

Book Review

Navigating the Transition to a More Innovation-Centric Antitrust

Richard J. Gilbert

Innovation Matters: Competition Policy for the High-Technology Economy

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Reviewed by Jonathan B. Baker

Long before the late 20th century, antitrust enforcement and litigation were concerned with innovation. Innovation was central to landmark tying cases involving IBM's tabulating cards¹ and International Salt's machines for utilizing salt products,² to the government's patent pool case involving the process of extracting gasoline from crude oil by "cracking,"³ and to the Supreme Court's 1951 decision finding that a dominant old-technology firm (a newspaper) had violated Section 2 of the Sherman Act by suppressing the entry of a rival employing a newer technology (radio).⁴ In 1979, the Second Circuit largely rejected claims by a rival that Kodak, the then-dominant producer of film and cameras, had violated the same statute when it introduced a new type of film in a format compatible with a new Kodak camera but not with its rivals' camera products.⁵ The antitrust laws prevented firms in high-technology markets from exploiting patent licenses⁶ or patent accumulation⁷ to exclude rivals in ways not permitted by the intellectual property laws, and were used to challenge collusion among innovation rivals to limit research and development.⁸

Notwithstanding cases like these and the more recent decisions and enforcement actions discussed by Richard Gilbert in *Innovation Matters*, antitrust has always largely been, in Gilbert's term, price-centric.⁹ That's not because courts and commentators failed to recognize innovation's importance. The problem has been knowing what to do about it. The connection between higher prices and reduced competition was historically well understood while the connection between innovation and reduced competition was less clear. Judge Learned Hand, writing in *Alcoa*, noted

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¹ IBM Corp. v. United States, 298 U.S. 131 (1936).

² Int'l Salt Co. v. United States, 332 U.S. 392 (1947).

³ Standard Oil Co. (Indiana) v. United States, 283 U.S. 163 (1931).

⁴ Lorain J. Co. v. United States, 342 U.S. 143 (1951).

⁵ Berkey Photo, Inc. v. Eastman Kodak Co., 603 F.2d 263 (2d Cir. 1979). Similar issues arose contemporaneously in the IBM plug compatibility cases. See, e.g., Transamerica Computer Co. v. IBM, 698 F.2d 1377 (9th Cir. 1983); Cal. Computer Prods., Inc. v. IBM, 613 F.2d 727 (9th Cir. 1979); Telex Corp. v. IBM, 510 F.2d 894 (10th Cir. 1975).

⁶ See, e.g., United States v. Singer Mfg. Co., 374 U.S. 174 (1963).

⁷ See, e.g., Xerox Corp., 86 F.T.C. 364 (1975).

⁸ United States v. Auto. Mfrs. Ass'n, 307 F. Supp. 617 (C.D. Cal. 1969).

⁹ RICHARD J. GILBERT, *INNOVATION MATTERS: COMPETITION POLICY FOR THE HIGH-TECHNOLOGY ECONOMY* 1 (2020).

the then-common belief “that immunity from competition is a narcotic, and rivalry is a stimulant, to industrial progress.”¹⁰ But that view always competed with an alternative economic perspective later summarized by Justice Scalia in *Trinko*: that the opportunity to charge monopoly prices “induces risk taking that produces innovation and economic growth.”¹¹

In 1979, Richard Posner described the relationship between competition and innovation as too unreliable to serve as a basis for enforcement given the then-current state of economic knowledge.¹² The team drafting the 1992 Horizontal Merger Guidelines at the Justice Department considered discussing the impact of mergers on innovation. But outside of recognizing in a general way that price effects and innovation effects often go in the same direction—that competition encourages firms to improve products and reduce costs through innovation in much the same way as it encourages firms to lower price and increase output and quality¹³—the drafters did not know what to say and ended up mentioning innovation only in passing.¹⁴

In more recent decades, this gap in our economic understanding has slowly been filling, and antitrust enforcement attention to innovation has grown. Carl Kaysen and Donald Turner, in their influential 1959 book on antitrust policy, recognized promoting “progressiveness” (along with “efficiency”) as an important goal of antitrust policy, but they did not advocate taking the progressiveness dimension of performance into account in identifying or remedying unreasonable market power.¹⁵ In contrast, in my recent book I devote a chapter to innovation threats from lessened competition and frame the discussion of factors relevant to the evaluation of a merged firm’s unilateral incentives to cut back on R&D around an economic model developed by Richard Gilbert.¹⁶

Today, as *Innovation Matters* recounts in Chapter 5, innovation effects are commonly alleged when mergers are challenged in high-tech industries. They are sometimes the subject of substantial analysis independent of the price effects of the transaction, based on an economic framework for evaluating the innovation effects of horizontal mergers summarized in the 2010 Horizontal Merger Guidelines.¹⁷ Antitrust is also increasingly concerned with exclusionary conduct that harms competition in future products. Most notably, the D.C. Circuit’s unanimous en banc decision in

¹⁰ *United States v. Aluminum Co. of Am.*, 148 F.2d 416, 427 (2d Cir. 1945) (*Alcoa*). On the other hand, the same opinion acknowledged that the antitrust laws do not condemn a producer that became “the sole survivor out of a group of active competitors, merely because of his superior skill, foresight and industry.” *Id.* at 430.

¹¹ *Verizon Commc’ns Inc. v. Law Offices of Curtis V. Trinko, LLC*, 540 U.S. 398, 407 (2004).

¹² RICHARD A. POSNER, *ANTITRUST LAW: AN ECONOMIC PERSPECTIVE* 17 (1979).

¹³ See Joseph Farrell, Deputy Assistant Att’y Gen., U.S. Dept. of Justice, Thoughts on Antitrust and Innovation, Address at the National Economists’ Club (Jan. 25, 2001), <https://www.justice.gov/atr/speech/thoughts-antitrust-and-innovation>. While the price and innovation effects of firm conduct often go in the same direction—Gilbert describes that as a good first approximation in exclusionary conduct cases—Gilbert points out that they need not always do so. His example is a merger between two firms selling complementary products implementing an existing technology, where both firms also seek to develop a new product that would displace current products so they are potentially sellers of substitutes in future products or in an innovation market. Compare GILBERT, *supra* note 9, at 93–94 with *id.* at 189.

¹⁴ In a footnote, the 1992 Guidelines recognized innovation as one of several non-price dimensions along which sellers with market power may lessen competition. U.S. Dep’t of Justice & Fed. Trade Comm’n, Horizontal Merger Guidelines § 0.1 n.6 (1992). Innovation was not mentioned in prior merger guidelines. I worked with Bobby Willig and Paul Denis on drafting the 1992 Guidelines.

¹⁵ CARL KAYSEN & DONALD TURNER, *ANTITRUST POLICY: AN ECONOMIC AND LEGAL ANALYSIS* 13–14, 82–89 (1959). The book largely discusses incentives to innovate in the context of locating the boundary between patent policy and competition policy. *Id.* at 160–79.

¹⁶ JONATHAN B. BAKER, *THE ANTITRUST PARADIGM: RESTORING A COMPETITIVE ECONOMY* 150–75 (2019).

¹⁷ U.S. Dep’t of Justice & Fed. Trade Comm’n, Horizontal Merger Guidelines § 6.4 (2010).

Microsoft confirmed that the antitrust laws reach monopolization by dominant firms undertaken though conduct suppressing nascent competition.¹⁸

The significance of innovation in antitrust enforcement has grown hand-in-hand with the increasing attention to the connection between competition and innovation in economic research, both theoretical and empirical,¹⁹ and with an increasing recognition of the significance of high-technology industries in the economy.²⁰ Economics does not yet permit precise measurement of the innovation effects of reductions in competition, but, as Gilbert makes clear, that imprecision should not stand in the way of considering innovation effects of conduct lessening competition in antitrust—the stakes are too high to do otherwise.²¹

There is no better guide for understanding the connection between antitrust enforcement and innovation than the work of Richard Gilbert. As an academic writing about the economics of innovation, as a commentator explaining the relevance of developments in economics for antitrust, as a government official helping to develop competition policy on innovation-related topics,²² and as an economic expert evaluating the innovation consequences of firm conduct for innovation in individual cases, Gilbert has made influential contributions toward making antitrust policy more innovation-centric.

Innovation Matters synthesizes what Gilbert has learned in his decades-long engagement with innovation economics and competition policy, and in doing so provides a window into antitrust's future. It integrates economics research and case examples to show how enforcers and courts should approach evaluation of the consequences of reductions in competition for innovation, with a focus on high-tech industries.

The four chapters surveying economic research provide an informed, sophisticated, up-to-date, and non-technical guide to the relevant theoretical and empirical literature. The theoretical analysis highlights three critical economic incentives: (1) the Arrow replacement effect—a firm's disincentive to innovate when doing so will cannibalize its pre-innovation profits, (2) appropriation—the

¹⁸ *United States v. Microsoft Corp.*, 253 F.3d 34, 54 (D.C. Cir. 2001) (“Nothing in § 2 of the Sherman Act limits its prohibition to actions taken against threats that are already well-developed enough to serve as present substitutes.”); *id.* at 79 (“[I]t would be inimical to the purpose of the Sherman Act to allow monopolists free reign to squash nascent, albeit unproven, competitors at will—particularly in industries marked by rapid technological advance and frequent paradigm shifts.”). The court also accepted the possibility that competition could be harmed by product improvements. While it explained that in general, “courts are properly very skeptical about claims that competition has been harmed by a dominant firm’s product design changes,” *id.* at 65, it declined to endorse a rule that would insulate from antitrust liability product design changes that exclude rivals by creating incompatibilities. Instead it held that for a violation, “the incompatible product must have an anticompetitive effect that outweighs any procompetitive justification for the design.” *Id.* at 75. Applying that test, the court found that Microsoft’s development of its own Java Virtual Machine (JVM) did not support a monopolization finding because Microsoft’s JVM allowed applications software to run more swiftly without itself having any anticompetitive effect. *Id.*

¹⁹ The relationship between developments in economic thinking and legal change is complex, however. Jonathan B. Baker, *A Preface to Post-Chicago Antitrust*, in *POST CHICAGO DEVELOPMENTS IN ANTITRUST LAW* 60, 69–70 (Roger van den Bergh, Roberto Pardolesi & Antonio Cucinotta eds., 2002).

²⁰ Research and development intensity is high in industries that include pharmaceuticals, electronic components, communications equipment, software, information and internet services, data processing, aerospace products, scientific instruments, chemicals, and scientific services. GILBERT, *supra* note 9, at 13. While there have always been high-technology sectors, my sense is that public recognition of their significance for economy-wide growth and productivity and the influence of competition policy on innovation has grown over the past 40 years.

²¹ *Id.* at 39.

²² As Deputy Assistant Attorney General for economics, Gilbert played a major role in developing and applying the concept of innovation markets, see Richard J. Gilbert & Steven C. Sunshine, *Incorporating Dynamic Efficiency Concerns in Merger Analysis: The Use of Innovation Markets*, 63 ANTITRUST L.J. 569 (1995), and in modernizing antitrust policy guidance on intellectual property licensing. See U.S. Dep’t of Justice & Fed. Trade Comm’n, *Horizontal Merger Guidelines*, *Antitrust Guidelines for the Licensing of Intellectual Property* (1995).

way a firm's incentive to innovate is diluted by the prospect that the profits from doing so will be shared with its rivals (for example, through rapid imitation), and (3) preemption—the incentive of an incumbent to take steps to discourage entry or innovation, whether through foreclosure or by appropriating the entrant's or innovator's profits.

Gilbert carefully dissects the features of the economic models that make these forces more or less important. How does it matter, for example, whether the innovation involves a new product or is cost-reducing; whether it is drastic (making the technologies it replaces obsolete) or incremental; whether the product is durable; whether a multi-product firm also sells substitutes or complements for a new product; whether there is an active market in which established firms acquire new products from startups; whether innovating firms are technologically behind or in parity with rivals; whether innovations are likely to be cumulative, with substantial follow-on improvements; or whether a successful innovation would require the innovating firm to develop and employ technical or commercial capabilities different from those it uses to produce its existing products and services?

The case study chapters in *Innovation Matters* show how to use economic analysis to evaluate liability and remedies in antitrust enforcement. One chapter scrutinizes more than a dozen U.S. merger cases as well as some European matters. It looks at “product-to-product” mergers (when an incumbent acquires a potential rival with ongoing R&D), “project-to-project” mergers (when both firms have R&D efforts targeting similar applications), and mergers between firms with overlapping R&D capabilities. Two chapters on exclusionary conduct by dominant firms examine exclusive dealing, tying, restrictions on interoperability, and exclusionary new product design. These chapters are framed around Microsoft's and Google's engagement with antitrust enforcement, in both the U.S. and the E.U. Another chapter considers abuses of standard setting.

The discussion is wide ranging. In the chapter on *Microsoft*, for example, Gilbert explains why Microsoft was properly held liable in the U.S. even though, as it turned out in retrospect, middleware (the excluded source of nascent competition) did not commoditize personal computer operating systems. He concludes that a two-sided platform market analysis of the sort employed in *Ohio v. American Express*²³ would not have reversed the finding that Microsoft's exclusionary conduct violated the Sherman Act.²⁴ Among other things, Gilbert also suggests that antitrust enforcers and courts can reasonably presume that dominant firms do not need to erect artificial entry barriers to protect their incentives to innovate.²⁵

Gilbert's analysis of remedies for innovation harms from anticompetitive mergers and exclusionary conduct is particularly interesting and thought-provoking. He is skeptical of imposing interoperability requirements, emphasizing their administrative difficulties, and of divestitures, emphasizing their mixed record of success. At the same time, he is enthusiastic about using compulsory licensing of intellectual property to redress innovation problems, pointing to the “profoundly beneficial” impact on competition and innovation of the 1956 AT&T and IBM consent decrees along with the success of the FTC's 1975 Xerox decree and several merger settlements.²⁶

Overall, Gilbert explains, the high-technology economy needs more aggressive antitrust enforcement, particularly in challenging mergers and exclusionary conduct that eliminate potential

²³ *Ohio v. Am. Express Co.*, 138 S. Ct. 2274 (2018).

²⁴ GILBERT, *supra* note 9, at 179.

²⁵ *Id.* at 189.

²⁶ *Id.* at 239; *see also id.* at 132–35.

competition from innovators.²⁷ But in paying close attention to distinctions in the economic models and to the equivocal state of some of the empirical evidence he surveys, Gilbert does not draw sweeping conclusions about how best to do more. His policy recommendations are nuanced, reflecting tradeoffs suggested by the economics literature, as indicated by the following examples:

- More aggressive enforcement is needed, but at least some categorical prohibitions on firm conduct would create an excessive risk of overdeterrence.²⁸
- Horizontal mergers among innovation rivals commonly create downward pressure on innovation, but perhaps not if innovation had been discouraged by anticipated technological spillovers between those competitors.²⁹
- Acquisitions of nascent rivals by dominant incumbent firms should not be presumed anti-competitive if the acquired firm's innovation was motivated by the expectation of buyout by an established firm in a related technology field, but courts should place less weight on claimed benefits from dominant firm acquisitions of startups when alternative acquirers present less risk of harm to innovation or future price competition.³⁰
- The U.S. is too permissive and the E.U. too tough when evaluating the exclusionary effects of product design changes.³¹ For both jurisdictions, Gilbert recommends employing a truncated rule of reason by which innovation or product design changes would be presumptively lawful if substantial and not accompanied by exclusionary conduct separable from the improved product or technology.³²
- Antitrust should become more innovation-centric, but enforcers can reasonably challenge a merger when its innovation benefits are more than offset by the harm resulting from higher prices.³³

Gilbert effectively makes the case that we know a great deal about the way competition policy affects incentives to innovate, and that it is important for enforcers and courts to account for those incentives in resolving cases and developing policy. As he explains, innovation-centric competition policies will require, at times, different emphases in enforcement, different analytical techniques, and new presumptions from the price-centric policies of the past.

Innovation Matters successfully accomplishes what it sets out to do. It provides an informed, even-handed, reliable, insightful—and for these reasons, essential—reference for antitrust policy-makers and practitioners, both lawyers and economists, as enforcers and courts navigate the ongoing transition to a more innovation-centric antitrust. I only wish that it had been longer, so that it could have provided even more guidance. ●

²⁷ *Id.* at 30–35, 238.

²⁸ *Id.* at 30–35.

²⁹ *Id.* at 89–91.

³⁰ *Id.* at 105, 238–39.

³¹ *Id.* at 217.

³² *Id.* at 213.

³³ *Id.* at 89.