

STRUCTURAL vs. BEHAVIORAL REMEDIES IN BIG TECH SECTORS



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I. INTRODUCTION

As the preoccupation about the state of digital industries intensifies across various areas of public policy – ranging from privacy, data protection, labor regulation, electoral integrity, and market power – the “break up big tech” slogan has gained growing centrality in competition policy and related debates concerned with the excessive levels of concentration and dominance of large digital platforms. In the U.S., for example, Elizabeth Warren has argued that tech firms like Facebook, Google, and Amazon have accumulated too much power over the economy and democracy, and should be broken up.² Chris Hughes, the co-founder of Facebook, has also recently urged that it is “time to breakup Facebook.”³ In a similar vein, various other commentators support structural solutions as a way to boost the competitiveness of digital markets.⁴

At a general level, many of the recent calls to break up tech titans are premised on the idea that digital industries have reached an excessive level of concentration and economic power due, among other things, to weak antitrust enforcement and unchecked market power abuses, which allow platforms to degrade quality and privacy, extract excessive amounts of data from users, and hurt nascent firms and innovation without facing effective responses from competitive market forces. In a context of highly concentrated industries where tech companies are perceived as “too big,” the desired objective of horizontal break ups is to boost competition through market fragmentation – for example, breaking up horizontally a search engine like Google in order to create a more fragmented market structure where a larger number of general-purpose search engines compete.⁵

At a more granular level, structural proposals often take more specific forms, reflecting a set of related, but at the same time distinct competition policy issues. One of them concerns killer acquisitions, whereby a dominant platform may pre-emptively acquire a small firm with a degree of complementarity at the time of the merger but which may have the poten-

2 See Elizabeth Warren, *Here's how we can Break up Big Tech*, Medium, March 8, 2019, at: <https://medium.com/@teamwarren/heres-how-we-can-break-up-big-tech-9ad9e-0da324c>; Astead W. Herndon, *Elizabeth Warren Proposes Breaking Up Tech Giants Like Amazon and Facebook*, The New York Times (March 8, 2019), at <https://www.nytimes.com/2019/03/08/us/politics/elizabeth-warren-amazon.html#>.

3 See Chris Hughes, *Opinion: It's Time to Break up Facebook*, New York Times, May 9, 2019, At <https://www.nytimes.com/2019/05/09/opinion/sunday/chris-hughes-facebook-zuckerberg.html>.

4 Wired, *Tim Wu Explains why he Thinks Facebook Should be Broken up*, May 07, 2019, at <https://www.wired.com/story/tim-wu-explains-why-facebook-broken-up>. See also Tim Wu, *The Curse Of Bigness: Antitrust in the new Gilded Age* (Columbia Global Reports, 2018); Thomas Philippon, *The Great Reversal: How America Gave up on Free Markets* (Harvard University Press, 2019); Jonathan Tepper, *The Myth of Capitalism: Monopolies and the Death Of Competition* (John Wiley & Sons, 2018); Lina Khan, *The Separation of Platforms and Commerce* (2019) 119 Columbia Law Review 973.

5 See for Instance Jonathan Taplin, *Opinion: Is It Time to Break up Google?* The New York Times (January 20, 2018), At: <https://www.nytimes.com/2017/04/22/opinion/sunday/is-it-time-to-break-up-google.html>.

tial to become a substitute in the future, as a way to eliminate the threat of a nascent competitor. A major preoccupation of current competition policy debates centers on the fact that some of these acquisitions may escape the standard merger review process and therefore should be subject at a minimum to heightened scrutiny, or more radically should be undone through a breakup. A widely cited example can be found in the merger between Facebook and Instagram.⁶

Another prominent antitrust context where structural solutions have been proposed concerns discriminatory conduct in the presence of extensive vertical integration. When a large platform with substantial control over one market vertically integrates, it may have incentives to leverage market power and foreclose adjacent markets by favoring its own specialized services.⁷ The most prominent manifestation of this conduct is represented by various forms of biases in ranked-based results that many platforms provide. This may include for instance Amazon providing preferential prominence to its own branded goods to the disadvantage of third-party sellers on the Amazon Marketplace, or Google's search bias as described in the recent Google Shopping case in Europe.⁸ For some, solutions to self-preferencing should include separation between the "core" platform function and the provision of related, specialized services or products in adjacent segments.⁹

While there is an obvious appeal in surgical solutions geared toward restructuring markets, it remains a largely open and controversial question whether structural remedies are feasible or desirable in practice, and whether these instruments truly represent superior responses to specific competition issues vis-à-vis alternative solutions that are more behavioral in nature. In this short commentary, we seek to highlight the relationship between structural and behavioral remedies in big tech sectors, and in so doing stress the potential role that behavioral remedies may play in future policy developments in digital markets. First, we briefly highlight the basic tradeoffs between structural and conduct remedies. Then, we discuss some of the pitfalls of structural solutions that may reduce their effectiveness in practice, and in light of these pitfalls we explain why the development of behavioral solutions will retain a critical function in big tech sectors.

II. STRUCTURAL SOLUTIONS IN DIGITAL MARKETS

The standard antitrust remedial toolkit divides into two major categories. At one end of the spectrum are structural remedies, which generally aim at fixing competition issues by restructuring a market. These may involve various degrees of separation, ranging from ownership separation to operational, legal, and accounting division. Examples include the divestiture of assets in the context of merger review to preserve efficiencies while removing the source of competitive concern; structural separation in regulated network industries as an instrument to enhance competition in potentially competitive segments previously controlled by a fully integrated monopolist, such as separating the transmission grid from the generation sector in previously integrated electricity utilities; or break-ups as a remedy in abuse of dominance and monopolization cases (as proposed in the *U.S. v. Microsoft* case).¹⁰ At the other end of the spectrum, behavioral remedies impose specific restriction on the conduct of a firm to limit its incentives to exercise market power (for example, regulation of access to non-competitive segments of an integrated firm or bottleneck inputs in network industries such as non-discriminatory access to a transmission or distribution grid).

As it is well known, the major advantage of structural remedies is that they attempt to eliminate anticompetitive problems and incentives at root, without the need for extensive ongoing monitoring and regulatory oversight. At the same time, structural remedies can result in foregone cost economies enabled by integration, and may be implemented on the basis of an arbitrarily set boundary of separation. For their part, behavioral remedies can be more flexible, avoid the costs of separation, and can preserve economies of scale and scope, but they entail the need for ongoing oversight while facing substantial information asymmetries between the regulator and regulated entities. The evaluation of these trade-offs is in practice more complex, however, given that, the structural-behavioral dichotomy is not always clear cut. For instance, structural remedies may need to be supported by behavioral remedies or quasi-structural solutions (for example, licensing of intellectual property rights, information firewalls, etc.). Thus, at times, the two can be complements,¹¹ for instance where lesser forms of separation like accounting may

6 See for Instance Federico, Giulio And Scott Morton, Fiona M. And Shapiro, Carl, *Antitrust and Innovation: Welcoming and Protecting Disruption* (2019) NBER Working Paper no. 26005.

7 See Discussion in Bruno Jullien & Wilfried Sand-Zantman, *The Economics of Platforms: A Theory Guide for Competition Policy* TSE Digital Center Policy Paper Series (September 2019, No. 1).

8 See https://ec.europa.eu/commission/presscorner/detail/en/memo_17_1785.

9 See Lina Khan, *supra* note 4.

10 Plaintiff's Reply Memorandum in Support of Proposed Final Judgement, *United States v. Microsoft Corp*, Civil Action No 98-1232 (DC Filed May 17, 2000).

11 OECD, *Structural Separation in Regulated Industries: Report on Implementing the OECD Recommendation* (2016).

facilitate the task of regulating access to bottlenecks, or in the merger context where structural divestiture may be complemented by behavioral remedies such as supply agreements for the buyer of divested assets.

The economic and technological features of digital platforms raise further challenges in the assessment of the relative benefits and shortcomings of alternative forms of remedies. Among other factors, the pace of technological change makes it harder to define clear and stable market boundaries, which makes separations in a technologically dynamic and fluid environment (where integration may be driven by significant efficiencies) more complex than in traditional network industries such as electricity or railways. At the same time, conventional antitrust remedies must deal with unconventional and often subtle forms of market power exercises, which in turn challenge the role of conduct remedies. Likewise, although structural approaches can offer clear-cut solutions, they do not necessarily go to the heart of the competitive problems affecting markets characterized by strong economies of scale and scope, especially where barriers to entry and switching costs are associated with the importance of network externalities. Hence, while the comparison between the relative costs and benefits of structural and behavioral remedies is necessarily highly context-specific, there are recurrent economic features of big tech industries that call for a degree of caution against generalized break-up proposals and arguably enhance the pertinence of behavioral solutions. In the remaining part of this section, we point to some of the limitations of structural solutions in digital platforms markets.

A. Market Fragmentation and Increasing Returns to Scale and Scope

One substantial limitation of break-up solutions is that various forms of economies of scale and scope represent the underlying economic force driving high levels of concentration in many digital platform markets. On the supply side, various platforms have a cost structure with large fixed costs and negligible marginal costs, and on the demand side many yield benefits in the form of direct and/or indirect network externalities as another source of scale economies. Moreover, data is an additional driver of concentration because data collection and analysis is associated with substantial economies of scale and scope. Depending on the interplay between these forces and counterforces of concentration (product differentiation and multi-homing, in particular, can prevent concentration on a single platform), big tech sectors tend to be associated with very concentrated market structures, at the extreme possibly giving rise to natural monopolies.¹² Given these inherent tendencies, a horizontal break-up appears in many cases as a non-sustainable solution (as winner-take-all features may recreate a concentrated market structure) that clashes with the fact that concentration is a natural, and often efficient outcome in a world of increasing returns to scale. In addition, horizontal break-ups may not necessarily address the inherent problems of inter-platform competition associated with network externalities and the resulting nature of switching costs and entry barriers that characterize many digital industries.

B. Merger Breakups

The issue of killer acquisitions is more complex, due to the current lack of clear limiting principles both for *ex ante* and *ex post* review of mergers involving potential competitors. First, proposals in favor of post-merger break ups presume that the merger of a nascent competitor was wrongly cleared and that its competitive harms escaped the standard merger review process, issues around which there is growing support but which remain controversial.¹³ Second, it is not obvious that a post-merger break up will have the expected result of effectively restoring competition (especially potential competition) once the two entities have already achieved full integration.

This is not to say that there is no merit in increasing the *ex post* review of specific mergers in tech sectors. The case for *ex post* challenges can be particularly compelling when accounting for the unavoidable hurdles confronted by more proactive pre-emptive merger review *ex ante*. While in theory a superior approach to a post-merger break up, a more stringent *ex ante* policy toward killer acquisitions is likely to face a number of obstacles due to the inherently speculative and uncertain task of predicting the future potential of a small nascent firm. Hence, while there may be room for tightening the scrutiny of acquisitions involving nascent competitors *ex ante*, a post-merger break up may in exceptional circumstances remain a potential solution to a clearly identified competitive problem that was unpredictable at the time of the merger. Such an ex-post review process is however in need of clearly defined limiting principles.

¹² Francesco Ducci, *Natural Monopolies In Digital Platform Markets* (Cambridge University Press, Forthcoming).

¹³ See Shapiro, Carl, *Protecting Competition in the American Economy: Merger Control, Tech Titans, Labor Markets* (2019) *Journal of Economic Perspectives*, forthcoming; Patel, Menesh S., *Merger Breakups* (October 14, 2019). Available at <https://ssrn.com/abstract=3469984>.

C. Structural Separation and Vertical Integration

Platforms' vertical integration and associated issues of foreclosure bring to the forefront the interplay between structural and behavioral remedies. A platform entry into adjacent markets may in various cases generate efficiencies and may, in itself, represent a form of platform competition.¹⁴ At the same time, it may raise the risk of vertical foreclosure and market power leveraging, which can be especially pernicious when targeted at nascent competitors. The main example of vertical foreclosure entails what is often labelled self-preferencing or information bias. This often entails an intermediary platform that provides ranked-based results upstream, while also operating in downstream adjacent markets by supplying goods or services on its own platform in competition with third parties (to concretize, one may think of Google general search as the "upstream" market, and various specialized search services, such as flight search and comparison services, as related "downstream" markets). With vertical integration, the control of the ranking and the visual display of ranked results upstream can induce the selection of specific goods or services at the downstream level, including favoring its own. In such cases, web "real estate" where ranked-results are displayed can be seen as an input and distribution channel for downstream competition, whose self-preferential allocation and access may lead to foreclosure.

Vertical separation represents one of the potential solution to foreclosure achieved through intermediation biases – for example, separating Amazon Marketplace from the supply of its own Amazon Basics products that compete with third-party sellers in the same marketplace, or separating Google general search from the provision of specialized search services. The strongest argument in favor of separation is that it removes and tackles directly the incentives of a platform to discriminate. At the same time, structural remedies may need to be accompanied by line-of-business restrictions in order to prevent future re-entry.¹⁵ They also entail a very uncertain exercise when searching for stable boundaries of separation in technologically fast-moving markets, where there are often substantial economies of scale and scope driving efficient forms of vertical integration. Comparisons between vertical separation and alternative behavioral solutions for vertical foreclosure are not likely to yield a conclusive verdict in the abstract, but separation faces a set of hurdles that are likely to reduce its promised simplicity and challenge its concrete application.

III. THE POTENTIAL ROLE OF BEHAVIORAL INSTRUMENTS

It is notable that most of the recently published official reports on competition and market power in digital platform markets¹⁶ support various forms of more interventionist competition policy enforcement, but none places particular emphasis on structural solutions. Rather, some of them hint at the potential need for some form of regulation.¹⁷ Likewise, it is also important to note that jurisdictions that have in practice adopted more aggressive approaches and stricter enforcement of competition law in platform markets – the European Union in particular – have not to date relied on structural remedies but rather on more behavioral solutions. In particular, in the Google Shopping case, the European Commission has imposed a principle of "equal treatment" requiring the application of the same processes and methods to rival comparison shopping services and Google's own services, which is akin to a non-discriminatory access requirement.

While this does not exclude a priori the desirability of structural remedies in particular contexts, behavioral remedies can often represent a compelling substitute or complement. We argue, in particular, that two important aspects of conduct remedies that pertain respectively to inter-platform and intra-platform competition justify future policy developments in the direction of more refined, and market-specific behavioral solutions.

First, an important aspect of inter-platform competition in industries where barriers to entry and switching costs are directly related to the importance of network externalities is users' ability to switch and multi-home across alternative platforms. Hence, especially in markets with demand-side economies, contestability and platform competition may be better enhanced by behavioral instruments such as portability measures that facilitate switching and multi-homing (for instance, measures that allow drivers to port their profile and reviews across alternative ride-hailing platforms) rather than a single-minded focus on the size of a platform. For these reasons, behavioral solutions that ease the costs

¹⁴ See Hemphill, C. Scott, *Disruptive Incumbents: Platform Competition in an age of Machine Learning* (2019) 119 Columbia Law Review 1973.

¹⁵ Richard Feasey & Jan Krämer, Cerre Report, *Implementing Effective Remedies for Anti-Competitive Intermediation Bias on Vertically Integrated Platforms* (October 2019).

¹⁶ See George Stigler Center for the Study of the Economy and the State – University Of Chicago Booth School of Business, Report by the Committee for the Study of Digital Platforms Market Structure and Antitrust Subcommittee (May 15, 2109); UK Report of the Digital Competition Expert Panel, *Unlocking Digital Competition* (March 2019); European Commission, *Competition Policy for the Digital Era, Final Report* (April 4, 2019); Australian Competition and Consumer Commission, *Digital Platform Inquiry, Final Report* (July 26, 2019).

¹⁷ See for instance the Report by the UK Expert Panel and the George Stigler Center, Id. See also *The Economist*, Big tech's \$2trn bull run, February 22, 2020.

of switching for users and reduce entry barriers for disruptive competitors may represent better tools for inter-platform competition than market fragmentation alone.

The form and the relative cost and complexity of each portability measure is likely to differ greatly depending on the context. For instance, data portability measures have been frequently mentioned both in the context of search engines and social networks as an instrument to promote inter-platform competition. However, their actual target and scope is not the same: in the general search market, portability treats past data as a critical input, and access to data is seen as way through which smaller search engines may be better able to compete. In contrast, in the case of a social network like Facebook the target is the entry barrier created by network externalities between users, and portability is geared toward users' profiles or social graphs as a way to facilitate switching between platforms and reduce the frictions created by those network externalities – arguably a simpler task than providing access to search engines' data. Hence, debates on the possible role and design of portability instruments require to be tailored to the particularities of a given market and service.

Second, another important feature of behavioral remedies, one that pertains to intra-platform competition and that has been to date largely neglected in the literature, is that digital bottlenecks often benefit from lower scarcity constraints, which in turn enhance their shareability. This is certainly true for ranked display of results performed by various platforms (search results of a search engine or e-commerce platform, for example). At first glance, this may seem counter-intuitive because rankings, by definition, are perceived to be scarce and rivalrous. As one commentator puts it in the context of search results: “There is only one first- ranked position, one second-ranked, and so on. Where a facility cannot accommodate both the monopolist-owner and its rival, the law is clear that the monopolist does not have to ‘share.’”¹⁸

In reality, the digital nature of platform rankings challenges this conclusion. The reason is that scarcity of rankings is often wrongly perceived from the perspective of an individual user facing a finite number of ranked results. In practice, however, scarcity should be defined by looking at the other side of the market – namely, those that aspire to be included in a ranking, for which what matters is not an individual user but the total number of users to be reached through ranked results. From this perspective, the problems of scarcity and shareability are overcome when the number of similar searches done on a platform is significant, because the number of available rankings to be allocated is not determined by a single search result page displayed to an individual user in response to a single query, but rather by the *total* number of search result pages presented to all users performing similar queries. Under this light, ranked results may be allocated on a rotational, probabilistic basis across equivalent searches, thus offering more room for mandated shareability between downstream competitors *and* a platform's own vertical properties. While this is just one among the various aspects to be considered in the evaluation of behavioral remedies in the context of vertical foreclosure, it nonetheless sheds some light on the untapped potential of behavioral solutions in terms of shareability and reduced scarcity constraints.

IV. CONCLUSION

Break-up solutions have tended to dominate the recent public debate on big tech sectors. While structural remedies may remain a potential approach to specific competition issues, especially in the context of merger enforcement, rethinking the potential role of behavioral remedies and how they may complement or substitute for structural solutions in specific sectors represent equally critical policy questions in digital industries.

¹⁸ Marina Lao, Search, *Essential Facilities, and the Antitrust Duty to Deal*, 11 NW. J. Tech. & Intell. Prop. 275 (2013). See also Cerre Report, *supra* note 15.



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