, *The fable of the bees: An economic investigation*, 16 J. L. & ECON. 11 (1973).

programs offer a case in point.⁴⁶³ These programs usually allow early adopters to receive rewards in exchange for bringing new users to a network. One salient feature of these programs is that they do not simply charge a lower price to early adopters; instead, in order to obtain a referral fee, there must be some agreement between the early adopter and the user who is referred to the platform. This leaves ample room for the reallocation of rewards. Users might, for instance, choose to split the referral fee. Alternatively, the early adopter might invest time to familiarize the switching user with the new platform, hoping to earn money when the user jumps ship. Both of these arrangements may reduce switching costs and mitigate externalities.

Daniel Spulber also argues that users may coordinate spontaneously.⁴⁶⁴ For instance, social groups often decide upon the medium they will use to communicate. Families might choose to stay on the same mobile phone network. And larger groups (such as an incoming class of students) may agree upon a social network to share necessary information, etc. In these contexts, there is at least some room to pressure peers into adopting a new platform that might offer superior functionality.

Similarly, firms and other forms of governance may also play a significant role. For instance, employees are routinely required to use a series of networked goods. Common examples include office suites, email clients, social media platforms (such as Slack), or video communications applications (Zoom, Skype, Google Hangouts, etc.). In doing so, firms presumably act as islands of top-down decision-making and impose those products that maximize the collective preferences of employers and employees. Similarly, a single firm choosing to join a network (notably by adopting a standard) may generate enough momentum for a network to gain critical mass.⁴⁶⁵ Apple's decisions to adopt USB-C connectors on its laptops and to ditch headphone jacks on its iPhones both spring to mind.⁴⁶⁶ Likewise, it has been suggested that distributed ledger technology and initial coin offerings may facilitate the creation of new networks.⁴⁶⁷ The intuition is that so-called "utility tokens" may incentivize early adopters to join a platform, despite initially weak network effects, because they expect these tokens to increase in value as the network expands.

⁴⁶³ See Daniel F. Spulber, *Consumer coordination in the small and in the large: Implications for antitrust in markets with network effects*, 4 J. COMPETITION L. & ECON, 237-238 (2007).

⁴⁶⁴ *Id.*

⁴⁶⁵ See, e.g., Timothy F. Bresnahan, *Network effects and Microsoft*, STANFORD INSTITUTE FOR ECONOMIC POLICY RESEARCH DISCUSSION PAPER NO. 00-51, 3 (2001). ("A firm controlling a locked in standard can face new competition by means of disruptive technical or market change in complementary technologies. This opens up several areas in which Microsoft's inductive method have taken them to interesting observations.").

⁴⁶⁶ Michael Simon, *Apple's 'courage' to remove the headphone jack has created a brave new world*, MACWORLD (Apr. 8, 2019), <https://www.macworld.com/article/3387148/apple-headphone-jack-right-move.html>

⁴⁶⁷ Chris Dixon, *Crypto Tokens: A Breakthrough in Open Network Design*, MEDIUM (Jun. 1, 2017), <https://medium.com/@cdixon/crypto-tokens-a-breakthrough-in-open-network-design-e600975be2ef>.

All of this is not to say that network effects will always be internalized through private arrangements, but rather that it is equally wrong to assume that transaction costs systematically prevent efficient coordination among users.

Given all of the above, it is plainly obvious that many of the assumptions that have been made about competition in digital markets are dubious at best. Critics have been far too quick to conclude that increasing returns to scale, network effects, and data incumbency advantages of some sort necessarily hamper competition in these markets. And, as the following section argues, they have also overlooked the potential benefits that these alleged features may entail.

VI. Overlooked benefits

Even if there are some costs associated with the collection and use of large datasets, it is inappropriate to condemn “Big Data” and to adopt policy solutions without also assessing the corresponding benefits:

[T]here are typically more actors that are attached to the big data, and as an economist, if we’re going to do a right job of evaluating whether a particular business practice is procompetitive or not, it’s important to account not only for all the costs, potential costs of that conduct or that merger or whatever, it’s also important to account for the potential benefits of that.⁴⁶⁸

Critics also fail to recognize another important factor. If digital markets were indeed plagued by network effects and increasing returns to scale, then industry consolidation may entail substantial benefits for consumers.

For a start, though the existence of increasing returns to scale might arguably complicate market entry by rival firms, it also implies that, other things being equal, more concentrated market structures may be desirable from a social welfare standpoint. This is because, in markets that present increasing returns to scale, it is potentially more efficient for the entire market to be served by a single firm. This is not to say that antitrust authorities should systematically champion increased consolidation. Instead, it is important to recognize that consolidated market structures are not an unmitigated burden on society, and that they may in fact generate substantial benefits.

The same reasoning can be applied in the case of network effects. At its heart, the theory of network effects posits that, for some goods, users value not only the good’s intrinsic qualities but also the number of other users that are present on the same network. As a result, other things being equal, networks with a larger number of users are more valuable to consumers. Many economists have thus

⁴⁶⁸ *Hearing #6 Day 2, supra* note 378, at 14 (statement of Mike Baye, Professor, Indiana University).

observed that, in markets with network effects, fragmentation may be more harmful than monopoly.⁴⁶⁹

Against this backdrop, it may come as a surprise that many of the recent reports on competition policy in digital markets pay almost no attention to the potential the redeeming features of concentrated market structures, or mention them only in passing. For instance, the report published by the Stigler Center takes what is arguably the strongest stance against concentration:

The resulting monopoly or concentrated market structures do not serve consumers as well as would a market in which entry is a credible, or actual, reality.⁴⁷⁰

Other reports have taken a somewhat more moderate stance, acknowledging the potential benefits of consolidation (though these caveats seem to have had little impact on these studies' ultimate conclusions). The Furman report (UK), finds that:

Concentration in digital markets can have benefits but also can give rise to substantial costs.⁴⁷¹

Similarly, the European Commission's report on competition in digital markets acknowledges that:

If platforms were fully identical, non-interoperable, and if users would not multi-home, it would be wasteful to build several platforms serving the exact same needs when costs are strongly decreasing in size. Indeed, focusing on network externalities, Weyl and White go as far as to argue that competition will lead to too little concentration.⁴⁷²

Unfortunately, both of the above reports do not appear to take these findings (i.e. that in the presence of network effects fragmentation may be worse than monopoly) very seriously. Both reports ultimately call for a series of *ex ante* measures destined to facilitate market entry by smaller players, without ever questioning whether, on balance, it is necessarily the case that increased market entry improves social welfare.

Despite claims to the contrary, it is, at best, unclear what the social welfare effect of constraining the use of data would be. Indeed, in the various submissions to and arguments put forward at the Hearings, as well as in arguments found elsewhere in the literature, the heterogeneity of consumers is not adequately (or sometimes at all) addressed.

Arguments that consumers are harmed by the use of data by large firms are also often based on incomplete or inaccurate assertions. Public Knowledge exemplifies this position with its assertion, based on work by Alessandro Acquisti, that "personalized pricing" is "often not welfare enhancing

⁴⁶⁹ See, e.g., Volker Nocke, Martin Peitz & Konrad Stahl, *Platform Ownership*, 5 J. EUR. ECON. ASS'N 1130 (2007).

⁴⁷⁰ STIGLER CENTER REPORT, *supra* note 228, at 98.

⁴⁷¹ DIGITAL COMPETITION EXPERT PANEL, *supra* note 339 at 4.

⁴⁷² Jacques Crémer et al., *supra* note 229, at 23.

for consumers” because “the lowest prices are more likely to be found in organic search results rather than in sponsored search results,” which are more likely to be “personalized.”⁴⁷³

Indeed, Acquisti did note that the lowest prices are often found in organic search results. But he did not claim that these results were less likely to be “personalized,” and that assertion is simply inaccurate. Moreover, Public Knowledge neglected to mention the full findings of his (preliminary) research which he summarizes as:

We found that prices for goods are, on average, slightly lower in sponsored search results. However, the lowest prices are more likely to be found in organic search results rather than in sponsored search results....⁴⁷⁴

In fact, contra Public Knowledge, this demonstrates absolutely nothing about the consumer welfare effects of personalized search results.

A. The costs and benefits of price discrimination

First and foremost, critics routinely miss the fact that, absent significant barriers to entry, no firm can expect to earn supra-competitive profits for an indefinite period of time. This includes profits derived from data-driven price discrimination. The reason for this is straightforward. One firm earning high profits will inevitably attract entry from competitors and/or encourage consumers to switch towards rival firms. This arbitrage ultimately leads to lower prices and increased quality dimensions (including things like greater privacy protection).

Second, even if a firm could price discriminate without the threat of arbitrage, high-value consumers would have huge incentives to withhold their personal information and/or send deceptive signals that they are low-value purchasers. When this is the case, the ability to acquire detailed consumer information may, counterintuitively, lead to lower prices and higher consumer welfare.⁴⁷⁵

While it is true that personalized pricing does not *necessarily* increase consumer welfare, there are many cases where personalized pricing reduces deadweight loss and increases access to a product or service for those with a lower willingness-to-pay. The ability to price discriminate—if it is even employed—could therefore induce lower-income marginal consumers with lower reserve prices to enter the market, while higher-income inframarginal consumers may end up paying relatively higher prices.

⁴⁷³ PK Comments, *supra* note 387 (citing Alessandro Acquisti, The Economics of Big Data and Personal Information, Testimony before the FTC Hearings on Big Data, Privacy, and Competition (Nov. 6, 2018)).

⁴⁷⁴ *Id.* at 37.

⁴⁷⁵ Geoff Manne, Kristian Stout, and Dirk Auer, *Comments on Developing the Administration’s Approach to Consumer Privacy to the National Telecommunications Administration* 17 (2018) available at

<https://laweconcenter.org/wp-content/uploads/2018/11/ICLE-Comments-NTIA-Developing-Administrations-Approach-to-Privacy.pdf>.

Ultimately, the net effect on consumer welfare, after accounting for changes in both price and quantity, shifts in consumption patterns, and new opportunities for marginal consumers, is an empirical question that falls squarely within the domain of the consumer welfare standard.

In addition to price discrimination, Ramsey Woodcock also expressed concern about dynamic pricing:

Advances in information technology do in fact pose a direct threat to consumer welfare that applies regardless of the prevailing level of concentration in any given market. That threat comes from what I call ‘extractive technologies,’ new technologies that facilitate the related practices of price discrimination – charging different markups on different units of the same good – and dynamic pricing – adjusting prices based on new information about demand faster than supply can adjust to the new demand. Big data and algorithms have enabled the spread of dynamic pricing across the economy over the past fifteen years, from Amazon to Disney World, and are poised to unleash near-perfect price discrimination in the years to come.⁴⁷⁶

But Woodcock’s preferred solution is a non-sequitur to the supposed problem he identifies: “[R]everting to the enforcement thresholds that prevailed before the 1980s... Challenge all mergers, horizontal or vertical. Challenge all refusals to deal that meet the essential facilities test. Challenge all pricing below average total cost.”⁴⁷⁷ If price discrimination harms consumers, then the Commission can quantify that harm via its regular analytical process. Reverting to the bygone era of structure-conduct-performance and simple market share thresholds is not necessary—and would create unintended consequences—to achieve Woodcock’s stated aim.

Moreover, there is nothing at all particular to a large firm that restricts its ability to build intelligent algorithms capable of dynamic pricing. After all, Google was a small start-up when it began operating with big data algorithms lightyears ahead of much better capitalized competitors. Woodcock hasn’t demonstrated that there is a harm to fear from dynamic pricing. But to the extent that one is discovered, it would seem to be completely disconnected from antitrust. Yet again, if there is a harm, it would be better analyzed through some other regulatory lens—likely consumer protection.

And, not only has Woodcock failed to connect alleged harms to anything antitrust-related, he focuses exclusively on the potential costs of dynamic pricing while discounting the benefits of dynamic efficiency gains. In fact, dynamic pricing can introduce a number of procompetitive efficiencies:

In a static model of third-degree price discrimination, some buyers receive lower prices (and purchase higher quantities), while other buyers receive higher prices (and purchase

⁴⁷⁶ Ramsi Woodcock, *The First of the FTC’s Hearings on Competition and Consumer Protection in the 21st Century, and Specifically, the Irrelevance of Concentration Levels to the Question Whether the FTC Should More Aggressively Enforce the Antitrust Laws 2* (Oct. 14, 2018) available at https://www.ftc.gov/system/files/documents/public_comments/2018/10/ftc-2018-0074-d-0068-155993.pdf.

⁴⁷⁷ *Id.* at 3.

lower quantities). Thus, the net impact of price discrimination on output is ambiguous. But in a dynamic model, price discrimination may often be pro-competitive because the prospect of higher profits provides incentives for entry and allows for additional investments in innovation, increasing product variety, expanding retail outlets, or research and development. As mentioned above, price discrimination may allow for increased competition to all consumers, including previously unreached and poorer consumers, another pro-competitive outcome. Contrary to the received wisdom, economists have noticed that price discrimination is present in even competitive markets.⁴⁷⁸

Thus, to the extent that dynamic pricing can be construed as an antitrust-relevant concern, both dynamic pricing and static price discrimination are not beyond the scope of the consumer welfare standard. These pricing strategies can have pro-competitive or anti-competitive effects and it is an empirical question to determine which effect dominates in a given context.

B. The benefits of “data collection” are far more widespread and important

As noted above, critics tend to focus on feared first-order harms, and go so far as to discount even the very obvious benefits (like the fact that data collection enables these platforms to exist in the first place). But many of the benefits of data use arise not merely from data *collection* but from data *collaboration*.

Consider one conspicuously absent example from the accounts of the critics: A crucial aspect of the relationship between consumers and data platforms is the two-way exchange of information, and thus the bilateral creation of knowledge. The act of a user providing information to a platform often entails the surfacing or creation of information previously unknown to the user. Such information may not always be valuable to the user (as it is often not valuable to the platform), but much of it surely is (and often for the same reason it is valuable to the platform). As Ginger Jin remarked:

So you can see from these kind of devices and online apps that we are constantly providing data to the app. **We are also consuming data....**

So this is a very active data exchange between consumers and firms. So **consumers are not passive sort of consumers of the products generated out of data; they are also actively participating in this process.**⁴⁷⁹

This creation of information extrinsic to the explicit exchange between users and platforms is, to our knowledge, entirely absent from all analyses of the consumer welfare effects of big data. And yet it is endemic to these exchanges.

⁴⁷⁸ Geoffrey Manne & Ben Sperry, *The Problem and Perils of Bootstrapping Privacy and Data into an Antitrust Framework*, CPI ANTITRUST CHRONICLE 7 (2015).

⁴⁷⁹ *FTC Hearing #6 Day 1*, *supra* note 380, at 10-11 (statement of Ginger Jin Professor, University of Maryland).

The focus of critics is entirely on the data explicitly collected and used by platforms and the assertion that this data creates, among other things, a problematic information asymmetry between platform and user. And yet enormous amounts of data are collected and processed by users as a sort of side effect of their interactions with platforms—data that is never shared with the platforms, that is combined with massive amounts of data in users’ heads, and which did not exist or was not known prior to the interaction. In a sense this information is a positive externality of the user/platform exchange, the value of which is ignored by critics who simply assume that platforms gain at users’ expense in their interactions.

And this is far from the only unknown aspect of the consequences of data for consumers. As Ginger Jin noted, the number of unanswered questions regarding data and its competitive effects is substantial:

In terms of exactly what is going on, I hope this hearing and other hearings would shed more light on who generates most data; who uses which data for what purpose; where and how does data stay, flow and evolve; and how does technology reshape data and data use; who benefits, who loses from certain data practices; and what is the aggregate consequence of data use in the short run and in the long run; and what is known and what is not known, to whom and when.

I really think those questions have to be addressed by probably a multidisciplinary approach... from, say, computer scientists, economists, law professors or even psychologists, to really help us understand how each player works in this space.⁴⁸⁰

One of the classic potential bases for government intervention is the presence of externalities—either negative externalities leading to over-production, or positive externalities leading to under-production. Ginger Jin in her remarks opening hearing 6 rightly called for attention to this issue:

So I want this hearing—I am hopeful that this hearing will talk about the externality issues in data and to what extent the parties that generate that spillover have the incentive to internalize that spillover and how does that spillover affect consumer welfare.⁴⁸¹

But in the ensuing conversations only one participant, Omri Ben-Shahar, discussed externalities with other than a passing reference. And, as he noted, “there is potential negative externality, [but] I would also want to... think about externality as a problem not just of negative but also positive. Data has immense positive externalities.”⁴⁸²

Indeed, as noted above, not only are there obvious benefits from the collection and use of data by large entities organized for the purpose of making use of data, but the process itself entails the

⁴⁸⁰ *Id.* at 12 (statement of Ginger Jin Professor, University of Maryland).

⁴⁸¹ *Id.* at 18 (statement of Ginger Jin Professor, University of Maryland).

⁴⁸² *Id.* at 40 (statement of Ben-Shahar, Professor, University of Chicago Law School).

spillover of information at the moment of interaction—that is, before the data are processed by the entity, and simply upon their surfacing by a user.

Suffice to say that proponents of particular “solutions” to alleged data problems have not answered or pointed to answers to any of these questions, let alone all of them. As Jin remarked:

Based on my experience, I think the potential anticompetitive practice related to data is more often a theoretical possibility than a widespread practice in the real world.⁴⁸³

Moreover, merely identifying anticompetitive potential is insufficient:

[I]f we identify some contribution of big data to the anticompetitive problem I listed here, I think that still has to be translated into what is the overall impact of that practice on consumer welfare, both short run and long run. That is sort of where the real and tangible harm should be associated with big data before we take antitrust action towards that.⁴⁸⁴

Again, while the conversations at the hearings and the information submitted in written comments are helpful, none of it even scratches the surface of a rigorous consumer welfare analysis sufficient to justify antitrust action. No doubt there is enough uncertainty, and the questions are important enough, that more analysis is warranted. The FTC should certainly be a significant part of that process. But, at best, the information gleaned from the hearings only raises more questions; it does not provide answers upon which policy may legitimately be based.

VII. Privacy: Competition issues and regulatory failure

Some commenters in these proceedings attempt to carve out a specific space for considering “privacy” as a necessary—and hitherto neglected—focus for antitrust analysis. Comments from the Trans Atlantic Consumer Dialogue, for example, express concerns that

Reduced incentives to innovate on privacy-enhancing technologies, as companies exploiting personal data view data protection legislation as a threat to their business model. This problem can be exacerbated by large firms absorbing start-ups that could become future competitors and offer alternative approaches that might better protect consumer privacy.⁴⁸⁵

A recent op-ed for the New York Times by antitrust scholar Dina Srinivasan made a similar case for why “Privacy Is an Antitrust Issue”:

⁴⁸³ *Id.* at 14 (statement of Ginger Jin Professor, University of Maryland).

⁴⁸⁴ *Id.*

⁴⁸⁵ *Resolution on Competition, Privacy and Consumer Welfare, In response to US Federal Trade Commission hearings on Competition and Consumer Protection in the 21st Century*, Trans Atlantic Consumer Dialogue (Dec. 10, 2018) available at https://www.ftc.gov/system/files/documents/public_comments/2018/12/ftc-2018-0100-d-0007-163092.pdf

[C]onsumers can suffer at the hands of monopolies because companies like Facebook lock in users with promises to protect their data and privacy—only to break those promises once competitors in the marketplace have been eliminated.⁴⁸⁶

Others attempts have been made to extend a rationale for treating privacy as a unique sort of anti-trust harm. In a recent article, Mark MacCarthy, a senior fellow and adjunct professor at Georgetown University asks us to

[C]onsider marketplace conduct that systematically amasses data of individuals. The larger the data set the more dangerous it is to people. If a single company gains control over this data set either through unilateral marketplace conduct or through merger, it is in the position to do considerable harm to the privacy interests of a very large number of people and it has a monopoly or close to a monopoly in this data. Efforts to gather this data must, therefore, be subject to a test of reasonableness under the antitrust laws. And mergers must be evaluated by whether the resulting data sets pose an unacceptably high risk of damage to the privacy interests of individuals.⁴⁸⁷

But privacy neither deserves to be treated particularly uniquely in an antitrust analysis, nor has it been ignored. Insofar as privacy-protection is a determinant of the quality of a good or service, modern analytical tools are fully capable of including it in an analysis alongside a variety of concerns, such as price, output, choice, innovation, and other quality factors. Even McCarthy ultimately acknowledges the poor fit of using competition law to govern privacy concerns:

Keeping antitrust in its own policy arena is not a recipe for consumer abuse. The antitrust laws are a very powerful tool of national public policy, but they are also designed for a very narrow purpose, which is to preserve competition so as to vindicate the consumer interest in high quality, low-priced and innovative goods and services.⁴⁸⁸

Moreover, to the extent there are unique dimensions to “privacy” problems, consumer harms resulting from privacy violations fall under the umbrella of “consumer protection” and are best addressed via enforcement of existing privacy regulations.

The proposals offered by critics of the current regulatory approach to data (and privacy) issues are completely unsupported. Public Knowledge, for example, calls for “robust protections” for “all personal information,” regardless of whether it is sensitive or not.⁴⁸⁹

Public Knowledge bases this conclusion on the assertion that, with enough context, sensitive information can be inferred from non-sensitive data, and that consumers cannot protect themselves

⁴⁸⁶ Dina Srinivasan, *Why Privacy Is an Antitrust Issue*, NY TIMES (May 28, 2019), <https://www.nytimes.com/2019/05/28/opinion/privacy-antitrust-facebook.html>.

⁴⁸⁷ Mark MacCarthy, *Privacy Is Not An Antitrust Issue*, FORBES (Oct. 1, 2018), <https://www.forbes.com/sites/washingtonbytes/2018/10/01/privacy-is-not-an-antitrust-issue/#475377a700d9>.

⁴⁸⁸ *Id.*

⁴⁸⁹ PK Comments, *supra* note 387, at 3-4.

against these inferences.⁴⁹⁰ It may be correct that, because of consumer heterogeneity⁴⁹¹ and the possibility of inference, the distinction between sensitive and non-sensitive data is an ambiguous one. But advocates have not remotely demonstrated that the solution to the problem of consumer heterogeneity is maximum protection of all data. At the very least, such a regime would impose costs on less-sensitive users, for the sake of offering maximum protection for the most sensitive among us. At the same time, such an approach imposes costs more broadly,⁴⁹² and we are aware of no analysis that adequately weighs the costs and benefits.

Further, even though Public Knowledge feels that individuals are not capable of making privacy decisions for themselves, differential sensitivity across information types is supported by a large body of research. A 2014 survey by the Pew Research Center found a wide range of sensitivities for different kinds of information, with social security numbers being the most sensitive and basic purchasing habits being the least sensitive.⁴⁹³ The report went on to note that “there are a variety of circumstances under which many Americans would share personal information or permit surveillance in return for getting something of perceived value.”⁴⁹⁴

Public Knowledge also quickly notes that, although there had been a twelve percent reduction in investment activity in the lead up to implementation of the EU’s General Data Protection Regulation, “by now [investment levels] are essentially where they were pre-GDPR levels.”⁴⁹⁵

And yet subsequent research demonstrates that the evidence for a bounce-back of investment was only temporary.⁴⁹⁶ It is also unclear whether even the temporary reduction in investment will have long-term consequences. That it may have increased since does not mean that net investment over the period is as high as it would have been absent GDPR.

Based on questionable, scant evidence, Public Knowledge nonetheless feels comfortable recommending “a strict data deletion requirement,” as it “could be privacy-enhancing without compromising multiple industries’ interests in those data.”⁴⁹⁷

⁴⁹⁰ *Id.* at 3.

⁴⁹¹ See *Id.* at note 24 (“[S]ensitivity is highly subjective. Different individuals are likely to perceive different data points’ sensitivity levels differently.”).

⁴⁹² See Jian Jia, Ginger Zhe Jin, Liad Wagman, *The Short-Run Effects of GDPR on Technology Venture Investment*, Working Paper (May 31, 2019), available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3278912.

⁴⁹³ Lee Rainie and Maeve Duggan, *Privacy and Information Sharing*, PEW RESEARCH CENTER, Jan. 14, 2016 available at <https://www.pewinternet.org/2016/01/14/privacy-and-information-sharing/>.

⁴⁹⁴ *Id.*

⁴⁹⁵ PK Comments, *supra* note 387, at 5.

⁴⁹⁶ See Jia, et al, *The Short-Run Effects of GDPR on Technology Venture Investment*, *supra* note 492, at 26 (showing the continued divergence between US and EU investment levels).

⁴⁹⁷ PK Comments, *supra* note 387, at 8.

Numerous economists have pointed out that privacy regulation tends to entrench established incumbents, disincentivizing increases in product quality on privacy dimensions. For instance, Campbell, Goldfarb and Tucker have shown that:

[A] potential risk in privacy regulation is the entrenchment of the existing incumbent firms and a consequent reduction in the incentives to invest in quality. These incentives are stronger when firms have little consumer-facing price flexibility, as is the case in online media.⁴⁹⁸

Indeed, “privacy regulation can shield a large, general incumbent from potential competition because regulation raises the threshold quality and scope for profitable entry by a challenger.... This is more likely for relatively strong incumbents: the stronger the incumbent, the better the marginal entrant must be.”⁴⁹⁹

The trade-off between privacy regulation and market competition applies with even more force when the regulations rely on opt-in consent, because users are less likely to test the products of new entrants.⁵⁰⁰ In its comments to the Commission, the advocacy group Access Now endorsed opt-in consent and a purpose limitation rule:

Data processing should be limited to specific bases, enumerated by law. These may include for example, meaningful, opt-in consent, execution of a contract, or as otherwise necessary under law. The bases for processing data should be identified by the entity, along with the purpose for which that processing is conducted. Acceptable purposes should be prevented from including any use that is discriminatory or has an overly vague description. These purpose limitations must contemplate the most harmful business models - such as those used by data brokers.⁵⁰¹

First, it is important to emphasize that empirical research shows that opt-in privacy rules deter competition by deterring new entry. The seemingly marginal costs imposed on consumers by requiring opt-in can have a significant cumulative effect on competition, as Campbell, Goldfarb, and Tucker point out in their research:

In a world with no transaction costs, one might expect privacy regulation to favor small firms over large ones: if data generate economies of scale, then reduced access to data might help to overcome such effects. However, this ignores that most privacy regulation requires firms to obtain one-time individual consumer consent to use consumer data

⁴⁹⁸ See James Campbell, Avi Goldfarb & Catherine Tucker, *Privacy Regulation and Market Structure*, 24 J. ECON. & MGMT. STRATEGY 47, 68 (2015) (emphasis added).

⁴⁹⁹ *Id.*

⁵⁰⁰ *Id.* at 49. See also, Jan Bouckaert & Hans Degryse, *Default Options and Social Welfare: Opt in Versus Opt Out*, 169 J. INSTITUTIONAL AND THEORETICAL ECON. JITE 468-489 (2013).

⁵⁰¹ Derek Moore, *Comments of Accessnow in re: 21st Century Hearings Consumer Privacy Background and Questions for Comment* (Dec. 20, 2018) available at https://www.ftc.gov/system/files/documents/public_comments/2018/12/ftc-2018-0098-d-0021-163229.pdf

(rather than the consent requests increasing with the amount of data used). Therefore, privacy regulation imposes transaction costs whose effects... will fall disproportionately on smaller firms. Consequently, rather than increasing competition, the nature of transaction costs implied by privacy regulation suggests that privacy regulation may be anti-competitive.

* * *

[In] competition between a generalist firm offering products that appeal to a variety of consumer needs and a specialist firm offering a product that serves fewer consumer needs... privacy regulation can preclude profitable entry by the specialist firm. Under regulation, the extra costs required to obtain consent mean that in some cases where entry had been profitable without regulation, the specialist firm will choose not to enter. The generalist firm then captures the whole market. This implies that privacy regulation can increase the advantage enjoyed by a large generalist firm. This deprives consumers of the higher-quality niche product offered by a specialist firm, which represents a loss that must be balanced against any gain to consumers due to the increased privacy.⁵⁰²

Second, a purpose limitation rule would necessarily limit innovation, as Howard Beales noted in his testimony to the Commission:

There are tremendous benefits that come from the ability to use information, even if it is an unexpected use of the information.

And we do not want to sacrifice those benefits because somebody did not think to include that in the list of things that might be done with information in the privacy policy, because it was not thought of at the time that the privacy policy was written...

[W]e have an enormous number of services that are built on exactly those kinds of secondary uses of information that was collected for a different purpose, that may or may not have fit with consumers' expectations.

What we want to make sure of is that that information is not being used in ways that are harmful to consumers, that is doing damage to consumers. And that is where privacy regulation and privacy enforcement really ought to focus. If there is not a harm, it is not something that the FTC in particular should be worried about.⁵⁰³

Therefore, policymakers would be wise to incorporate harms to competition in assessing the costs and benefits of any new privacy regulation. Regulatory barriers to entry—such as mandatory opt-in—might harm consumers on net even after factoring in the benefits of hypothetical privacy protection. Likewise, refraining from implanting a purpose limitation rule would also be advisable for competition reasons. *A priori* it is unclear which data might be the basis for innovation (and future competition).

⁵⁰² Campbell, Goldfarb & Tucker, *supra* 498, at 48-49.

⁵⁰³ *FTC Hearing #1*, *supra* note 384, at 194-195 (statement of Howard Beales, Professor, George Washington University School of Business).

Finally, calls for mandatory sharing of data—data portability mandates—fail to account for the full costs of such rules. When the data creators' knowledge is applied to the collection or storage of data—either by determining which data to collect or by imposing a particular structure on the data—it incorporates hard-won knowledge (either tacit or explicit) beyond the data themselves. Mandating the sharing of data entails the forced sharing of this knowledge, as well, thus reducing the incentive to develop it in the first place and the incentive to expend resources to protect it. Both are wasteful, and the cost of this waste must be accounted for and weighed against the possible benefits in determining whether mandatory data sharing is desirable policy.

Related, the potential cost of homogeneity and reduced innovation by new entrants must be considered, as well. Having received by operation of law not only valuable data, but also some of the incumbent's knowledge, new entrants will, at the margin be more likely to mimic the incumbent's implementation of the data, as well.