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UNREALISTIC CAUSATION STANDARDS PUT EFFECTIVE MONOPOLIZATION REMEDIES AT RISK

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AUGUST 18, 2025

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Successful enforcement against illegal monopolization depends as much on obtaining effective relief as it does on proving liability. As the Supreme Court observed, an antitrust “suit has been a futile exercise if the Government proves a violation but fails to secure a remedy adequate to address it.”² The current series of monopolization cases against digital platforms will be the toughest tests to date of the remedy pillar of Section 2 enforcement. The recent caselaw on monopolization remedies is sparse and the industries involved are complex. And the defendants are the largest and most well-resourced corporations in our economy. They will do everything in their power to avoid any real change to their business practices.

In this context, applying the correct standard for evaluating remedies has lasting and broad importance. An overly demanding standard will not just frustrate justice in any particular case but will have a significant impact on antitrust law’s ability to rein in monopolistic conduct in much of the modern economy. We discuss below one example of this problem: the nearly impossible to meet causation standard that some advocates for Big Tech seek to make a prerequisite of any remedy beyond a narrow “cease and desist” injunction. As we argue below, creating obstacles like this to restoring competition violates the core principle of remedies—the need to put “effectiveness first.”

I. INTRODUCTION

Remedial standards for modern monopolization enforcement meet their first test in the Google search case pending in the District Court for the District of Columbia. Earlier this year, Judge Mehta found that Google violated Section 2 of the Sherman Act by monopolizing markets for search and search advertising.³ The judge concluded that Google’s decade-long contracts with Apple and other mobile phone and computer OEMs secured Google’s position as the default search engine, creating de facto exclusivity that

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² *U.S. v. E.I. Du Pont de Nemours*, 366 U.S. 316, 323 (1961).

³ *United States v. Google LLC*, 747 F. Supp. 3d 1, 32 (D.D.C. 2024).

foreclosed search competitors and illegally maintained Google’s monopoly. Just a few weeks ago, the DOJ, several State Attorneys General (“State AGs”), and Google wrapped up a separate phase of the trial focused solely on the appropriate remedy for the violation. The parties’ warring remedy proposals differed on whether Google should be allowed to continue some payments for search placement, whether Google should have to share some of the data its search engine collects, and whether it should have to divest its Chrome browser.⁴

Even in the most complex remedy cases, the governing principles that the court must follow are clear and long-established. First, a remedy must restore competition, not simply end the challenged conduct.⁵ Second, it must have a logical nexus with and “flow from” the competitive harm.⁶ Third, a remedy must be forward-looking, aimed at preventing future competitive harm as well as ending past misconduct.⁷ Thus the Supreme Court has instructed that “[i]n its choice of remedies, a court is not limited to a simple proscription against the precise conduct previously pursued. It must fashion relief so as to ‘unfetter a market from anticompetitive conduct.’”⁸

As the multi-week remedy phase of the Google search trial showed us, this framework demands a highly factual inquiry. But the facts are meaningless if those shaping the remedy lack the freedom to adapt to them. Accordingly, trial courts are “clothed with large discretion to model their judgments to fit the exigencies of the particular case.”⁹ And indeed, that remedial flexibility is an inherent feature of the antitrust statutes. They provide courts in public enforcement cases with “an unrestricted grant of equitable power that does not distinguish among the various antitrust statutes and does not relate any particular violation to any particular remedy.”¹⁰

Nevertheless, Google and several of the amici supporting it in the search case have proposed a heightened causation standard that would radically circumscribe the court’s remedial powers in monopolization cases. Instead of permitting the court to shape the remedy to the substantial factual record before it, they would impose a bright-line rule: unless the government can prove that Google’s monopoly power is the sole cause for the acquisition or maintenance of Google’s monopoly, the court’s only remedial option is a barebones injunction: an order that the defendant “cease and desist” from the illegal conduct.¹¹ Remedies aimed at proactively restoring competition would be unavailable.

⁴ See, e.g., Pls. Remedies Pre-Trial Br., *United States v. Google LLC*, No. 1:20-cv-03010 (D.D.C. Mar. 7, 2025).

⁵ See *United States v. United Shoe Machinery Corp.*, 391 U.S. 244, 250 (1968).

⁶ See, e.g., Dep’t of Justice, Antitrust Div., Merger Remedies Manual 2 (Sept. 2020).

⁷ See *United Shoe*, 391 U.S. at 250.

⁸ *National Soc’y of Professional Engineers v. United States*, 435 U.S. 679, 697 (1978).

⁹ *Int’l Salt Co. v. United States*, 332 U.S. 392, 400–01 (1947).

¹⁰ Herbert J. Hovenkamp, *Antitrust Harm and Causation*, 99 WASH. U. L. REV. 787, 845 (2021).

¹¹ See, e.g., Br. of Bipartisan Former Antitrust Enforcers as Amicus Curiae, 3, *United States v. Google LLC*, No. 1:20-cv-03010 (May 6, 2025) (“[W]e believe the best reading of Microsoft’s heightened causation standard

The standard, they claim, can be extracted from language in the *Microsoft* decision. Namely, they cite the *Microsoft* court's statement that structural remedies may require a "clearer indication of a significant causal connection" between the anticompetitive conduct and the monopolization, and "[a]bsent such causation," the antitrust defendant's unlawful behavior should be remedied by "an injunction against continuation of that conduct."¹²

The federal government and State AG plaintiffs have explained in detail why, given the facts in the case, any causation standard set out in *Microsoft* is met in the search case.¹³ But the legal principle Google and its *amici* try to extract from *Microsoft* is problematic in any factual context. And, given its potential to hamstring remedy efforts, similar arguments are likely to be raised by defendants in other pending Section 2 cases.

This white paper explains why this position is a dangerous misreading of *Microsoft*. First, such a rigid approach to remedies flies in the face of the flexibility required by precedent, including the need to craft complete relief and to prevent future recurrence of the illegal behavior. Second, it ignores equitable principles holding that a wrongdoer is not permitted to benefit from uncertainty created by its own misconduct. Third, it strips the courts of the means to craft the kind of proportional responses long found to be key to fair and effective relief.

Finally, the approach reflects a dangerous but common approach to "error cost" in antitrust analysis. It discounts almost entirely the risk of false negatives—that is, the downsides of judicial failure to intervene. This bias against intervention unacceptably transfers the risk created by the monopolist onto consumers already harmed by years of illegal conduct. Significant and growing evidence suggests that this risk-shifting is especially damaging in markets dominated by large digital platforms.¹⁴ At the crucial step of finding a fix to an already proven harm, adopting such a standard would be a grave mistake and impermissibly counter to the public interest.

for structural or other remedial relief that goes beyond enjoining the anticompetitive conduct in question is that the plaintiff must show [...] that the defendant's monopoly power would not have been maintained but for the illegal conduct...").

¹² *United States v. Microsoft Corp.*, 253 F.3d 34, 106 (D.C. Cir. 2001) (*en banc*).

¹³ See, e.g., Presentation of United States and Co-Plaintiff States, Plaintiffs' Remedies Closing Arguments: Legal Standards slides 12-21, *United States v. Google LLC*, No. 1:20-cv-03010 (D.D.C. May 30, 2025), available at <https://www.justice.gov/atr/media/1402256/dl?inline>.

¹⁴ See also *infra* Section IV.

II. A STRICT CAUSATION REQUIREMENT WOULD RESTRICT THE MOST POTENT REMEDIES PRECISELY WHERE THEY ARE MOST NEEDED

The strict causation standard would require enforcers to prove a counterfactual. They would have to show what would have happened if not for the anticompetitive conduct. In many markets, especially rapidly changing digital ones, reconstructing a world “but for” the anticompetitive conduct of the monopolist is nearly, if not totally, impossible. In digital and non-digital markets alike, “the hypothetical marketplace absent a defendant’s anticompetitive conduct” will “invariably” be speculative.¹⁵ Digital markets present a particular challenge. The speed at which these markets evolve makes predictions more uncertain, and a dominant firm’s exclusionary conduct may alter the market structure in foundational ways that are difficult to reverse engineer.¹⁶ When dominant firms stifle competition before it materializes, resuscitating those competitors can be extremely difficult, whether in the real world or for purposes of constructing a but-for world. “The convergence of factors that produced a competitive challenge before it was anticompetitively excluded[] may never re-appear, not in the same fashion, anyway.”¹⁷

As a result, a strict causation requirement could rule out restorative remedies in many digital market cases. This includes two of the most powerful tools for restoring competition available to the courts: divestiture and interoperability requirements.¹⁸ Because, as we discuss below, restoring competition in these markets can be so challenging, restricting the best options to do so would be particularly disastrous for efforts to redress competitive harm.

A. Divestiture

Antitrust jurisprudence has long recognized that “[d]ivestiture is the most important of antitrust remedies.”¹⁹ Supreme Court decisions “starting with *Standard Oil Co. of New Jersey v. United States*” affirmed that divestiture remedies are “essential.”²⁰ Divestiture “is simple, relatively easy to administer, and sure.”²¹ Unlike most behavioral remedies,

¹⁵ *Microsoft*, 253 F.3d at 79.

¹⁶ Francesco Decarolis, et.al., *Quantification of antitrust damages in digital markets* 263, in RESEARCH HANDBOOK ON COMPETITION AND TECHNOLOGY (2025).

¹⁷ U.S. DEP’T OF JUSTICE, ANTITRUST DIV., COMPETITION AND MONOPOLY: SINGLE-FIRM CONDUCT UNDER SECTION 2 OF THE SHERMAN ACT (2008) (withdrawn), https://www.justice.gov/archives/atr/competition-and-monopoly-single-firm-conduct-under-section-2-sherman-act-chapter-9#N_120_ (quoting Mar. 29 Hr’g Tr. of Professor Marina Lao).

¹⁸ See, e.g., Br. of Bipartisan Former Antitrust Enforcers, *supra* note 11, at 3, 12 (arguing that both divestiture and so-called “forced sharing” remedies require strict causation).

¹⁹ *United States v. E.I. du Pont de Nemours & Co.*, 366 U.S. 316, 331 (1961).

²⁰ *United States v. Grinnell Corp.*, 384 U.S. 563, 580 (1966).

²¹ *E.I. du Pont de Nemours & Co.*, 366 U.S. at 331.

divestiture does not just prohibit or discourage anticompetitive actions. When done properly, it eliminates the underlying incentive to engage in the conduct. As a result, it does not require the same level of ongoing monitoring or provide the same opportunity for circumvention as behavioral relief. For this reason, antitrust agencies in the United States have long preferred structural remedies over behavioral ones in a range of cases.²²

The DOJ's proposed Chrome divestiture remedy in the Google search case shows why. After the sale, a new owner of the browser would not have Google's profit-based incentive to foreclose other search engines. Complex monitoring would no longer be needed to anticipate all the ways in which Google may use Chrome to disadvantage its search rivals. And it would eliminate the likelihood that Google could find ways to circumvent those prohibitions via undetectable changes to Chrome. The overall remedy's potential for success would increase.

B. Interoperability Requirements

Interoperability requirements have been singled out for their effectiveness in digital markets, like search, shaped by scale and network effects.²³ In these environments, mandating interoperability is not just potentially appropriate—it can be vital to dismantling structural barriers to entry.²⁴ Interoperability directly addresses a potential anticompetitive entry barrier in digital platform markets. It “causes network effects to occur at the market level—where they are available to nascent and potential competitors—instead of the firm level where they only advantage the incumbent.”²⁵ Indeed, the interoperability mandate's unique ability to disrupt network effects have made it a centerpiece of the Digital Markets Act, the European Commission's effort to make digital platform markets fair and contestable.²⁶

The DOJ's proposed interoperability remedies in the Google search case illustrate how. A key purpose of Google's illegal agreements, Judge Mehta found, was to deny rivals access to user-side data and thereby secure Google's insurmountable scale advantage in

²² See, e.g., U.S. DEPT. OF JUSTICE, ANTITRUST DIV., POLICY GUIDE TO MERGER REMEDIES 8 (Oct. 2004).

²³ Herbert Hovenkamp, Antitrust Interoperability Remedies, 123 Columbia L. Rev. 1 (2023) (describing the history of interoperability as a successful remedy in digital market cases).

²⁴ Findings of Fact ¶¶ 394–395, *United States v. Microsoft*, No. 98-1232 (D.D.C. Nov. 5, 1999).

²⁵ MICHAEL KADES & FIONA SCOTT MORTON, INTEROPERABILITY AS A COMPETITION REMEDY IN DIGITAL MARKETS 11(2021), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3808372.

²⁶ Commission leaders have explained that “[i]nteroperability is one of the most important tools” in making the DMA's goals of innovation and choice happen.” Through it, the “Digital Markets Act opens up opportunities in the digital market” especially to new entrants, “while preserving the gatekeepers’ space for innovation.” EUROPEAN COMM’N, COMMISSION PROVIDES GUIDANCE UNDER DIGITAL MARKETS ACT TO FACILITATE DEVELOPMENT OF INNOVATIVE PRODUCTS ON APPLE'S PLATFORMS (Mar. 18, 2025) https://ec.europa.eu/commission/presscorner/detail/en/ip_25_816 (Statement of Henna Virkkunen, European Commission Executive Vice President for Tech Sovereignty, Security and Democracy).

search.²⁷ The DOJ's proposed remedies would require Google to share that data, which is used to train Google's search ranking and ad auction algorithms. This would, the DOJ has explained, help break down the data entry barrier Google created and was found to have illegally maintained. A remedy with this effect likely is necessary to prevent Google from continuing to benefit from its illegal conduct.

A strict causation requirement thus risks placing the most potent and appropriate remedies out of reach of the courts exactly where they are most needed—those markets where rapid technological change has allowed a durable monopoly to erase the but-for world and remake it in its own image. The options left open to the courts would be less effective, less administrable, and less adaptable. The chance of undoing the competitive harm for which the defendant's is liable, in the Google search case and in other digital platform cases, would be significantly undermined.

III. LEGAL PRECEDENT DOES NOT SUPPORT A STRICT CAUSATION REQUIREMENT

By compromising the effectiveness of potential relief, the proposed strict causation requirement contradicts the Supreme Court's long-held positions on restorative remedies. It effectively bars, without basis, an entire class of relief in many Sherman Act Section 2 cases, disproportionately affecting cases involving digital and other high technology markets. This cannot be reconciled with the remedial flexibility precedent demands.

A. A Remedy Likely to Fail Cannot Provide “Complete Relief”

Supreme Court precedent requires that courts craft antitrust remedies that “restore competition” and provide “complete relief” from anticompetitive consequences of the illegal conduct.²⁸ The proposed causation standard, if adopted, would make this impossible in many monopolization cases. Absent a finding that the conduct was the sole reason for the ongoing monopoly, the court would be limited to banning the illegal conduct. But the risks are great that such a narrow cease-and-desist type remedy will fail. The monopolist would have powerful ongoing incentives to find a work-around, and the odds are slim that even if the conduct ceases, new competitive entry will “fix” the market. A remedy designed to fail is inconsistent with any possible standard of “complete relief.”

History illustrates the risk. To take a particularly close example, the European Commission in 2017 issued a decision in the Google Shopping case finding that Google

²⁷ *Google LLC*, 747 F. Supp. 3d at 159 (“Google’s exclusive agreements...deny rivals access to user queries, or scale, needed to effectively compete”).

²⁸ See *United Shoe*., 391 U.S. at 250.

abused its dominance in search by disadvantaging rival comparison shopping services.²⁹ During the investigation, Google committed to a behavioral remedy ostensibly granting comparison shopping services “equal access” to the promoted spots Google previously reserved for itself on its search results page. But implementation was left open to Google. On paper, the illegal conduct “ceased” and rivals were no longer officially excluded from preferred placement. But, in practice, Google’s solution, in which rivals bid for paid placement, turned out to have no effect on the market or on Google’s dominance. If anything, empirical analyses suggested that Google, not competition or shopping competitors, may have benefited from its “remedy.”³⁰

The odds that narrow behavioral remedies will fail are particularly high in digital markets. Because monopolists in these markets have “significant comparative advantages based on scale, scope, and network effects, a potential competitor with identical cost functions, capabilities, and resources might find it difficult to replicate such advantages.”³¹ Market power is likely to prove particularly sticky because the economic characteristics of these markets tend to create customer lock-in.³² Customer lock-in, in turn, makes any cease-and-desist remedy unlikely to succeed.³³ Given these realities, it is no surprise that academic surveys find that antitrust remedies in digital markets “have largely been ineffective,” “failing to restore competitive equilibrium.”³⁴

The long duration of the major digital monopolies, like Google’s decade-long monopolization of search, makes it even less likely that a cease-and-desist injunction can offer anything approaching complete relief. In dynamic markets where entry is suppressed, the injury to competition accumulates, and injunctions offer only partial relief in the best of circumstances. Professor Steve Salop has illustrated the issue with a hypothetical. If there is a 10 percent chance of entry for each of the ten years the monopolist has excluded competitors, then there would have been a 65% chance of successful entry over the course of the monopolization. A remedy limited to the specific conduct, restoring the 10% annual probability of entry, makes it more likely than not the defendant will retain its monopoly for five years or more—an obviously inadequate result.³⁵

²⁹ See European Comm’n, Google Shopping Decision, No. AT.39740 (June 27, 2017).

³⁰ Höppner, Thomas, Study, Google’s (Non-) Compliance with the EU Shopping Decision (September 28, 2020), available at <https://ssrn.com/abstract=3700748>.

³¹ Michal Gal & Nicolas Petit, Radical Restorative Remedies for Digital Markets, 36 Berkeley Tech. L. J. 617, 629 (2021).

³² Damien Geradin & Dimitrios Katsifis, *Strengthening effective antitrust enforcement in digital platform markets*, 18 EUR. COMP. J., 356 (2022).

³³ *Id.* (noting that “the dominant platform may well cease its anticompetitive conduct and still enjoy the fruits of its past illegal conduct in the form of durable and entrenched market power.”).

³⁴ *Id.*

³⁵ Steven Salop, Microsoft’s Economic Infrastructure and Legacy 42-3 (working paper, April 23, 2025), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5138318.

A 2025 European Commission retrospective on the effectiveness of remedies in antitrust conduct cases provides empirical support for these concerns. The authors of the report compiled a dataset of 108 remedies resolving non-cartel conduct cases from 2003-2022. From this dataset, a subset of remedies meeting certain neutral criteria were chosen for in-depth evaluation. Less than half of the remedies studied were judged to be fully effective, and two failed completely. The investigation concluded that “purely behavioural remedies were the least likely to be fully implemented and fully effective, pointing to remedy design issues, the inability of purely behavioural remedies to alter the concerned undertaking’s incentives to misbehave, as well as difficulties in monitoring implementation.”³⁶ Notably, key recommendations from the ex-post evaluation included (1) making the “principle of effectiveness [...] the fundamental principle in antitrust remedy design,” and (2) eliminating a provision in EC law requiring “the subordination of structural remedies to behavioural remedies” in favor of “leaving it to the principles of effectiveness and proportionality to inform the choice of the best remedy type.”³⁷

If adopted, the causation standard advanced by Google and its supporting amici would send U.S. law in the exact opposite direction of these empirically-informed recommendations. By making structural and other restorative remedies more difficult to obtain and by valuing convenience over effectiveness, the proposed rule threatens to impact a wide range of cases and factual contexts. The market factors that make it very difficult to establish a but-for world, including rapid market evolution, network or scale effects, and durable monopoly, are the same factors that make it unlikely a narrow remedy will effectively restore competition. Conditioning a broader remedy on proof of strict causation simply doubles down on the enforcement problem. If adopted, it would effectively abandon the goal of restoring competition in many high-tech markets central to our economy and in markets where monopolies are most entrenched. No such exception exists to the clear Supreme Court directive to provide complete relief.

B. A Narrow “Cease and Desist” Remedy Cannot Be Adequately “Future-Proofed”

Supreme Court precedent also requires that a remedies decree must “ensure that there remain no practices likely to result in monopolization in the future.”³⁸ A remedy “should not be limited to past violations; it must also effectively foreclose the possibility that antitrust violations will occur or recur.”³⁹ At a minimum, a remedy must anticipate the

³⁶ Francesco Sciaudone et al., Final Report, Ex post evaluation of the implementation and effectiveness of EU antitrust remedies, European Comm’n, Directorate-General for Competition (2025), <https://data.europa.eu/doi/10.2763/4894234>, p.6.

³⁷ *Id.* at 8.

³⁸ *Microsoft*, 253 F.3d at 103 (quoting *United States v. United Shoe Mach Corp.*, 391 U.S. 244, 250 (1968)).

³⁹ *United States v. American Tel. and Tel. Co.*, 552 F. Supp. 131 (D.D.C. 1982).

likely reactions of the defendant, including attempts to evade or work around any restrictions.⁴⁰

An overly narrow cease-and-desist injunction is not equal to the task.⁴¹ Addressing only past conduct does nothing to address the monopolist's incentives and does little to prevent recurrence. As has been observed many times, "[t]he problem is that those prohibited acts are in the interest of the firm, which therefore can be predicted to seek workarounds and other methods to avoid or evade the intent of the remedy."⁴² Indeed, if it does not change the underlying incentives, a narrow remedy will only "inspire the defendant to the pursuit of other paths."⁴³

For this reason, "future-proofing" a remedy often means going beyond a ban on the conduct deemed illegal. As the Supreme Court articulated it: "it is not necessary that all of the untraveled roads to the prohibited goal be left open and only the worn one be closed. The usual ways to the prohibited end may be blocked against the proven transgressor, and the burden put upon him to show that other paths are legitimate."⁴⁴

A few examples show how courts have applied this principle in practice. In *United States v. U.S. Gypsum Co.*, the injunction extended not just to the relevant markets in the case but also to other geographic markets where comparable conduct was threatened.⁴⁵ More recently, in *U.S. v. Shkreli*, which involved a pattern of exclusionary conduct by Martin Shkreli, the infamous owner of Turing Pharmaceuticals who acquired and then dramatically raised the prices of long off-patent but essential life-saving drugs. The Second Circuit summarily rejected Shkreli's argument that an injunction against his anticompetitive conduct should be limited to the narrow set of pharmaceutical markets that Shkreli had already monopolized.⁴⁶ Instead, it credited the district court's factual assessment and upheld as proportional and appropriate a broad, lifetime ban against Shkreli's participation in any pharmaceutical market. The "risk of recurrence" was otherwise too great. "Without a lifetime ban," the district court wrote, "there is a real danger that Shkreli will engage in anticompetitive conduct within the pharmaceutical context again."⁴⁷ To artificially narrow the range and scope of available remedies through a strict causation requirement would make such informed judgment calls impossible in

⁴⁰ See, e.g., *Int'l Salt*, 332 U.S. at 400 (remedy should address "methods more subtle and informed, and more difficult to prove than those which, in the first place, win a market.").

⁴¹ See, e.g., *Schine Chain Theatres, Inc. v. United States*, 334 U.S. 110 (1948) ("If all that was done was to forbid a repetition of the illegal conduct, those who had unlawfully built their empires could preserve them intact.").

⁴² John Kwoka & Spencer Waller, *Fix It or Forget It: A "No Remedies" Policy for Merger Enforcement* 4, *Comp. Pol'y Int'l Antitrust Chron.* (Aug. 2021).

⁴³ William Kovacic, *Designing Antitrust Remedies for Dominant Firm Misconduct*, 31 *CONN. L. REV.* 1285, 1311 (1999).

⁴⁴ *United States v. United States Gypsum Co.*, 340 U.S. 76, 89 (1950).

⁴⁵ *Id.* at 90.

⁴⁶ Federal Trade Commission, et al. v. Shkreli, No. 22-728 (2d Cir. Jan. 23, 2024).

⁴⁷ Federal Trade Commission, et al. v. Vyera, et al., No. 20-cv-706 (S.D.N.Y. Feb. 4, 2022).

many cases and throw out what experience has taught us about future-proofing antitrust remedies.

Future-proofing a remedy also means ensuring administrability, a task made more difficult by a narrow injunction. If violations cannot be detected and a remedy cannot be enforced, it will not prevent future misconduct.⁴⁸ The DOJ has documented the enforcement challenges presented by narrow behavioral remedies, which are “typically more difficult to craft, more cumbersome and costly to administer, and easier than a structural remedy to circumvent.”⁴⁹ Real life examples are all too easy to find, from the multiple evasions of injunctions that led to the divestment in *United Shoe* to the ongoing, fifteen-year-long failure to secure Live Nation’s compliance with behavioral merger remedies imposed after its 2010 merger with Ticketmaster, which culminated in a government Section 2 case seeking structural relief.⁵⁰

Ensuring digital technology companies’ compliance with narrow behavioral remedies can be especially challenging. As Professors Kwoka and Valletti explain,

Their product is not a simple, homogeneous, static commodity, but rather complex and flexible, and subject to rapid change due to the underlying technology and also at the discretion of the tech company. The ability to alter its operation and interfaces, its compatibility and ties to other products, as well as its pricing and terms of service confer on the company enormous pretextual rationales for actions that adversely affect competition with and by rival companies.⁵¹

The EC’s Google Shopping case described above offers a stark illustration of the difficulties of enforcing a behavioral commitment in digital environments and the often difficult-to-detect ways in which digital platforms can achieve the same ends through different means.

By limiting the scope of available remedies in many dynamic markets to less flexible and less administrable options, a strict causation standard impermissibly restrains effective

⁴⁸ See OECD, Remedies and Commitments in Abuse Cases 13, OECD Competition Pol’y Roundtable Background Note (2022) (advocating for remedies that “can be effectively implemented, monitored and enforced”).

⁴⁹ See, e.g., POLICY GUIDE TO MERGER REMEDIES, *supra* note 22, at 8.

⁵⁰ See Compl., United States, et al. v. LiveNation Entertainment, Inc., No. 1: 24-cv-03973 (S.D.N.Y. May 23, 2024).

⁵¹ John Kwoka & Tommaso Valletti, Unscrambling the eggs: breaking up consummated mergers and dominant firms, 30 INDUSTRIAL AND CORPORATE CHANGE 1286, 1286–1306 (Oct. 2021).

forward-looking relief. It is “like trying to stop traffic on a five-lane highway by closing one lane.”⁵²

C. A “Tailored” Remedy Must Still Be Effective

Supporters of a strict causation requirement argue that it is necessary to ensure that the remedy “flows from the theory of harm.” The premise of this claim is that only a narrow cease-and-desist order satisfies the tailored-remedy doctrine.⁵³ But by extrapolating from logical relationship to strict causation, this premise goes too far. It wrongly elevates one aspect of remedy doctrine above the other equally and indeed more important remedial principles of effectiveness and proportionality.

The tailored remedy doctrine complements—it does not conflict with—the goal of restoring competition. Courts have been clear: any tailoring of a remedy cannot come at the expense of effectiveness. As the court in *United States v. AT&T* explained, “the issue of competition and the effects of competition which are at the heart of the antitrust laws” are the “matters of paramount concern” in choosing a remedy.⁵⁴ Only “when choosing between effective remedies” is a court to consider the effect on other public and private interests.⁵⁵

A closer look at the precedent that proponents of strict causation cite show that those cases too rely on the “effectiveness first” principle.⁵⁶ The remedy “must represent[] a reasonable method” but it must also “eliminat[e] the consequences of the illegal conduct.”⁵⁷ Remedying the violation is a non-negotiable prerequisite, not one factor to be weighed alongside tailoring and other factors.⁵⁸ That balance is logically intuitive—a suit cut down until it is too small for the wearer is not “tailored,” it is unusable.

Striking any other balance puts the risks of error squarely on the harmed consumers to the benefit of the guilty monopolist. That misguided risk-shifting is apparent in the approach recommended by some of Google’s supporting amici advocating a strict

⁵² Einer Elhauge, *Soft on Microsoft: The Potemkin Antitrust Settlement*, THE WEEKLY STANDARD, March 25, 2002, at 17–18.

⁵³ See, e.g., Br. of Bipartisan Former Antitrust Enforcers, *supra* note 11, at 5 (describing a narrow injunction against illegal conduct as the “tailored default.”).

⁵⁴ *United States v. American Tel. & Tel. Co.*, 552 F.Supp. 131, 139-40, 225 (D.D.C. 1982).

⁵⁵ *Id.*

⁵⁶ See Br. of Bipartisan Former Antitrust Enforcers, *supra* note 11, at 6.

⁵⁷ *Massachusetts v. Microsoft Corp.*, 373 F.3d 1199, 1216 (D.C. Cir. 2004) (alteration in original) (internal quotation omitted)(emphasis added).

⁵⁸ See *Brown v. Plata*, 563 U.S. 493, 531 (2011) (“[T]he scope of the remedy must be proportional to the scope of the violation, and the order must extend no further than necessary to *remedy the violation*.”) (emphasis added). See also DEPT. OF JUST., MERGER REMEDIES MANUAL, *supra* note 6, at 2 (“Before proposing a remedy to an anticompetitive merger, the Division should satisfy itself that there is a logical nexus between the remedy and the alleged violation—that the remedy *both* cures the competitive harm *and* flows from the theory of competitive harm.”) (emphasis added).

causation standard. One brief, filed on behalf of former enforcers, asks the court to determine “what harm to competition the remedy is likely to correct and, then, weigh the possibility of that benefit against possible harm from reducing Google’s competitive efficiency and its incentives to continue to invest in product improvements.”⁵⁹

On its face, that guidance is a thinly veiled appeal to status quo bias. The future benefit of a remedy will inevitably be less certain than immediate, court-ordered changes to a defendant’s business. And without the backstop of “effectiveness first,” it is a self-reinforcing death spiral. The more the court trims the remedy to benefit the defendant, the weaker the remedy becomes. The less effective the remedy becomes, the less well it stacks up against disruption to the defendant’s business. And so on, until the remedy is whittled down to nothing, and defendants are free to continue business as usual.

That is the wrong test and the wrong risk allocation. An appropriate remedy does not balance addressing harm to competition against harm to the individual defendant’s business strategy. As the former enforcers’ amicus brief acknowledges elsewhere, a remedy is instead measured “by the same criteria that we generally adopt as goals for antitrust law”—that is, its effect on competition as a whole. The rule that antitrust law is designed to “protect competition” and “not competitors” individually continues to apply at the remedy stage.⁶⁰ It is as true there as it is everywhere else in antitrust law.

D. A Divestiture Remedy is Not Limited to Certain Fact Patterns

Proponents of a strict causation standard also presuppose that divestiture is limited to a narrow, pre-defined set of factual circumstances.⁶¹ That is wrong. Divestiture has been a remedy in Section 2 cases since antitrust law’s earliest days, with the break-up of Standard Oil and American Tobacco. And while divestiture may be an obvious remedy when acquisitions were a means to the monopolization, this is not the only scenario in which it may be appropriate. The D.C. Circuit recognized as much when it acknowledged that structural relief was a possibility in the Microsoft case.⁶²

The resolution of the DOJ’s 1982 case against AT&T shows how divestiture can be an appropriate and proportional remedy to an entrenched monopoly, even if it was not the result of acquisitions. DOJ alleged that AT&T had restricted competitors’ connection of service offerings and devices to its landline network, had unfairly prioritized equipment

⁵⁹ See Br. of Bipartisan Former Antitrust Enforcers, *supra* note 11, at 14.

⁶⁰ *Brown Shoe Co., Inc. v. United States*, 370 U.S. 294, 344 (1961).

⁶¹ *Id.* at 11–12 (advocating skepticism about a divestiture remedy “[b]ecause there is no unlawful acquisition of monopoly power to unwind here”).

⁶² See *Microsoft*, 253 F.3d at 107 (not ruling out divestiture but noting that the district court on remand “may well conclude divestiture is not an appropriate remedy”).

manufactured by its Western Electric subsidiary, and had overcharged for long distance telephone calls. After losing a private antitrust damages action to MCI, AT&T negotiated a settlement with DOJ, approved by the district court, that separated the long-distance business, AT&T, from its regional companies, the so-called “Baby Bells.”

That “break-up,” far from the disaster non-interventionists so often predict from divestitures, is widely acknowledged as one of the most successful antitrust remedies. There is broad consensus, even from the most conservative quarters, that the competitiveness of the telecom industry increased post-divestiture.⁶³ Overall, both shareholders and consumers benefited. Increased competition led to lower long-distance rates, consumers were freed to choose from a range of equipment providers, and shareholders in the Baby Bells benefited from one of history’s most profitable spin-offs. Perhaps most importantly, as discussed further below, it led to a significant uptick in innovation across the telecom space.⁶⁴

In the Google search case, the DOJ explained why a divestiture of Google Chrome flows directly from the identified harm, even though Chrome was not acquired but rather developed internally. Chrome, with the leading market share in browsers, is one of the most significant access points for search engines.⁶⁵ The trial court found that in instrumentalizing its illegal monopolization, Google used Chrome to “fortif[y] its dominance.”⁶⁶

So long as Google controls Chrome, it will have an incentive to continue using it to preserve its search monopoly. The shortfalls of the European Commission’s Google Shopping remedy show how hard it is to police such conflicts.⁶⁷ There is an extreme informational asymmetry between the business and any external monitor. The business will always know of more paths to advantaging its own products than anyone outside the business could possibly imagine, let alone predict and prevent.

⁶³ See Noah J. Philips, *We Need to Talk: Toward a Serious Conversation about Breakups* 11, Prepared Remarks at the Hudson Institute, Washington, D.C. (Apr. 30, 2019) (quoting Judge Posner).

⁶⁴ Monika Schnitzer & Martin Watzinger, *How the AT&T Case Can Inform Big Tech Breakups*, PROMARKET (Feb. 20, 2023) <https://www.promarket.org/2023/02/20/when-considering-breaking-up-big-tech-we-should-look-back-to-att/>.

⁶⁵ *United States v. Google LLC*, 747 F. Supp.3d 1,45 (D.D.C. 2024).

⁶⁶ *Id.* at 49.

⁶⁷ See *supra* Part III.A.

IV. REQUIRING STRICT CAUSATION AT THE REMEDY STAGE VIOLATES PRINCIPLES OF EQUITY

Accepting a strict causation requirement would also impermissibly violate basic tenets of equity. A defendant facing consequences for illegal conduct does not stand in the same position as one who has not violated the law at all. Once the plaintiff has met its burden of showing liability, the Supreme Court has said “all doubts as to remedy are to be resolved in its favor.”⁶⁸

The Supreme Court has described this as an “ancient” principle that does not brook exceptions. “[T]he most elementary conceptions of justice and public policy require that the wrongdoer shall bear the risk of the uncertainty which his own wrong has created.”⁶⁹ To allow otherwise is to “enable parties to profit by, and speculate upon their own wrongs,” and that “is not, and cannot be the law....”⁷⁰ Making restorative relief subject to a nearly impossible standard of proof contravenes this foundational precept.

A. Placing the Burden on Enforcers to Reconstruct the But-For World at the Remedy Stage Creates Perverse Incentives

Imposing a strict causation standard at the remedy stage, after liability has been proven, would be inequitable and, for reasons identified by the Supreme Court, perverse. The greater the damage a monopolist has done to a market, the less likely plaintiffs can reconstruct a world without the illegal monopoly. Rather than deter illegal conduct, as the antitrust laws intend, such a rule would allow defendants to benefit from the uncertainty their illegal conduct has caused. It would incentivize a more thorough destruction of competition in the market.

Proponents of a strict causation requirement point to the counterfactual models plaintiffs rely on in private antitrust damages actions.⁷¹ These models prove the opposite of their point. In private antitrust damages actions, equitable principles require courts to apply a more relaxed causation standard at the remedial stage than at the liability stage, precisely because the causal connection between the conduct and the harm depends on the counterfactual but-for world absent the violation.

⁶⁸ *Ford Motor Co. v. United States*, 405 U.S. 562, 575 (1972).

⁶⁹ *Bigelow v. RKO Radio Pictures*, 327 U.S. 251, 265 (1946).

⁷⁰ *Story Parchment Co. v. Paterson Parchment Paper Co.*, 282 U.S. 555, 565 (1931).

⁷¹ See, e.g., Br. for Bipartisan Former Antitrust Enforcers, *supra* note 11, at 3 (“Applying this test requires examining the counterfactual of what would have happened absent that conduct, just as courts regularly do in other contexts such as measuring damages in antitrust cases.”).

In *Bigelow v. RKO Radio Pictures*, for example, competitor plaintiffs claimed damages based on the profits they earned before an antitrust violation relative to the lesser profits they earned once the violation began. The defendants argued that the plaintiffs had not adequately proven that the antitrust violation caused the difference in profits rather than an intervening or superseding cause. The Court refused to entertain the argument, because “the defendant by his own wrong has prevented a more precise computation.”⁷² The standard of proof, the Court reasoned, should not allow defendants to benefit from uncertainty that their antitrust violation created. This would “enable the wrongdoer to profit by his wrongdoing at the expense of his victim,” and it also “would be an inducement to make wrongdoing so effective and complete in every case as to preclude” relief.⁷³ “Failure to apply [this rule] would mean that the more grievous the wrong done, the less likelihood there would be” any relief.⁷⁴

The Court explained that, once the evidence was deemed sufficient to sustain a liability finding, the jury was permitted to draw an inference of causal injury from the wrongful acts’ “tendency to injure plaintiffs’ business” and from the adverse changes in price or profits “not shown to be attributable to other causes.”⁷⁵ In other words, a defendant who contests a claimed causal connection between the conduct and the harm may attempt to prove the claimed injury is attributable to another cause, but it is not the injured victim’s responsibility to rule out other such causes.⁷⁶

Whether in public enforcement or private damages actions, principles of equity leave no room for a perverse standard in which defendants benefit from weaker, less effective relief because the thoroughness of their monopolistic conduct erases all proof of the but-for world.⁷⁷ The precedent instead teaches that once the harm has been established, it is equitable principles of justice and reasonableness that should determine the type and extent of relief at the remedy stage. The proposed strict causation standard would improperly usurp that role.

⁷² *Bigelow*, 327 U.S. at 265.

⁷³ *Id.*

⁷⁴ *Id.*

⁷⁵ *Id.* at 264 (emphasis added).

⁷⁶ This also follows from the evidentiary principles of burden-shifting that govern antitrust law. Courts recognize that “[w]here the facts with regard to an issue lie peculiarly in the knowledge of a party, that party is best situated to bear the burden of proof.” *Smith v. United States*, 568 U.S. 106, 112 (2013) (cleaned up). If anyone is equipped to evaluate whether a monopolist would have maintained its monopoly despite its unlawful conduct in a but-for world, it is the monopolist who is intimately familiar with its business and the market, not its injured customers or the public.

⁷⁷ Avoiding such perverse incentives is a core principle reflected in *U.S. v. Microsoft* as well. There the court wrote: “To require that § 2 liability turn on a plaintiff’s ability or inability to reconstruct the hypothetical marketplace absent a defendant’s anticompetitive conduct would only encourage monopolists to take more and earlier anticompetitive action. 253 F.3d at 79.”

B. Limiting Remedial Relief Thwarts Central Equitable Considerations

Chief among the equitable considerations in antitrust relief is proportionality, the principle which allows courts to shape the remedy to the harm.⁷⁸ Proportionality is the tool that allows courts to strike the appropriate balance between competing interests in the remedy phase. As one scholar put it, “by gearing the remedy to specific anticompetitive effects in the marketplace, the doctrine of proportionality minimizes the likelihood of creation of perverse incentives that would either underdeter or overdeter market behavior.”⁷⁹

Google and its supporting amici have paid lip service to proportionality.⁸⁰ But the one-size-fits-all nature of their proposed strict-causation rule leaves no room for the equitable considerations that are proportionality’s hallmarks. A court’s options tightly restricted by an unforgiving standard, it would be unable to craft relief that responds to the factual context, including how long the conduct has lasted, how widespread it is, and how likely the defendant is to work around an injunction. This contradicts the most basic principles inherent in remedy precedent.⁸¹

Proportionality has a broad meaning that is focused not on legal technicalities like causation but on the practical danger the conduct poses to the public.⁸² That risk is a function of several factors, including duration of conduct, pervasiveness, history of compliance, and potential chilling of pro-competitive conduct. Proportionality requires that a remedy take these variables into account. The on-off switch of a strict causation requirement provides no mechanism to do so.

First, we know that the duration and the pervasiveness of the illegal conduct determine the degree of harm and the ongoing danger to the public. A narrow cease-and-desist injunction offers no room to calibrate accordingly. Where, as in the Google search and other pending tech monopolization cases, the conduct has gone on for many years and is thoroughly embedded in the way business is done, the extent to which competitive entry and expansion in the market was blocked may never be known. And, as discussed above, ongoing barriers will exist even when specific exclusionary tactics end. To ignore this

⁷⁸ See E. Thomas Sullivan, *Comparing Antitrust Remedies in the U.S. and E.U.: Advancing a Standard of Proportionality*, 48 ANTITRUST BULL. 377 (2003).

⁷⁹ Edward Cavanagh, *Antitrust Remedies Revisited*, 84 OREGON L. REV. 147 (2005).

⁸⁰ See, e.g., Br. of Bipartisan Former Antitrust Enforcers, *supra* note 11, at 11.

⁸¹ See, e.g., *U.S. Gypsum Co.*, 340 U.S. at 89 (“In resolving doubts as to the [remedial provisions], courts should give weight to ... the circumstances under which the illegal acts occur.”) See also *Brown v. Plata*, 563 U.S. 493, 531 (2011) (The “scope of the remedy must be proportional to the scope of the violation.”); *Salazar v. Buono*, 559 U.S. 700, 718 (2010) (“A court must find prospective relief that fits the remedy to the wrong or injury that has been established.”).

⁸² See, e.g., Kovacic, *supra* note 43, at 1312–13 (“[R]emedies should be proportional in the sense that they reflect the dangers of the conduct by which a firm has achieved or sustained a position of dominance.”).

when crafting a remedy is to invite failure.⁸³ In this context, structural relief may be the only option to jump-start competition in a victimized marketplace. A strict causation standard would make that all but impossible.

Second, the proposed strict causation approach would prevent the court from taking the defendant's prior conduct into account. Compliance history is one of the surest indicators of future behavior. As Professor Cavanagh observes, "[f]ailure to comply with decrees in the past calls into question whether a firm will comply with conduct restrictions in the future and suggests that divestiture is appropriate."⁸⁴ In *United Shoe*, for example, it was defendant's repeated evasion of court restrictions that led the court to choose divestiture.

Google has repeatedly demonstrated its ability and willingness to work around government restrictions to maintain its market position. In the Google Shopping case described above, Google was fined more than 2 billion Euros for failure to comply for years with the European Commission's decision. Even more recently, it has been investigated for failure to abide by key provisions of the Digital Markets Act, the regulatory scheme designed to ensure digital markets remain contestable. In non-compliance proceedings "reserved for situations where attempts at dialogue have not been successful," the Commission made preliminary findings that (1) Google is breaching the DMA by self-preferencing its own services over third parties in search and (2) Google has not effectively implemented the obligation to allow app developers to make free or discounted offers outside the Google Play Store.⁸⁵ There is no reason to think Google would be any more compliant with a narrow injunction in the search case.

Other big digital platforms have no better history of compliance in this area. Apple and Meta have both been fined by the EC for failure to comply with anti-steering and data choice provisions of the DMA.⁸⁶ Indeed, in the U.S., Apple has been referred for criminal contempt proceedings for its failure to comply with district court rulings that require Apple to open up its iOS platform.⁸⁷

⁸³ See, e.g., Cavanagh, *supra* note 79, at 203 (arguing that "if the monopolist's dominant position is insulated by high entry barriers, any decree that does not attempt to lower those barriers would not effectively restore competition and hence is doomed to failure.").

⁸⁴ *Id.* at 204.

⁸⁵ See *Commission sends preliminary finds to Alphabet under Digital Markets Act*, Press Release, Eur. Comm'n (Mar. 18, 2025), https://ec.europa.eu/commission/presscorner/detail/en/ip_25_811.

⁸⁶ See *Commission finds Apple and Meta in breach of Digital Markets Act* (Eur. Comm'n Press Release, Apr. 22, 2025), https://ec.europa.eu/commission/presscorner/detail/en/ip_25_1085.

⁸⁷ Lily Jamali, *Apple referred for possible criminal contempt investigation*, BBC News (Apr. 30, 2025), <https://www.bbc.com/news/articles/c62xv43xqq5o>.

Against the backdrop of a long track record of non-compliance with behavioral remedies, a standard that would protect the largest digital platforms from anything but the narrowest of injunctions is not proportional. It is instead a free pass.

V. STRICT CAUSATION GETS “ERROR COST” WRONG

At bottom, making restorative remedies contingent on a showing of strict causation reflects a miscalculation. Its proponents purport to be concerned with error risk, but they focus on only one type of error—the risk of intervention—and ignore the already proven risk of non-intervention. In this sense, their logic reflects the Chicago School theory that would put a “thumb on the scale” for not intervening in business conduct.

The assumptions behind that philosophy have been roundly criticized in ways that are directly applicable here.⁸⁸ As Professor Jonathan Baker has pointed out, such thinking relies on (1) predictions of self-correcting markets and (2) incomplete if not incorrect theories of what spurs innovation. For many of the reasons discussed above, including high barriers to entry and network effects, these predictions have turned out to be particularly deficient in the case of large digital platforms. And those shortcomings are most pronounced in the domain of monopoly-maintenance remedies, where the finding of liability already proves the market has failed to self-correct or protect innovation.

A. Non-Intervention Bias Gets Predictions of Self-Correcting Markets Wrong

As discussed above, proponents of a strict causation restriction urge courts to err on the side of narrow remedies even at the expense of effectiveness. Non-intervention, they argue, is less damaging to the market than over-intervention. That bias toward non-intervention assumes, to quote Judge Easterbrook, that “monopoly is self-destructive” because “monopolistic prices eventually attract entry.”⁸⁹ In other words, it assumes entry will “prove capable of policing market power with a sufficient frequency, to a sufficient extent, and with sufficient speed to make false positives systematically less costly than false negatives.”⁹⁰

History tells us otherwise. In many markets, entry will not be fast enough or vigorous enough to self-correct.⁹¹ Digital markets provide a dramatic case study. The findings of a 2019 Report by the Stigler Center show “that rapid self-correction in markets dominated by large digital platforms is unlikely, and that harms to economic welfare from the

⁸⁸ See Jonathan Baker, *Taking the Error Out of “Error Cost” Analysis*, 80 ANTITRUST L. J. 1 (2015).

⁸⁹ *Id.* at 9, n.30.

⁹⁰ *Id.* at 9.

⁹¹ *Id.* at 11.

exercise of market power in such markets are substantial.”⁹² The obstacles to self-correction are the same entry barriers that make effective remedies so challenging: economies of scale, economies of scope, network effects, and negligible marginal cost.⁹³

The “entry” cure is particularly unreliable in an industry where a monopolist has successfully limited competitive entry for more than a decade. It is Panglossian to think that banning one method of exclusion in such a market will restore competitive conditions. The risk is very real, as critics of the conduct remedies in the Microsoft litigations noted, that once the “legal wheels” have turned out a “cure,” the “victim [is] already dead.”⁹⁴

B. Non-intervention Bias Gets Innovation Incentives Wrong

The non-interventionist bias contains a second incorrect presumption. It is the perception that “monopolies are not troublesome because they foster market growth.”⁹⁵ We see this at work when Google and its supporters caution that remedies like data sharing might chill investment and innovation.⁹⁶ To put this in Professor Baker’s terms, they seek a remedy that trades off consumer harm against the “benefits monopoly confers in enhancing incentives to innovate.”⁹⁷ The unexamined assumptions about innovation in this argument do not hold up under scrutiny.

Concerns about chilling investment focus on only one theory of the incentive to invest—that monopolists invest based on how easily they can appropriate the social benefits of their innovation. It ignores entirely evidence for “the potentially more significant incentive of those firms to increase investment in response to greater investment from their rivals.”⁹⁸ When the remedy standard for monopolization cases favors the status quo, it assumes that appropriability matters more to innovation (and ostensibly consumer welfare) than restoring competition.

The available evidence tends to show the opposite. As Professor Carl Shapiro’s comprehensive survey of empirical studies on innovation concludes, “the unifying principle, richly supported by the empirical literature, is that innovation, broadly defined, is spurred if the market is contestable; that is, if multiple firms are vying to win profitable

⁹² Stigler Committee on Digital Platforms, Final Report, Stigler Center for the Study of the Economy and the State, U. Chi. Booth School of Bus. (Sept. 16, 2019), *available at* <https://research.chicagobooth.edu/-/media/research/stigler/pdfs/digital-platforms---committee-report---stigler-center.pdf?la=en&hash=2D23583FF8BCC560B7FEF7A81E1F95C1DDC5225E>.

⁹³ *Id.*

⁹⁴ Herbert Hovenkamp, *The Antitrust Enterprise, Principle and Execution* 298, 299 (2005).

⁹⁵ Baker, *supra* note 88, at 14.

⁹⁶ See, e.g., Br. of Bipartisan Former Antitrust Enforcers, *supra* note 11, at 12 (citing preserving “incentives to innovate” as a reason not to require interoperability).

⁹⁷ Baker, *supra* note 88, at 14.

⁹⁸ *Id.*

future sales.”⁹⁹ A rule that forgoes intervention “on the rationale that one firm is enough for competition” in rapidly changing high-technology markets in particular “would undermine innovation incentives under the guise of protecting them.”¹⁰⁰

Retrospective studies on the breakup of AT&T show how restoring competition can unleash innovation. A main concern expressed by the opposition to divestiture was that the Bell System’s valuable innovation might be compromised. The reverse proved to be true. While Bell’s patenting declined somewhat after the breakup, empirical studies show that the number of “important” patents (as measured by citations) increased. More striking, though, patenting within the sector as a whole sky-rocketed. Professors Schnitzer and Watzinger show that “[p]atenting in the sector affected by the breakup grew by 19% more than patenting in the other but comparable sectors. Per year, that is 1,000 additional patents, about 2.6% of all annual US patents by US inventors in the years after 1982.”¹⁰¹ By this measure, the breakup spurred overall innovation in the sector by nearly 20%.

Far from threatening technological progress, the effects of the divestiture suggest that AT&T’s monopoly had been artificially constraining innovation. The anecdotal evidence leads to a similar conclusion. Pre-remedy, Bell withheld answering machine technology for decades based on fear that it would reduce demand for its phone services.¹⁰² Similarly, cell phones, despite being based in large part on Bell technology, were introduced in parts of Europe years before they were available in the United States.¹⁰³

This is not different in markets where competition may be “for the market” rather than “within the market.” In those markets that “tip” towards one large player, intense competition can still exist for the dominant position.¹⁰⁴ The laissez-faire approach to antitrust in such markets assumes (1) monopolies will be short-lived because of technological change and (2) the bigger the “prize” offered the winner, the more incentive there is to innovate.¹⁰⁵ But evidence shows that where two companies vie “for the market,” antitrust protections increase rates of innovation.¹⁰⁶ The barriers to entry also distort investment in potentially anti-competitive ways, as documented in the 2019 Stigler Report. In the core areas in which the large digital platforms are active, studies suggest that their monopolies negatively impact investment. The large digital platforms

⁹⁹ Carl Shapiro, *Competition and Innovation: Did Arrow Hit the Bull’s Eye?* 361–404, in *The Rate and Direction of Inventive Activity Revisited*, Nat’l Bur. of Econ. Research (2011).

¹⁰⁰ Baker, *supra* note 88, at 14.

¹⁰¹ Schnitzer & Watzinger, *supra* note 62.

¹⁰² *Id.*

¹⁰³ *Id.*

¹⁰⁴ Shapiro, *supra* note 99, at 401.

¹⁰⁵ *Id.*

¹⁰⁶ *Id.*

can form a kind of “kill zone” for competing innovation around their sprawling ecosystems.¹⁰⁷

In short, a knee-jerk animus to court intervention based on “protecting” the investments of the tech giants has at best a questionable evidentiary basis. But even more, it ignores completely the lasting harms illegal exclusion does to others’ incentives to invest, especially in the tech platform’s core markets, and the resulting market distortions and the loss of consumer choice. To justify as pro-innovation a standard that leads to less effective remedies is to willfully ignore that evidence. The markets warped by illegal barriers to entry have foregone innovation and will continue to do so if effective remedies do not jump-start competition.

VI. CONCLUSION

Google and its *amici* in the search case may be the first but almost certainly will not be the last to attempt to make strict causation a prerequisite for any restorative monopolization remedy. This approach has no justification in precedent or policy. It ignores the primary purpose of antitrust remedies, which is to provide complete, forward-looking relief. And it contradicts foundational principles of equity prohibiting wrongdoers from benefiting from the uncertainty their illegal conduct creates. It also relies on wrong assumptions about the trade-offs between intervention and non-intervention and leans on debunked, incorrect notions of how digital markets work.

For these reasons, the unrealistic strict-causation standard must be rejected in the search case and in other future monopolization remedy proceedings.

¹⁰⁷ Stigler Committee on Digital Platforms, *supra* note 92, at 77.