United States of America
Federal Trade Commission

Antitrust and Innovation: Still Not A Dynamic Duo?

Christine S. Wilson*
Commissioner, U.S. Federal Trade Commission

Remarks at the
Standard Essential Patents Symposium

Arlington, VA

September 10, 2019

* The views expressed in these remarks are my own and do not necessarily reflect the views of the Federal Trade Commission or any other Commissioner. Many thanks to my Attorney Advisor, Keith Klovers, for assisting in the preparation of these remarks.

I. INTRODUCTION

Good morning! Many thanks to Gene Quinn and the IPWatchdog group for having me here. I appreciate the opportunity to share my thoughts on antitrust and innovation with you today. Before I begin, though, I must give the standard disclaimer: The views I express today are my own, and do not necessarily reflect the views of the U.S. Federal Trade Commission or any other Commissioner.

During our time together this morning, I will cover three topics. First, I will discuss the recent district court opinion in *FTC v. Qualcomm*. I've commented publicly on this decision in the pages of the *Wall Street Journal*, so I apologize in advance if you've already heard my views. And if you haven't yet heard them, the bottom line is that I believe the district court ruling "is both bad law and bad policy."[1] From there I'll move to a more theoretical discussion about how the economic literature views static and dynamic effects. And I'll conclude by exploring how we have tried – and often failed – to integrate dynamic effects into the antitrust analysis.

II. THE DISTRICT COURT OPINION

So let me start with the district court opinion in *FTC v. Qualcomm*. As most of you probably know, a divided Commission voted two to one to sue Qualcomm in January 2017, just two months after the last Presidential election and three days before the change in Administration. Commissioner Maureen Ohlhausen issued a strong dissent, an unusual step for her – or any sitting Commissioner – in the face of impending agency litigation.[2]

---

[1] Christine Wilson, Op-Ed, *A Court's Dangerous Antitrust Overreach*, WALL ST. J., May 28, 2019, *available at* https://www.wsj.com/articles/a-courts-dangerous-antitrust-overreach-11559085055 [hereinafter Antitrust Overreach].

[2] Dissenting Statement of Commissioner Maureen K. Ohlhausen, Qualcomm Inc., File No. 141-0199, Jan. 17, 2017, *available at* https://www.ftc.gov/system/files/documents/cases/170117qualcomm_mko_dissenting_statement_17-1-17a.pdf.

As evidenced by the district court opinion, Commissioner Ohlhausen's concerns proved to be well-founded. Although there are several aspects of the district court opinion that I believe went too far, I am particularly alarmed that the judge took this opportunity to radically expand a company's legal obligation to help its competitors. Normally consumers benefit when rivals compete, and normally patents grant the patentee the right to exclude all others – and especially its competitors – from the use of the patented technology.

Here, though, the court created an exception, reviving and extending a discredited U.S. Supreme Court case called *Aspen Skiing*.[3] In that case, the justices decided that antitrust law may require a company to aid a competitor if it unilaterally terminates a pre-existing, voluntary, and profitable course of dealing to acquire or maintain monopoly power.[4] Even within these narrow parameters, courts have long disfavored this "duty to deal," and the Supreme Court has since said it is "at or near the outer boundary" of U.S. antitrust law.[5]

In the Qualcomm case, the district court judge concluded that Qualcomm had a duty to license its intellectual property to chip-making rivals,[6] even though Qualcomm did not have a pre-existing, voluntary, and profitable course of dealing with them. So she expanded the scope of *Aspen Skiing*. Peering into the distant past, she found that in 1999, Qualcomm said it was licensing some patents to some chip makers.[7] Although it has long since stopped,[8] and presumably those patents have long since expired, the judge reasoned that "Qualcomm itself has

[3] Aspen Skiing Co. v. Aspen Highlands Skiing Corp., 472 U.S. 585 (1985).
[4] *See id.* at 610-11.
[5] Verizon Commc'ns Inc. v. Law Offices of Curtis V. Trinko, 540 U.S. 398, 409 (2004).
[6] *See* FTC v. Qualcomm, Inc., No. 17-cv-00220, slip op. at 81-85 (N.D. Cal. May 21, 2019).
[7] *Id.* at 83 ("Licensing rivals was also profitable for Qualcomm, as Qualcomm received royalties on patent licenses to modem chip suppliers. In a 1999 email, Steve Altman (then a Qualcomm lawyer, later Qualcomm President) stated to Marv Blecker (QTL Senior Vice President) that Qualcomm had licensed modem chip suppliers.").
[8] *Id.* ("However, Qualcomm voluntarily stopped licensing its rivals.")

licensed its [patents] to rival" chip makers, and therefore had a duty under *Aspen Skiing* to "continue" doing so.[9]

Never mind that the judge's reference point involved licensing *different* patents, to *different* competitors, in – literally – a *different* century. By this logic, *Aspen Skiing* now means that if a company ever sells any product to any competitor, it then could have a perpetual antitrust obligation to sell every product to every competitor. That's light years beyond the "outer boundary" of antitrust law – or at least it was until this district court decision. This development is particularly concerning because, from a policy perspective, forced sharing may substantially diminish the incentive to innovate in the first place.

Many others have since echoed my concerns with the district court's *Aspen Skiing* analysis, including the U.S. Department of Justice Antitrust Division,[10] Judge Ginsburg,[11] retired Federal Circuit Judge Michel,[12] practitioners,[13] and a host of law and economics professors.[14]

---

[9] *Id.* at 138.

[10] Br. of the United States of America as *Amicus Curiae* in Support of Appellant and Vacatur at 19-24, FTC v. Qualcomm Inc., No. 19-16122 (9th Cir., filed Aug. 30, 2019).

[11] Lindsey M. Edwards, Douglas H. Ginsburg & Joshua D. Wright, Section 2 Mangled: FTC v. Qualcomm on the Duty to Deal, Price Squeezes, and Exclusive Dealing, at 2, Geo. Mason Univ. L. & Econ. Res. Paper Series 19-21 (Aug. 19, 2019), *available at* https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3433564 ("We find three glaring errors in the district court opinion. First, the court expands the exception to the general rule permitting refusals to deal, as laid out in Aspen Skiing Co. v. Aspen Highlands Skiing Corp., well beyond the outer boundary of Section 2 by applying it to contracts negotiated by Qualcomm over 20 years ago and by inferring the company was willing to sacrifice profits even in the face of evidence that the change in dealing was implemented to increase short-term profits. This expansion is squarely in conflict with the Supreme Court's decision in Verizon Communications Inc. v. Law Offices of Curtis V. Trinko, LLP, which clarified and narrowed Aspen Skiing and reinforced the importance of a company's right freely to decide with whom to transact.").

[12] *Amicus Curiae* Br. of the Hon. Paul R. Michel (Ret.) in Support of Appellant Qualcomm Inc. at 30-31, FTC v. Qualcomm Inc., No. 19-16122 (9th Cir., filed Aug. 30, 2019).

[13] Lisa Kimmel et al., Crowell & Moring, District Court Decision in *FTC v. Qualcomm* Spawns Controversy: Four Issues to Watch on Appeal, June 3, 2019 https://www.crowell.com/NewsEvents/AlertsNewsletters/all/District-Court-Decision-in-FTC-v-Qualcomm-Spawns-Controversy-Four-Issues-to-Watch-on-Appeal ("[T]here are purely legal reasons to question the court's embrace of Aspen Skiing to impose a duty to license intellectual property given that the case did not involve the licensing of intellectual property. Moreover, the Federal Circuit has held that the antitrust laws do not impose any duty to share intellectual property and the relevant Ninth Circuit precedent has been widely criticized.").

[14] *See, e.g.*, Edwards et al., *supra* note 11, at 2; Jan Wolfe, *Qualcomm Has Strong Argument to Win Reversal of U.S. Antitrust Ruling: Legal Experts*, Reuters, May 31, 2019, https://www.reuters.com/article/us-qualcomm-antitrust-appeal-analysis/qualcomm-has-strong-argument-to-win-reversal-of-u-s-antitrust-ruling-legal-experts-idUSKCN1T11BV (recapping my Op-Ed and noting "Jonathan Barnett, a law professor at the University of

Given these concerns, I wrote in May, shortly after the district court issued its decision, that "Qualcomm has an excellent case for staying the judge's ruling."[15] And three weeks ago, the Ninth Circuit issued an order staying most of the district court order, including the provisions compelling Qualcomm to license its standard-essential patents to competitors at FRAND ("fair, reasonable, and non-discriminatory") rates.[16] As part of its legal analysis, the Ninth Circuit said it was "satisfied that Qualcomm has shown, at minimum, the presence of serious questions on the merits of the district court's determination that Qualcomm has an antitrust duty to license its SEPs to rival chip suppliers."[17] Briefing on the merits is now underway, and oral argument is likely to take place early next year. So stay tuned for further developments.

Before I move on, allow me to make one final note: My opposition to the district court's opinion, and particularly its *Aspen Skiing* analysis, does not stem from any desire to help or protect Qualcomm. Frankly, my position on the opinion has nothing to do with Qualcomm. Rather, I am focused on preserving and applying sound antitrust principles.

III. THE RELATIONSHIP BETWEEN STATIC AND DYNAMIC EFFECTS

The *Qualcomm* saga illustrates nicely the tension between static and dynamic effects in antitrust law. We also see this tension in everyday life. On the one hand, we often emphasize the present, like when we say "a bird in the hand is worth two in the bush" and you should

---

Southern California, agreed that Koh's decision was in danger of being overturned by an appeals court" because "[t]he exception created by *Aspen Skiing* was supposed to be 'very narrow'"); *see also* Richard A. Epstein, The Hoover Institution, Judge Koh Is No 5G Wiz, HOOVER.ORG, May 28, 2019, https://www.hoover.org/research/judge-koh-no-5g-wiz ("Trinko stands for the proposition that, except in rare cases, the antitrust law does not require any firm to do business with its competitors. . . . Nonetheless, in dealing with Trinko, Judge Koh threw that caution to the wind, ignored the strong presumption and imposed the comprehensive ratemaking remedy that Justice Scalia warned about. The only case pointing [to] some duty to deal is *Aspen Skiing Co. v. Aspen Highlands Skiing Co.* (1985) . . . .").

[15] Antitrust Overreach, *supra* note 1.

[16] FTC v. Qualcomm, No. 19-16122, slip op. at 8-9 (9th Cir. Aug. 23, 2019) (per curiam) ("[W]e conclude that the requested stay is warranted. Therefore, pending the resolution of this appeal or until further order of this court, we stay the portions of the district court's injunction requiring that (1) "Qualcomm must make exhaustive SEP licenses available to modem-chip suppliers . . . .").

[17] *Id.* at 2.

"never put off till tomorrow what you can do today." Yet we just as often emphasize the future, like when we say that "an ounce of prevention is worth a pound of cure," "a penny saved is a penny earned," and "all things come to those who wait." Or, as one of my daughters learned at basketball camp, some things worth doing are "TIPI" – a "temporary inconvenience for a permanent improvement."

Many believe that antitrust law focuses primarily upon static effects, like price, output, and quality *today*.[18] And these metrics certainly are important. But the economic literature also recognizes that innovation will, over the long run, deliver very large consumer welfare gains. Joe Brodley once summarized the economic research as showing that "[i]nnovation efficiency or technological progress is the single most important factor in the growth of real output in the United States and the rest of the industrialized world."[19] For example, the giant leap from horse-drawn carriages to cars generated far more consumer surplus than many preceding innovations that slowly reduced the price of horse-drawn carriages. The same is true of other so-called "drastic innovations,"[20] like the move from the vacuum tube to the transistor, or from the courier to the telegraph.

The point is not just that innovation is important; it is also that an economic policy focused solely on static efficiency will underperform an economic policy that considers both static and dynamic effects. This is hardly news. Indeed, Joseph Schumpeter once argued that an

---

[18] *See, e.g.*, *infra* notes **Error! Bookmark not defined.**-32, 45-47.

[19] Joseph F. Brodley, *The Economic Goals of Antitrust: Efficiency, Consumer Welfare, and Technological Progress*, 62 N.Y.U. L. REV. 1020, 1026 (1987) (citing Zvi Griliches, *R&D and Productivity: Measurement Issues and Econometric Results*, 237 SCI. 31, 34-35 (1987); Lester C. Thurow, *A Weakness in Process Technology*, 238 SCI. 1659, 1660-62 (1987); Robert Solow, *Technical Change and the Aggregate Production Function*, 39 Rev. Econ. & Stat. 312 (1957); F.M. SCHERER, INDUSTRIAL MARKET STRUCTURE AND ECONOMIC PERFORMANCE 407 (2d ed. 1980)); *see also, e.g.*, Edwin Mansfield, *Entry, Gibrat's Law, Innovation, and the Growth of Firms*, 52 AM. ECON. REV. 1023, 1044 (1962) (in an empirical study, finding "that on the average the successful innovators in these industries grew about twice as rapidly as other comparable firms during the relevant period").

[20] *See, e.g.*, Richard Gilbert, *Looking for Mr. Schumpeter: Where Are We in the Competition-Innovation Debate?*, 6 INNOVATION POLICY AND THE ECONOMY 159, 166 (2006) (discussing the incentives for firms to engage in "drastic innovation").

economic system "that at *every* given point of time fully utilizes its possibilities to the best advantage may yet in the long run be inferior to a system that does so at *no* point of time, because the latter's failure to do so may be a condition for [achieving] the level or speed of long-run performance."[21] And that was in 1942!

So the question is not whether dynamic effects matter. Rather, we need to be cognizant of just how *much* they matter, and in particular how we can optimize the balance between static and dynamic effects.[22] Certainly we do so through our patent system, which provides innovators with temporary legal protection. We also strike that balance in other areas of intellectual property, like copyright, trademark, and know-how protections. Farther afield, we do so through regulatory mechanisms, including both general-purpose laws like antitrust and sector-specific rules like the Hatch-Waxman framework for pharmaceuticals.

IV. APPLICATION TO ANTITRUST LAW

Considering the number of IP experts in this room, I'll stick to my comparative advantage, antitrust. On that front, I've got good news and bad news.

First, the good news: Antitrust enforcers consider dynamic effects in many cases, and occasionally concerns about preserving incentives to innovate even carry the day. I'll illustrate that point with a few examples.

---

[21] JOSEPH A. SCHUMPETER, CAPITALISM, SOCIALISM AND DEMOCRACY 83 (3d. ed., 1962) (1942).

[22] This debate is not solely an academic one; the corporate world has also long struggled with the appropriate balance between short-term and long-term thinking. *Compare* Mark J. Roe, *The Imaginary Problem of Corporate Short-Termism*, WALL ST. J., Aug. 17, 2015, https://www.wsj.com/articles/the-imaginary-problem-of-corporate-short-termism-1439853276 ("Critics need to acknowledge that short-term thinking often makes sense for U.S. businesses, the economy and long-term employment. Bad short-termism is when boards and managers forgo good long-term business opportunities simply to meet quarterly earnings targets. Bad long-termism, obviously, is when they invest in businesses that have no future."), *with* Jamie Dimon & Warren E. Buffett, *Short-Termism Is Harming the Economy*, WALL ST. J., June 6, 2018, https://www.wsj.com/articles/short-termism-is-harming-the-economy-1528336801 ("Reducing or even eliminating quarterly earnings guidance won't, by itself, eliminate all short-term performance pressures that U.S. public companies currently face, but it would be a step in the right direction. Anything America—and America's public markets—can do to focus on the future and build long-term wealth and opportunity will make the country stronger, more resilient and more competitive. Over the long run this will strengthen the U.S. economy, benefit America's workers, shareholders and investors, and leave a generational legacy we can be proud of.").

On the merger front, dynamic effects – and specifically dynamic procompetitive efficiencies – convinced the FTC to clear a 1980s-era joint venture agreement between General Motors and Toyota. The parties proposed to use an idled General Motors factory in California to produce a U.S.-made version of one of Toyota's cars, using Toyota's manufacturing techniques, and marketed by General Motors as Chevrolet vehicles. Japanese firms were much more efficient at that time, enjoying a cost advantage of more than $2,000 per car even after shipping and delivery.[23]

A divided Commission allowed the transaction to proceed with some restrictions, finding that the joint venture would expand output, reduce prices, *and* allow GM to learn "more efficient Japanese manufacturing and management techniques."[24] The Commission explained that GM could use what it learned "at its other plants" to help make its other American-made cars more competitive and spur other U.S. manufacturers to make similar improvements.[25]

Although the Commission originally imposed a 12-year limit on the life of the joint venture, it lifted that restriction in 1993, noting that GM had learned much from Toyota and put that knowledge to work in its new Saturn line of cars.[26] In other words, the Commission found

[23] Robert D. Hershey Jr., *G.M.-Toyota Plan for Joint Venture Approved by F.T.C.*, N.Y. TIMES, Dec. 23, 1983, at A1, *available at* https://www.nytimes.com/1983/12/23/business/gm-toyota-plan-for-joint-venture-approved-by-ftc.html (citing information provided by Tim Muris, then the Director of the FTC's Bureau of Competition).
[24] Statement of Chairman James C. Miller III, General Motors Corp., 103 F.T.C. 386, 387-88 (1984), *available at* https://www.ftc.gov/sites/default/files/documents/commission_decision_volumes/volume-103/ftc_volume_decision_103_january_-_june_1984pages_374-497.pdf
[25] *Id.* at 388 ("Moreover, to the extent the Fremont venture demonstrates the Japanese system can be successfully adapted to the United States, the venture should lead to the development of a more efficient and competitive U.S. industry. Evidence obtained during the Commission's investigation persuasively establishes that a successful experiment at Fremont could serve as a predicate for other domestic auto makers and their unionized employees to work out similar flexibility in work rules and practices.").
[26] *See* Order Granting Pet'n to Reopen and Set Aside Order, General Motors Corp., 116 F.T.C. 1276, 1284-86 (1993), *available at* https://www.ftc.gov/sites/default/files/documents/commission_decision_volumes/volume-116/ftc_volume_decision_116_january_-_december_1993pages_1179-1296.pdf; *see also* Kathryn M. Fenton, GM/Toyota*: Twenty Years Later*, 72 ANTITRUST L.J. 1013, 1019-1021 (2005) (describing the reopening and vacatur of the consent agreement).

that GM had in fact realized the dynamic efficiencies it had expected at the outset. Others have reached the same conclusion.[27]

The Commission has also assessed the extent to which a merging party in the market today may not be an effective competitor tomorrow. For example, in 1998 the Commission cleared Boeing's acquisition of McDonnell Douglas, despite the fact that the transaction reduced the number of competitors from three to two, because "McDonnell Douglas, looking to the future, no longer constitutes a meaningful competitive force in the commercial aircraft market."[28] Although the Commission therefore had no need to consider offsetting procompetitive effects, a subsequent empirical retrospective found that Boeing also realized large cost savings that it passed on to purchasers in the form of lower aircraft prices.[29]

Antitrust law also considers dynamic effects outside the merger context. For example, antitrust law does not prohibit a monopolist from charging a monopoly price so long as it does nothing to inhibit competition. As the Supreme Court explained in the *Trinko* decision, "[t]he opportunity to charge monopoly prices—at least for a short period—is what attracts 'business acumen' in the first place; it induces risk taking that produces innovation and economic

---

[27] *See, e.g.*, A.C. Inkpen, *Knowledge Transfer and International Joint Ventures: The Case of NUMMI and General Motors*, 29 STRATEGIC MGMT. J. 447, 452 (2008) (describing the NUMMI joint venture as "a successful GM outcome" despite some early hiccups); David Kiley, *Goodbye, NUMMI: How a Plant Changed the Culture of Car-Making*, POPULAR MECHANICS, Apr. 2, 2010, https://www.popularmechanics.com/cars/a5514/4350856/ ("It's worth noting that when the White House Automotive Task Force assessed GM last year during its Chapter 11 Bankruptcy, it acknowledged publicly that GM's current global production and procurement system, modeled on Toyota's, is world-class and every bit as efficient as the Japanese automaker's system.").

[28] Statement of Chairman Pitofsky and Commissioners Janet D. Steiger, Roscoe B. Starek III and Christine A. Varney in the Matter of The Boeing Company/McDonnell Douglas Corporation, July 1, 1997, *available at* https://www.ftc.gov/public-statements/1997/07/statement-chairman-robert-pitofsky-commissioners-janet-d-steiger-roscoe-b

[29] *See* Yonghong An & Wei Zhao, *Dynamic Efficiencies of the 1997 Boeing-McDonnell Douglas Merger*, 50 RAND J. ECON. 666, 668 (2019) ("Our main findings are that (i) the merger brings dynamic efficiencies, which come from accelerated learning-by-doing after the merger; these efficiencies outweigh the detrimental market power effect; we estimate that consumer surplus increases by $0.11 billion and $5.14 billion, respectively, depending on whether experience stock does not transfer or transfers completely between the MD-11 and the B777. By contrast, a static equilibrium model that ignores learning-by-doing predicts a $0.92 billion loss of consumer surplus.").

growth."[30] In other words, we may tolerate small reductions in static efficiency – consumer welfare today – in order to maximize dynamic efficiency and consumer welfare tomorrow.

Now for the bad news: Despite a few success stories like Boeing and General Motors, most believe antitrust law still focuses heavily upon static effects. For example, in 2010 then-FTC Commissioner Tom Rosch noted that although "[p]roper antitrust enforcement considers both static and dynamic effects and efficiencies," "antitrust enforcement has historically focused more on static than dynamic effects."[31] And in 2012, Judge (and former Assistant Attorney General) Douglas H. Ginsburg, from whom you'll hear later today, and future FTC Commissioner Josh Wright explained that "dynamic analysis in antitrust law" continues to be "driven largely by intuition and the unique stories told by the proponents and opponents of each merger or business practice."[32] In other words, we know dynamic effects are important, but we routinely struggle to account for them in our analysis.

There are legal, economic, and institutional reasons for this struggle. On the legal side, for example, the defendant in a merger bears the burden of identifying and demonstrating offsetting procompetitive efficiencies,[33] including claims that the transaction will lead to new

[30] Verizon Commc'ns Inc. v. Law Offices of Curtis V. Trinko, 540 U.S. 398, 407 (2004).
[31] J. Thomas Rosch, Comm'r, FTC, Remarks at the USC Gould School of Law 2010 Intellectual Property Institute: Promoting Innovation: Just How "Dynamic" Should Antitrust Law Be?, at 3, Mar. 23, 2010.
[32] Douglas H. Ginsburg & Joshua D. Wright, *Dynamic Analysis and the Limits of Antitrust Institutions*, 78 ANTITRUST L.J. 1, 5 (2012).
[33] *See, e.g.*, Saint Alphonsus Med. Ctr.-Nampa Inc. v. St. Luke's Health Sys., Ltd., 778 F.3d 775, 790-91 (9th Cir. 2015) ("Courts recognizing the defense have made clear that a Clayton Act defendant must clearly demonstrate that the proposed merger enhances rather than hinders competition because of the increased efficiencies." (internal quotations omitted)); *id.* at 792 ("The district court did not clearly err in concluding that whatever else St. Luke's proved, it did not demonstrate that efficiencies resulting from the merger would have a positive effect on competition."); *see also* Joint Statement on the Burden of Proof at Trial § 10, *United States v. AT&T Inc.*, No. 1:17-cv-02511 (filed Mar. 13, 2018), *available at* https://www.justice.gov/atr/case-document/file/1043756/download (United States position #10: "If the defendants' rebuttal case involves showing that the merger is justified as a result of the pro-competitive efficiencies or synergies it will create, then defendants have the burden to prove those efficiencies."

innovations.[34] Although the defendants may not always produce the requisite evidence, when they do, the agencies should evaluate it in good faith.

Indeed, efficiencies were a major focus of mine when I served as Chief of Staff to then-Chairman Tim Muris in the early 2000s. As part of that effort, the Commission analyzed how merging parties' efficiencies claims had been evaluated by the agency,[35] and conducted retrospective studies to determine whether claimed efficiencies had been obtained.[36] The Commission also hosted a roundtable on the topic with leading academics.[37] Or, to borrow some terms from the R&D literature, we incurred a small static cost – in the form of staff time and effort – in order to reap large dynamic benefits in the future.

On the economic side, economists agree that it can be difficult to predict the next innovation, and therefore difficult to say that a given transaction or trade practice will necessarily hasten innovation.[38] Yet as Gregory Sidak and David Teece put it, "[u]ncertainty and

---

[34] *See* U.S. DEP'T OF JUSTICE & FED. TRADE COMM'N, HORIZONTAL MERGER GUIDELINES § 10 (Aug. 19, 2010), *available at* https://www.ftc.gov/sites/default/files/attachments/merger-review/100819hmg.pdf (noting that cognizable efficiencies include those that "result in lower prices, improved quality, enhanced service, or new products" and that "it is incumbent upon the merging firms to substantiate efficiency claims so that the Agencies can verify by reasonable means the likelihood and magnitude of each asserted efficiency, how and when each would be achieved (and any costs of doing so), how each would enhance the merged firm's ability and incentive to compete, and why each would be merger-specific").

[35] *See, e.g.*, Malcolm B. Coate & Andrew J. Heimert, Bureau of Economics, FTC, Merger Efficiencies at the Federal Trade Commission 1997-2007, Feb. 2009, https://www.ftc.gov/sites/default/files/documents/reports/merger-efficiencies-federal-trade-commission-1997–2007/0902mergerefficiencies.pdf.

[36] *See, e.g.*, Denis A. Breen, The Union Pacific/Southern Pacific Rail Merger: A Retrospective on Merger Benefits, Mar. 11, 2004, *available at* https://www.ftc.gov/sites/default/files/documents/reports/union-pacific/southern-pacific-rail-merger-retrospective-merger-benefits/wp269_0.pdf.

[37] *See, e.g.*, Timothy J. Muris, Opening remarks before FTC Bureau of Economics Roundtable on Understanding Mergers: Strategy and Planning, Implementation, and Outcomes, Dec. 9, 2002, *available at* https://www.ftc.gov/public-statements/2002/12/understanding-mergers-strategy-and-planning-implementation-and-outcomes.

[38] *See, e.g.*, Andrew Tepperman & Margaret Sanderson, Innovation and Dynamic Efficiencies in Merger Review, at iv, Final Report prepared by CRA International for the Canadian Competition Bureau, Apr. 9, 2007 ("[I]nnovation is highly uncertain, making it much more difficult to measure and quantify than price and output."); Kenneth J. Arrow, *Economic Welfare and the Allocation of Resources for Invention*, *in* THE RATE AND DIRECTION OF INVENTIVE ACTIVITY: ECONOMIC AND SOCIAL FACTORS 609, 616 (1962) ("The central economic fact about the processes of invention and research is that they are devoted to the production of information. By the very definition of information, invention must be a risky process, in that output (information obtained) can never be predicted perfectly from the inputs.").

complexity are hallmarks of dynamic market environments."[39] Indeed, businesses routinely estimate the expected value of potential R&D projects, considering the probability of different outcomes, the expected benefits of each outcome, and the appropriate discount rate associated with the money invested in the research.

Antitrust enforcers should have the tools to conduct the same analysis, particularly for "process" innovations that allow firms to make existing products more cheaply.[40] Product innovations may be more difficult to assess, but if the defendant produces compelling evidence, we should credit it.[41] And, as Gary Roberts and Steve Salop have said, these dynamic efficiencies "generally will diffuse at least partially to competing firms," causing "the aggregate cost savings [to] multiply" and enhancing competition.[42] Roberts and Salop therefore propose one possible way to credit both dynamic efficiencies generated by the merged entity and those diffused to competitors.[43]

Of course, our assessment of dynamic effects should be symmetric. We routinely attempt to predict, quantify, and discount the likely anticompetitive dynamic effects of a merger or business practice. To ensure a balanced approach in our analysis, we must also attempt to predict, quantify, and discount the likely procompetitive dynamic effects of that same merger or business practice.[44]

---

[39] J. Gregory Sidak & David J. Teece, *Dynamic Competition in Antitrust Law*, 5 J. COMP. L. & ECON. 581, 611 (2009).
[40] *See, e.g.*, Wesley M. Cohen, *Fifty Years of Empirical Studies of Innovative Activity and Performance*, I HANDBOOKS IN ECONOMICS 129, 170 (2010) (contrasting the empirical findings regarding "gains from reducing the cost of production (process innovation)" and "gains from improvement in product quality (product innovation)").
[41] *See generally, e.g.*, Gary L. Roberts & Steven C. Salop, *Efficiencies in Dynamic Merger Analysis*, 19 WORLD COMPETITION 5 (1995); Malcolm B. Coate, *Efficiencies in Merger Analysis: An Institutionalist View*, 13 S. CT. ECON. REV. 189 (2005) (proposing a framework for evaluating both dynamic efficiencies and dynamic harms in merger review).
[42] Roberts & Salop, *supra* note 41, at 6.
[43] *See id.* at 7-13.
[44] Indeed, the Commission often has alleged harm to innovation in its recent cases. *See* Richard J. Gilbert & Hillary Greene, *Merging Innovation into Antitrust Agency Enforcement of the Clayton Act*, 83 GEO. WASH. L. REV. 1919,

Unfortunately, many treat dynamic effects asymmetrically. For example, Tim Wu wrote a lengthy article about "taking innovation seriously" in antitrust law, yet focused entirely on how we can increase innovation by increasing the number of cases we bring against large firms.[45] He specifically cited large technology firms,[46] which he has since argued impair innovation, and therefore must be restrained in order to protect innovation.[47] In neither telling does he mention, let alone emphasize, the possibility that increased enforcement in the tech sector could chill innovation or prohibit innovative conduct. Wu therefore would assess dynamic efficiency asymmetrically, crediting theories of anticompetitive effects that reduce innovation but ignoring entirely any associated procompetitive benefits that promote innovation. Or, in layman's terms, "heads I win, tails you lose."

Finally, there are institutional hurdles to fully incorporating dynamic efficiencies into the competitive analysis. To start with, there is today no robust model capable of predicting the likely path of innovation in a given market.[48] For another, information asymmetries and adverse incentives make it unlikely that the agencies will ever be able to collect anything approaching perfect information.[49] Yet another problem is what then-Chairman Muris once called the "chicken and egg" problem: If the agencies rarely credit efficiencies, the parties won't "bother

---

1931-32 (2015) (finding that between 2004 and 2014, the Commission challenged 164 mergers and alleged harm to innovation in 54 of them).

[45] *See* Tim Wu, *Taking Innovation Seriously: Antitrust Enforcement If Innovation Mattered Most*, 78 ANTITRUST L.J. 313 (2012).

[46] *Id.* at 314 ("Now is a particularly important time to consider the relationship between antitrust and innovation. Within the last two years, both the Justice Department and Federal Trade Commission have accumulated an entire docket of antitrust investigations related to the Internet and other high-tech industries. The list of publicly disclosed investigations is lengthy, and includes major players like Google, Apple, Facebook, and Twitter.").

[47] *See* Tim Wu, Where New Industries Get Their Start: Rebooting the Startup Economy, Testimony before the Committee on the Judiciary, at 3, July 16, 2019, *available at* https://docs.house.gov/meetings/JU/JU05/20190716/109793/HHRG-116-JU05-Wstate-WuT-20190716.pdf. ("Unlike in 2008, the big firms seem in no danger of fading under the onslaught of smaller rivals. Instead (often in violation of the antitrust laws) most of those would-be rivals have been bought or effectively tamed.").

[48] *See* Ginsburg & Wright, *supra* note 32, at 21 (arguing that the antitrust agencies have thus far failed to identify "an extra-legal body of theory" that is "capable of yielding determinate results").

[49] *See id.* at 15-17 (describing why the incentives of the witnesses with the best information about likely future inventions may diverge from that of the enforcement agencies).

giving us good material, and without good material, we don't believe an efficiencies argument."[50] He therefore encouraged parties to present "solid, credible efficiencies evidence" and pledged to give strong arguments "detailed attention."[51]

V. CONCLUSION

So in closing, we have long known that dynamic effects are important, but we have also long struggled to properly account for them in our antitrust analysis. There may be good legal, economic, and institutional reasons why the agencies view dynamic effects, or at least procompetitive dynamic effects, skeptically. But that is hardly a reason to ignore them, and certainly no reason to treat them asymmetrically. Therefore, I renew then-Chairman Muris's proposal to the private bar: If you present concrete and credible evidence of dynamic effects, and especially procompetitive efficiencies, I will give them serious consideration. I likewise extend an invitation to academics and practitioners, both lawyers and economists, to help identify better ways for the Commission to incorporate dynamic effects – both procompetitive and anticompetitive – into its analysis.

[50] Muris, *supra* note 37.
[51] *Id.*