

This is a section of [doi:10.7551/mitpress/12686.001.0001](https://doi.org/10.7551/mitpress/12686.001.0001)

Innovation Matters

Competition Policy for the High-Technology Economy

By: Richard J. Gilbert

Citation:

Innovation Matters: Competition Policy for the High-Technology Economy

By: Richard J. Gilbert

DOI: [10.7551/mitpress/12686.001.0001](https://doi.org/10.7551/mitpress/12686.001.0001)

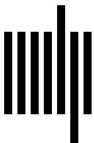
ISBN (electronic): 9780262358637

Publisher: The MIT Press

Published: 2022

OA Funding Provided By:

The open access edition of this book was made possible by generous funding from Arcadia—a charitable fund of Lisbet Rausing and Peter Baldwin.



The MIT Press

11 Some Concluding Remarks on Innovation-Centric Competition Policy

As a society, we are conflicted about the digital economy. We bemoan our loss of privacy and worry that the winds of creative destruction that topple dominant firms appear to have slowed. At the same time, we cannot ignore the many ways that the giants of the digital economy have improved our lives with new products and services. Competition policy has to navigate the conflicting costs and benefits of market power in the digital economy. For some, the solution is to abandon the traditional focus of antitrust enforcement on consumer welfare and incorporate broader concerns, such as jobs, privacy, inequality, and the concentration of political power. Including these ill-defined goals increases the risk that courts and antitrust agencies will have too much discretion to respond to political pressures, corporate lobbying, and personal biases. The commitment of antitrust enforcers to policies that promote consumer welfare goes far to explain the relatively weak impact of these influences.

There is another path to achieve broader goals while preserving a focus on consumer welfare. Antitrust enforcement should evolve from being *price-centric* to *innovation-centric*. Price-centric antitrust enforcement prevents mergers that are likely to raise prices, and prevents firm conduct that excludes competition for existing products and services. Innovation-centric antitrust enforcement does not abandon these concerns, but it augments them by challenging mergers and firm conduct that are likely to harm innovation and competition for products that do not presently exist. Innovation-centric competition policy will achieve goals that price-centric enforcement neglects, such as ensuring opportunities for entrepreneurs to compete and thrive.

Although the antitrust laws do not have to be rewritten to address innovation, there are historical precedents that erect judicial barriers to

the enforcement of dynamic competition. I summarize some of the most significant obstacles and how they must change to accommodate innovation-centric competition policy.

Antitrust authorities should not emphasize market definition to analyze innovation and future price competition

Courts have developed analytical tools such as market definition to evaluate antitrust allegations, and they have increasingly demanded empirical evidence to prove anticompetitive effects, which they typically measure by firm shares, prices, and output in existing markets. This policy evolution has introduced commendable analytical rigor to antitrust enforcement. It restrains enforcement that would deter beneficial conduct, and limits the ability of special interests to influence judicial outcomes. Yet this focus of modern antitrust enforcement on market shares and prices also raises barriers to evaluate allegations of harm to innovation and future price competition.

Harm to innovation requires an analysis of effects on research and development (R&D) incentives. Conventional approaches to market definition are generally unhelpful for this analysis because most R&D is not traded in a market. Conventional approaches to market definition also are unhelpful for innovation-centric antitrust policy because mergers and other conduct involving high-tech firms affect the availability and prices of products that may appear in the future, for which the lack of empirical evidence makes the definition of these future markets inherently uncertain.

In contrast to conventional market definition, the concept of a “research and development market” can be useful to analyze innovation incentives and future price competition by identifying the firms with the specialized assets necessary to conduct R&D devoted to a particular application. A merger in an industry with few firms that possess these specialized R&D assets raises concerns about downward pressure on innovation incentives. A merger in an industry with many firms that possess these specialized assets is unlikely to harm innovation or future price competition. Thus, definition of a research and development market can be a useful screen to identify the potential for harm to innovation and price competition, much as conventional market definition is a useful screen to identify the potential of a merger to raise prices for existing products and services.

Antitrust authorities should rely on validated presumptions to assess innovation effects

Innovation-centric antitrust enforcement will require courts to rely more on presumptions about future effects that are buttressed by economic theory, empirical evidence, and corporate records and testimony. Although available theory makes diverse predictions about the effects of competition and mergers on innovation, it also provides robust insights into different market circumstances. Mergers decrease innovation incentives through a unilateral effect that operates in much the same way that mergers increase prices. Profits that are at risk from innovation can be a heavy drag on innovation incentives. Mergers can stifle innovation even if the merging firms do not supply products that are substitutes for each other.

Courts should rely on an extensive body of theory and empirical studies to support presumptive effects of mergers on innovation and future price competition. Mergers can harm innovation by creating downward innovation pressure, or they can promote innovation if they allow the merging parties to appropriate greater value from their innovations than they could obtain as independent firms. Unfortunately, empirical studies of innovation effects from mergers are few in number; there is great need for additional empirical research to inform competition policy.

Courts should require evidence of benefits from proposed mergers or acquisitions

The Clayton Act prohibits mergers or acquisitions that are likely to substantially lessen competition in a relevant market. Antitrust enforcers have the burden to prove that harm from a merger is likely and substantial. However, many transactions in the high-tech sector have anticompetitive effects that are substantial, but often difficult to prove with a high degree of certainty. At the same time, many of these transactions have questionable efficiency benefits.

Competition policy would be more effective for the high-technology economy if courts required evidence of benefits from proposed mergers or acquisitions, or from other conduct that has the potential to harm competition and innovation. Existing competition policies prioritize the risk of overenforcement, perhaps based on a belief that market forces can correct anticompetitive conduct, but are less able to correct misguided antitrust intervention. In the high-technology economy, the potential consumer harm from underenforcement of the antitrust laws

is at least as great as the potential harm from overenforcement. Forces such as network effects and economies of scale reinforce market dominance and aggravate concerns about market power obtained by excluding rivals or by acquiring potential competitors when the conduct does not have offsetting benefits. Reasonable presumptions should strike a balance between errors of overenforcement and underenforcement to foster innovation and future competition.

Courts should increase scrutiny of acquisitions that eliminate potential competitors

The court of appeals in *US v. Microsoft* affirmed the principle that the antitrust laws apply to conduct by a dominant firm that eliminates nascent threats. Exclusionary conduct by a dominant firm can violate the antitrust laws without having to prove that the excluded competition likely would have occurred without the conduct. This principle should also apply to acquisitions of nascent competitors. Dominant firms in the high-technology economy are adept at identifying competitive threats and can acquire them in their infancy, before their targets achieve a market presence that would trigger conventional antitrust concerns.

Many of these potentially harmful acquisitions fall below the Hart-Scott-Rodino (HSR) value thresholds that require reporting of the transaction to the Federal Trade Commission (FTC). Although transactions that fall below the HSR thresholds are not immune from antitrust enforcement, reporting greatly facilitates the detection of troublesome transactions. The HSR thresholds should be modified to require reporting of acquisition targets with modest revenues if the acquirer is a firm that dominates an industry.

Firms in the high-tech sector of the economy have made hundreds of acquisitions and they will make many more. Even if the probability is small that any single acquisition will eliminate a significant competitive threat, there is a high probability that at least one acquisition will have this effect. Courts should not presume that potential competition must be likely and significant to warrant antitrust intervention, and they should oppose acquisitions that have no credible efficiency benefits.

However, courts and antitrust authorities should not presume that acquisitions of potential rivals are anticompetitive if the expectation of acquisition by an established firm in a related technology field is the motivator for innovation by the acquired firms in the first place, provided that there are no other acquirers that would offer similar rewards

without the risk of anticompetitive effects. These other acquirers would be less restrictive than a potentially harmful merger. Courts should erect a high bar to acquisitions that may harm competition or innovation if there are other acquirers for which anticompetitive harm is much less likely.

Courts should not require evidence of substantial foreclosure to prevent exclusionary conduct

Innovation-centric competition policy should continue to emphasize restrictions on conduct that excludes competition and allows firms to benefit in ways that are not the result of superior performance or efficiency. The prevention of conduct that excludes competition is particularly important in markets with network effects because the exclusion of rivals can allow these markets to tip to a dominant supplier that does not offer consumers the best products and services. Antitrust policy should apply a lower threshold than substantial foreclosure for anticompetitive exclusionary conduct in industries with network effects.

Compulsory licensing is often an effective tool to promote innovation

Most observers of antitrust enforcement would put the breakups of Standard Oil and AT&T at the top of the list of greatest antitrust “hits.” But they might overlook compulsory licensing agreements that had profoundly beneficial impacts on competition and innovation. These include the 1956 AT&T and IBM consent decrees, which compelled the licensing of more than 9,000 patents (some royalty-free), as well as the 1975 Xerox consent decree, which compelled the company to offer patents covering plain-paper copiers at reasonable royalties. These decrees were powerful stimulants for competition and promoted follow-on innovations that built on the patented technologies.

Compulsory licensing obligations in merger consent decrees appear to have promoted patenting by firms that were the beneficiaries of these compulsory licenses without significantly reducing patenting by the firms that were compelled to license intellectual property or by other industry participants. These observations are consistent with studies of compulsory licensing in other industry contexts. Compulsory licensing can promote interoperability to benefit innovation by firms that offer complementary products and services. Where data is a barrier to entry, compulsory licensing can offer rivals access to data,

although licenses would have to be designed to make the shared data useful without compromising privacy.

Compulsory licensing should be used sparingly to address industry dominance because it can diminish innovation incentives. An additional concern is the cost of administering compulsory licenses. The consent decrees that resolved the US and European Commission (EC) cases against Microsoft included obligations to license intellectual property and provide know-how necessary to achieve interoperability with Microsoft operating systems and applications. These are important forward-looking provisions, but they proved difficult to administer. The difficulties were related to narrow obligations for which Microsoft had discretion to specify licensing terms. Broader licenses with no or low royalties are easier to administer. While such obligations increase concerns about undermining innovation incentives, licensing obligation can be designed to promote follow-on innovation without allowing firms to imitate a market leader.

The truncated rule of reason analysis is useful to assess allegations of anticompetitive innovation

One of the most challenging areas of antitrust enforcement for the high-technology economy is the evaluation of incremental innovations or product designs that allow a dominant firm to maintain a monopoly or extend it into related markets, but also have benefits for consumers. Courts and antitrust scholars have proposed various tests to analyze whether innovations that exclude competition should warrant antitrust scrutiny, but they have yet to agree on a preferred approach. For instance, the US FTC and the EC reached different conclusions in their evaluations of alleged bias in Google's displays of search results related to product comparison shopping services. The FTC did not challenge Google's conduct, which is consistent with a strong deference to innovation in US antitrust policy. The EC held that Google's conduct was unlawful, which is consistent with European policy that conduct by a dominant firm that discriminates against rivals can be a violation of European antitrust law. Neither approach strikes the right balance between promoting innovation incentives and protecting competition.

I suggest a truncated rule of reason to evaluate product designs and other innovations that may exclude competition. Under this approach, product designs and other innovations would escape antitrust condemnation if they offer substantial improvements and are not accompanied by other exclusionary conduct that does not have procompetitive ben-

efits. Innovations and product designs that provide only marginal benefits would be examined under a full rule of reason analysis to determine whether their benefits compensate for any exclusionary effects.

This approach would not impose a large burden on potential innovators because the circumstances in which a marginal innovation or product design cause large exclusionary effects are limited. Some examples, such as pharmaceutical product hopping, have product changes and exclusionary effects that are no more difficult for courts to quantify than issues that courts address in many other antitrust cases. Exclusionary effects from changes in interoperability protocols are more complicated because the changes can have benefits and costs that are difficult to quantify. Nonetheless, the truncated rule of reason can accommodate these types of cases by imposing a low threshold for benefits from a change that defeats interoperability as a condition to require a balancing of costs and benefits.

Antitrust authorities should evaluate the effectiveness of remedies for innovation

Antitrust authorities should not hesitate to impose harsh remedies, including structural divestitures, if they are warranted by the expectation of harm to innovation or future competition that cannot be satisfactorily addressed with more moderate measures. Unfortunately, there are no systematic studies of the performance of remedies that address innovation concerns. This book offers some anecdotes, but they paint a mixed picture. In the merger context, some divestitures appear to have successfully restored innovation incentives that allegedly would have been eliminated by the merger. Others appear to have been less successful: Recipients of the divested assets failed to invest in R&D directed toward applications for which there were innovation concerns. A successful remedy requires the identification of a party with the ability and incentive to restore investment allegedly lost from a challenged transaction and transfer of the R&D and related assets necessary to accomplish the desired ends.

Competition authorities have sponsored several studies of the effects of merger remedies on price competition in existing markets; however, little has been done to evaluate the extent to which remedies have succeeded in preserving innovation incentives and competition in markets for new products and services. Antitrust enforcement would benefit from comprehensive ex post reviews of the consequences that interventions have had for innovation and future competition. Indeed, antitrust

enforcement would be served by a statutory obligation for merging firms to provide data on prices, R&D expenditures, patenting, and other relevant measures that would allow agencies to engage in retrospective analyses of the effects of mergers on competition and innovation.

Should antitrust enforcement break up big tech?

I would be remiss if I did not at least briefly address the calls from many politicians and some antitrust scholars to break up major tech platforms. There are many concerns, in addition to perceived harm to innovation and price competition, that compel demands for structural reforms. They include the political power wielded by the giant platforms, the risks they pose to privacy, and monopsony power over workers and suppliers. The EC has levied substantial fines and ordered remedies to address perceived antitrust violations by the major tech platforms. However, these punishments and remedies have accomplished little to upset their market dominance.

I have no comparative advantage to assess whether structural reforms would alleviate concerns about political power or the misuse of personal data. However, it is worth noting that breaking up these firms does not necessarily imply that their successors would have greater interest in protecting consumer data or that regulators would have an easier time controlling abuses of privacy if more firms compete for the attention of consumers and advertisers.

Structural reform can be justified as an antitrust remedy to resolve persistent harm to competition that cannot be addressed satisfactorily with behavioral conditions, although it is easier to prevent combinations that create antitrust concerns in the first place. Structural reform often involves the separation of activities that have characteristics of a natural monopoly from other activities for which competition is feasible. That objective was an impetus for the separation of local telephone service from other potentially competitive services in the breakup of AT&T. The breakup promised that the local exchange companies, which would continue to be regulated as monopolies, would not have incentives to foreclose or shift accounting costs onto services that could be provided under competitive conditions.

The major tech platforms are not regulated and consequently do not have the same anticompetitive incentives. Nonetheless, they have the ability and incentive to disadvantage firms that both compete with them and depend on access to their services. Google has the incentive and ability to disadvantage rivals that compete for search-based adver-

tising revenues. Apple and Amazon have incentives to advantage their own products over other competitive products whose suppliers use their platforms to reach customers—and so on with respect to conduct by platforms in other dimensions.

Although the major tech platforms do not lack the ability and incentive to harm actual and potential rivals, the central question is whether structural divestiture is the best solution to address these concerns. Divestiture would require a determination of the boundary lines for the divested components and enforcement oversight to prevent the component parts from crossing into prohibited territories. Perhaps some acquisitions, such as Facebook's purchase of Instagram, could be unwound without major disruptions. But it is questionable whether unscrambling these eggs would have procompetitive consequences. It would not be difficult for Facebook to compete with an independent Instagram, and the inexorable forces of network effects are likely to produce a single victor. We can bet who that might be.

Other types of structural reforms might have more beneficial effects. For example, separating Amazon merchant services from sales of its privately branded products might alleviate concerns that Amazon would misuse data on merchant sales to favor its own products. But such reforms could sacrifice consumer benefits by prohibiting Amazon from supplying private label products at attractive prices, and by eliminating the use of Amazon's private label products to discipline the prices of related products. As a policy matter, it would also be difficult to explain why Amazon should be restricted from private label sales while allowing other sellers (such as Walmart) to make extensive use of this retail strategy. More complicated structural reforms, such as limiting the types of services that Google, Facebook, Amazon, or Apple can offer, could have benefits in theory, but they would be very difficult to design and enforce in ways that promote innovation and consumer welfare.

The design and administration of the divestiture of a major tech platform would be no easier than the breakup of AT&T. The AT&T divestiture was costly to administer and, more importantly, interfered with innovation that required coordination between the different parts of the divested Bell System. There is no reason to believe that the risk of harm to innovation would be less severe from a structural divestiture of any of the major tech platforms. Moreover, if a divestiture cleaves activities for which there are powerful network effects, the forces that enable a tech platform to sustain its dominance would tend to recreate a new dominant firm after a breakup.

Although there may be scope for informed structural change to address dominance in the digital economy, it is not a substitute for diligent antitrust enforcement. Antitrust enforcement for the high-technology economy can be strengthened by reforms proposed in this book, along with increased penalties for unlawful conduct and additional agency resources to develop the specialized expertise necessary to address harm to competition and innovation in this sector. Stronger antitrust enforcement should be joined with regulations designed to protect privacy and limit the political influence of these and other major companies. The purpose of this book is to provide a reference source of knowledge and experience to guide this diligent antitrust enforcement. The lessons are not simple; more needs to be done to understand the proper role of antitrust enforcement in promoting innovation for the high-technology economy.

© 2020 Massachusetts Institute of Technology

This work is subject to a Creative Commons CC-BY-NC-ND license.

Subject to such license, all rights are reserved.



The open access edition of this book was made possible by generous funding from Arcadia—a charitable fund of Lisbet Rausing and Peter Baldwin.



This book was set in Palatino by Westchester Publishing Services.

Library of Congress Cataloging-in-Publication Data

Names: Gilbert, Richard J., 1945- author.

Title: Innovation matters : competition policy for the high-technology economy / Richard J. Gilbert.

Description: Cambridge, Massachusetts : MIT Press, [2020] | Includes bibliographical references and index.

Identifiers: LCCN 2019039525 | ISBN 9780262044042 (hardcover)

Subjects: LCSH: High technology industries. | Competition. | Antitrust law--Economic aspects. | Consolidation and merger of corporations--Law and legislation--Economic aspects.

Classification: LCC HC79.H53 G56 2020 | DDC 338.8/2--dc23

LC record available at <https://lcn.loc.gov/2019039525>