

WHEN THE ECONOMETRICIAN SHRUGGED: IDENTIFYING AND PLUGGING GAPS IN THE CONSUMER-WELFARE STANDARD

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INTRODUCTION

Edge providers have alleged that dominant tech platforms exploit their platform power to gain an artificial advantage in some ancillary, edge markets. In May 2018, Yelp filed a complaint at the European Commission, alleging that Google “abused its dominance in local search” by giving preferred placement to its own local search offerings over similarly situated rivals.¹ Facebook has been accused of leveraging its platform power by appropriating the functionality of Snapchat (“Stories” feature), Timehop (“On This Day” feature), Grubhub (food delivery feature), and GoFundMe (fundraising feature).² And Amazon has been accused of leveraging its platform power into retail via predation against independent retailers such as Diapers.com,³ and more recently by steering voice searches on Alexa to its private-label products.⁴

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¹ See Rochelle Toplensky & Hannah Kuchler, *Yelp Files New EU Complaint Against Google over Search Dominance*, FIN. TIMES (May 22, 2018), <https://www.ft.com/content/42ac9192-5dd2-11e8-ad91-e01af256df68>.

² See Elizabeth Dwoskin, *Facebook’s Willingness to Copy Rivals’ Apps Seen as Hurting Innovation*, WASH. POST (Aug. 10, 2017), https://www.washingtonpost.com/business/economy/facebooks-willingness-to-copy-rivals-apps-seen-as-hurting-innovation/2017/08/10/ea7188ea-7df6-11e7-a669-b400c5c7e1cc_story.html?utm_term=.a77cd0efc51f (“But while [Facebook’s Onavo app] advertises itself to users as a way to ‘keep you and your data safe,’ Facebook is able to glean detailed insights about what consumers are doing when they are not using the social network’s family of apps, which includes Facebook, Messenger, WhatsApp and Instagram.”).

³ See Lina M. Khan, *Amazon’s Antitrust Paradox*, 126 YALE L.J. 710, 768–74 (2017).

⁴ Julie Creswell, *How Amazon Steers Shoppers to Its Own Products*, N.Y. TIMES (June 23, 2018), <https://www.nytimes.com/2018/06/23/business/amazon-the-brand-buster.html> (“[R]esearchers at Bain & Co., found in categories in which Amazon offered a private-label product, Alexa recommended those products 17% of the time. Noting that the private label goods represent only about 2% of total volume sold, the Bain researchers said, ‘the online retailer clearly positions its own private labels favorably in voice shopping.’”).

This paper does not take a view of the merits of any particular allegation but instead explores how to address innovation-based theories of harm caused by gaps in antitrust's consumer-welfare ("CW") standard. A similar problem discussed in this paper leads to underenforcement of monopsony-based theories of harm. As we argue below, innovation harms are beyond the scope of the CW standard and the capability of antitrust courts; to protect innovation, we need a new regulatory tool. Monopsony harms, another critical gap in the CW standard, are caused by a misunderstanding of the full implications of the meaning of consumer welfare; we argue the solution here is not with the CW standard in theory but instead in how the CW standard is applied.

Imagine asking a top-flight econometrician to connect the alleged exclusionary conduct by a vertically integrated and dominant tech platform with a loss in "edge innovation"—the reduction in investment, entrepreneurial, and risk-taking activity by independent application ("app") and content providers operating at the "edge" of a dominant platform.⁵ Imagine further that the conduct under scrutiny generated no short-run price or output effect. Instead, the platform owner was merely redirecting traffic from independent properties to its own via a discriminatory algorithm. Or imagine the platform was appropriating or "cloning" app functionality into its basic service. The only potential harm in this instance would be that independent edge providers would be encouraged to exit or discouraged from entering in future periods. In theory, edge providers might be discouraged to compete in the app space given what they perceive to be a slanted playing field. Conversely, the dominant platform's discriminatory conduct might encourage it to invest more in the app space than it would have otherwise, by allowing it to appropriate more of the returns from doing so.

This tradeoff is inherently difficult to assess. Society might place a special value on content and programming supplied by independents. Some of these values, such as quality and choice, are economic (and quantifiable) in nature; others, such as diversity and equality of opportunity, are arguably noneconomic. For the purpose of this paper, assume that under current evi

⁵ At a higher level of abstraction, it often happens that innovative firms exploit profit opportunities by offering products to consumers of dominant firms, where those offerings are complementary to the product(s) of the dominant firms. This creates an opportunity for the dominant firms to effectively duplicate or otherwise eliminate demand for the innovation. The Supreme Court has weighed in on the issue of vulnerable aftermarkets where the innovator offered replacement parts of equal or greater value. In *Eastman Kodak Co. v. Image Technical Services, Inc.*, plaintiff Image Technical Services claimed that Kodak attempted to monopolize the aftermarket for repair services on high-volume photocopiers and other equipment Kodak manufactured. 504 U.S. 451, 455–56 (1992). As explained by antitrust attorneys David Goldfine and Kenneth Vorrasi, however, federal courts "have bent over backwards to construe *Kodak* as narrowly as possible," thereby narrowing *Kodak* "to the point where it is simply no longer an effective weapon for antitrust plaintiffs." David A.J. Goldfine & Kenneth M. Vorrasi, *The Fall of the Kodak Aftermarket Doctrine: Dying a Slow Death in the Lower Courts*, 72 ANTITRUST L.J. 209, 209 (2004).

dentiary standards in antitrust, there could be no intervention to “level” the playing field between independents and platform-affiliated apps unless and until one could establish empirically a causal connection between the discriminatory conduct by the platform provider and a tangible harm to consumers.

If an econometrician were present when a particular independent edge provider threw in the proverbial towel, she might hear the towel hit the floor. But how would she measure hundreds of similar towel drops? And even if she could measure the innovation loss, how would she connect the discriminatory conduct at issue (the independent variable) to the rate of towel drops (the dependent variable)? Setting aside the measurement problem for innovation, proving causation in a rigorous way still would be challenging, as the discriminatory conduct did not “turn on” at some discrete point in time, nor did it increase over time in some measurable way.⁶ Given such an intractable empirical assignment, the econometrician might shrug.

This paper identifies the gaps in protection under strict application of the CW standard. In addition to demonstrating market power, the CW standard requires plaintiffs in monopolization cases brought under Section 2 of the Sherman Act to rigorously and causally connect the challenged conduct to some measure of consumer-welfare loss, typically in the form of a short-run price or output effect.⁷ Before offering a critique, it bears noting that the authors are generally supportive of the CW standard. There are at least four reasons for beginning with a framework that focuses on consumers. First, an objectively identifiable metric such as CW enables consistent analysis and predictable results, which prevents the politicization of antitrust, or “political

⁶ Although some economists have charted the decline in employment by young firms in high-tech industries, not every abandoned innovation manifests in the form of a job, and it is hard to know what portion of the observed decline in young firms’ employment shares is attributable to exclusionary conduct versus other factors, such as the bursting of the dot-com bubble. *See, e.g.*, RYAN A. DECKER ET AL., CHANGING BUSINESS DYNAMISM AND PRODUCTIVITY: SHOCKS VS. RESPONSIVENESS 2, 4, 29, 36 (Finance & Economics Discussion Series, 2018-007, 2018), <https://www.federalreserve.gov/econres/feds/files/2018007pap.pdf> (showing employment shares for young firms in the high-tech falling from around 15% in 2001 to around 8% in 2014); Steve LeVine, *U.S. Startups Are in a Surprising 13-year Slump*, AXIOS (May 27, 2018), <https://www.axios.com/startups-slump-13-years-artificial-intelligence-us-e914164-78f7-4783-b912-2ea50a06968d.html> (“Haltiwanger dismisses neither of those reasons, but told Axios at conference Thursday at the Dallas Fed that the loss of the propulsion of startups is a primary reason for the current malaise. He speculates that Big Tech companies may be buying up a lot of them before they make their big splash, thus smothering their potential.”).

⁷ *See, e.g.*, *Ohio v. Am. Express Co.*, 138 S. Ct. 2274, 2287 (2018) (requiring plaintiffs to show an output effect in cases involving two-sided transactional platforms); *Brooke Grp. Ltd. v. Brown & Williamson Tobacco Corp.*, 509 U.S. 209, 237 (1993) (refusing to “infer competitive injury from price and output data absent some evidence that tends to prove that output was restricted or prices were above a competitive level”); *McWane, Inc. v. FTC*, 783 F.3d 814, 838 (11th Cir. 2015) (“Perhaps the Commission’s most powerful evidence of anticompetitive harm was direct pricing evidence. It noted that McWane’s prices and profit margins for domestic fittings were notably higher than prices for imported fittings, which faced greater competition. Thus, these prices appeared to be supracompetitive.”).

antitrust.”⁸ Second, the CW standard is helpful in resolving tensions between conduct that harms consumers but benefits producers (e.g., a transfer of surplus to a monopolist). Third, the CW standard is helpful in resolving tensions between conduct that harms rivals but benefits consumers; a bundling arrangement might exclude a rival but nevertheless increase buyers’ surplus. Fourth, the CW standard appropriately allows rule-of-reason judgments to replace per se prohibitions on conduct with ambiguous CW effects, such as tying and price discrimination.

But a dogmatic application of the CW standard could create certain areas of underenforcement.⁹ When the harm to consumers does not manifest in the form of higher prices or reduced output in the product market, the CW standard might generate a false negative—that is, a finding of no harm when a real harm to innovation exists. Conversely, when short-run price or output effects are observed, they may be outweighed over the long run by offsetting dynamic incentives to invest, innovate, or otherwise improve consumer welfare. In that case, the CW standard would generate a false positive. The first potential blind spot identified here concerns innovation harms. These harms, which might not manifest until future periods, are not readily quantifiable or relatable to a platform’s discrimination; thus, the exclusionary conduct that generated such harms may not be cognizable under the current rigorous antitrust injury standard. The last pure innovation-based harm case brought by an agency in a single-firm case was *United States v. Microsoft Corp.*¹⁰ nearly two decades ago. And even if the CW standard could be bent to accommodate innovation harms, the pace of antitrust is arguably too slow to preserve edge innovation.

The second potential blind spot of the CW standard is preventing the exercise of monopsony power and its concomitant wage effects. Consider the following hypothetical: Companies A and B do not compete in the same product market, but they are the only two firms that hire computer

⁸ We understand that among the New Brandeisians, whether the CW standard furthers the goals of antitrust is an open question. See, e.g., Lina Khan, *The New Brandeis Movement: America’s Antimonopoly Debate*, 9 J. EUR. COMPETITION L. & PRAC. 131, 132 (2018), <https://academic.oup.com/jelap/article/9/3/131/4915966>. For example, predictability and consistency are virtues, but clearly not all standards that are predictable and consistent are good competition goals.

⁹ As a theoretical matter, the CW standard could lead to overenforcement in Section 2 cases when prices rise but other measures of welfare improve. In practice, this does not appear to be the case, given the observed dearth in Section 2 enforcement in the post-*Microsoft* era. For two opposing viewpoints, compare Robert W. Crandall & Clifford Winston, *Does Antitrust Policy Improve Consumer Welfare? Assessing the Evidence*, 17 J. ECON. PERSP. 3, 4 (2003) (arguing that empirical evidence suggests that past government antitrust interventions have failed to “provide[] much direct benefit to consumers or significantly deter[] anticompetitive behavior”), with Jonathan B. Baker, *The Case for Antitrust Enforcement*, 17 J. ECON. PERSP. 27, 27 (2003) (arguing that empirical data demonstrate that antitrust enforcement has provided benefits to consumers and social welfare that likely outweigh government spending on antitrust enforcement).

¹⁰ 253 F.3d 34 (D.C. Cir. 2001).

programmers in a 100-mile radius. Prior to the merger, the two firms have increased wages and benefits to attract software engineers. After the merger, the combined firm lowers wages but does not raise the prices of its products. Because this hypothetical merger could be condemned under the CW standard, the CW standard is *not* the problem. Thus, the CW doctrine need not be changed to accommodate monopsony harms. Instead, antitrust enforcers should interpret the CW standard more broadly to make cognizable harms to sellers (including sellers of labor).

Several recent papers attempt to answer this very question. Professor Herbert Hovenkamp argues that the CW standard can accommodate labor harms with a modest tweak, noting that “the harder case [for the CW standard] occurs when firms exercising market power for the purchase of labor lack power in the market in which they sell . . . Here, the ‘consumer’ label needs to be stretched a little, but not very much.”¹¹ Professors C. Scott Hemphill and Nancy Rose assert that, when it comes to monopsony harms, a “trading partner welfare” standard is more consistent with the antitrust case law and the 2010 Horizontal Merger Guidelines (Section 12) than a standard that focuses exclusively on the welfare of final consumers.¹² Finally, Professors Suresh Naidu, Eric Posner, and Eric Weyl explain that, although economics reveals the fundamental symmetries between product-market and labor-market harms, “legal scholars have influentially argued that the amorphous norms of antitrust law that prevailed earlier in the twentieth century should be replaced with a laser-like focus on consumer welfare.”¹³ The authors suggest provocatively that mergers that threaten monopsony harms should be subject to a “worker welfare” standard, in which a merger would be permitted only “if the merger sufficiently increases worker productivity (workers’ marginal revenue product) in a way that will not fully be absorbed by lower prices or increased employer profits.”¹⁴

This Article is organized as follows. Part I presents evidence consistent with the claim of innovation harms at the edge of the dominant tech platforms and explores whether the CW standard is up to the task of protecting against

¹¹ Herbert Hovenkamp, *Whatever Did Happen to the Antitrust Movement?*, 94 NOTRE DAME L. REV. 583, 634 (2018).

¹² C. Scott Hemphill & Nancy L. Rose, *Mergers That Harm Sellers*, 127 YALE L.J. 2078, 2091 (2018). The authors identify an episode where even an antitrust enforcement agency can misinterpret the CW standard. *Id.* at 2090 (“This evidence contradicts the erroneous suggestion made by the FTC that section 12 focuses upon or is limited to output-side harm. For example, in a statement closing its investigation of a merger of two pharmacy benefit managers (PBMs), the FTC summarized its analysis . . . [and] g[ave] the erroneous impression that section 12 is focused on harm to downstream purchasers or final consumers.” (citing Statement of the Federal Trade Commission Concerning the Proposed Acquisition of Medco Health Solutions by Express Scripts, Inc., FTC File No. 111-0210, at 7 (Apr. 2, 2012))).

¹³ Suresh Naidu, Eric A. Posner & E. Glen Weyl, *Antitrust Remedies for Labor Market Power*, 132 HARV. L. REV. 536, 541 (2018).

¹⁴ *Id.* at 587.

such harms. Part II presents evidence consistent with the claim of monopsony harms and again asks whether the CW standard is up to the task of protection against such harms. Part III presents remedies to address these potential gaps in antitrust enforcement under the CW standard. While monopsony is more readily addressable via modest alterations in the CW standard and merger review, this Article argues that innovation harms would be better addressed outside antitrust, via the application of a nondiscrimination standard by an administrative law judge or Internet Tribunal (“Net Tribunal”).¹⁵ Not only would these innovation harms be cognizable under the new standard, but the relief for meritorious cases would come at a much faster rate due to procedural and evidentiary-standard improvements; if the aim is to promote innovation, speed matters. Using the duration of program carriage cases adjudicated by the Administrative Law Judge of the Federal Communications Commission (“FCC”) as a proxy for the expected speed of the Net Tribunal, this paper finds that the resolution of discrimination complaints could be reduced by nearly half—from an average duration of thirty-five months for modern Section 2 cases to an average duration of eighteen months for all program carriage cases.

I. THE FIRST POTENTIAL GAP: INNOVATION HARMS

When it comes to innovation concerns (often referred to as “dynamic efficiencies”),¹⁶ the goal of the enforcement regime should be to maximize the *sum* of innovation at the platform and at the edges, weighing both equally.¹⁷ Put differently, holding constant static efficiencies, the objective should be to maximize total innovation, regardless of whether it is carried out at the edge or the core, and regardless of the number of innovators. Attention in antitrust circles tends to focus, however, on how an intervention could

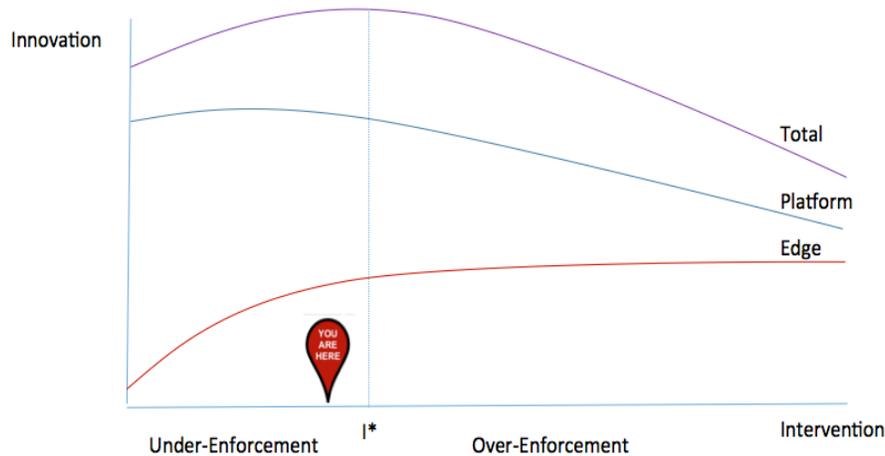
¹⁵ It bears noting that the concept of a Net Tribunal could also be used more broadly for innovation harms, including those that occur outside the Internet.

¹⁶ See, e.g., Melissa A. Schilling, *Towards Dynamic Efficiency: Innovation and Its Implications for Antitrust*, 60 ANTITRUST BULL. 191, 192 (2015) (“Given the contribution of innovation to economic welfare, it should be clear that antitrust laws must pursue *dynamic efficiency*, that is, an appropriate balance between short-run static efficiencies such as reducing costs and maximizing consumer surplus (*productive efficiency* and *allocative efficiency*) with longer-term efficiencies that arise from innovation.”).

¹⁷ The goal of antitrust policy is to maximize social welfare. Thus, antitrust is concerned with innovation only to the extent that it feeds into social welfare. But because more innovation, all else equal, likely increases social welfare, these objectives are not in tension. The phrase *innovation* is used here to capture investment as well as the resulting applications. This metric should not be confused with, say, the number of patents granted, which is only a crude proxy for innovation.

affect the platform owners' incentives to invest, or competition *for* the market ("platform innovation").¹⁸ Yet edge innovation by non-platform owners¹⁹ should not be treated less importantly than platform innovation; the two forms of innovation should be afforded equal weight. Figure 1 shows the tradeoffs from over- and underenforcement of edge and platform innovation, as well as the unweighted sum of the two.

[Figure 1: Tradeoffs of Antitrust Intervention on Innovation]



Because more regulatory intervention would limit opportunities for appropriation or exclusion by dominant tech platforms, *edge* innovation would be expected to increase with more enforcement. On the other hand, with more enforcement, *platform* innovation could decrease due to the reduced incentive for existing or would-be platforms to invest; for example, a regime that shared the majority of the rents of incumbent platforms with edge providers or rival platforms could upset Schumpeterian competition. If we are below the socially optimal level of intervention (I^*), then slightly more intervention increases innovation on net—that is, the gains to edge innovation will exceed the losses to platform innovation.

¹⁸ E.g., J. Gregory Sidak & David J. Teece, *Dynamic Competition in Antitrust Law*, 5 J. COMPETITION L. & ECON. 581, 623 (2009) (explaining the virtues of “[i]nfusing antitrust analysis with principles of Schumpeterian competition”).

¹⁹ Platform owners also provide edge innovation—many platform owners experiment internally on disruptive apps—and this type of innovation also should count in the objective function. Maximizing total innovation also recognizes the existence of complementarities between edge and platform.

A. *Evidence of Innovation Harms*

The empirical evidence that edge innovation has been diminished by dominant tech platforms is partially anecdotal and not dispositive but is nevertheless consistent with our hypothesis that there is a gap in antitrust enforcement relating to innovation harms. This section is not intended to convince the reader of a causal connection between lax antitrust enforcement and declining edge innovation. Indeed, such proof might be impossible. Rather, this section explains how antitrust might miss innovation harms to the extent they exist.

A 2017 survey of over two dozen Silicon Valley investors and entrepreneurs by the *Washington Post*'s Elizabeth Dwoskin suggested that Facebook's appropriation of app functionality from edge rivals is "having a profound impact on innovation in Silicon Valley, by creating a strong disincentive for investors and start-ups to put money and effort into creating products Facebook might copy."²⁰ Examples of this alleged appropriation include key elements of the Snapchat app—such as 3D filters of your photos, sending videos to friends, and Snapchat stories—as well as Facebook's "online fundraising tool, food delivery, offline meetups and its 'On This Day' feature, which shows Facebook users pictures of what they did on the same day a year earlier."²¹ A May 1, 2018, announcement by Facebook to add a dating app to its basic service coincided with a drop in Match Group's stock value—the owner of OkCupid and Tinder—by 17%.²² Professor Scott Galloway described the impact of an uneven playing field on venture-capital ("VC") activity:

I've sat in dozens of VC pitches by small firms. The narrative has become universal and static: "We don't compete directly with the Four [Amazon, Apple, Facebook and Google] but would be great acquisition candidates." Companies thread this needle or are denied the requisite oxygen (capital) to survive infancy. IPOs and the number of VC-funded firms have been in steady decline over the past few years.²³

Dominant tech platforms compete with edge innovators, and the platforms are often successful in displacing edge competitors. If the platform achieves success by competing on the merits, that is competition; if, however, the platform is able to succeed through its dominance as a platform, it could undermine dynamic efficiency.

²⁰ Dwoskin, *supra* note 2.

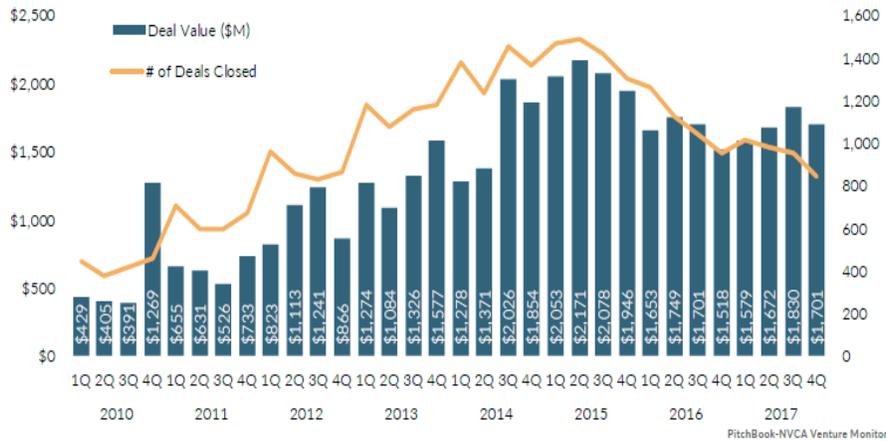
²¹ *Id.*

²² See, e.g., Nick Statt, *Facebook Is Taking On Tinder with New Dating Features*, THE VERGE (May 1, 2018, 1:30 PM), <https://www.theverge.com/2018/5/1/17307782/facebook-tinder-dating-app-f8-match-ocupid>.

²³ Scott Galloway, *Silicon Valley's Tax-Avoiding, Job-Killing, Soul-Sucking Machine*, ESQUIRE (Feb. 8, 2018), <https://www.esquire.com/news-politics/a15895746/bust-big-tech-silicon-valley/>.

Would-be app providers could be at a disadvantage because Facebook or Google can appropriate their innovations—and then give their affiliated content (or functionality) preference—rather than compete on the merits. So long as these firms control the platform, they also control the users’ experience. This is not to say that a better independent mousetrap cannot prevail in this environment. Yet each of the dominant platforms has the ability to be the first, and perhaps only, to make the respective app tie in with the rest of the platform’s affiliated apps and unfairly prevail through that bundling advantage (in addition to the self-promotion). Professor Galloway’s surmise of declining VC activity is consistent with data compiled by PitchBook-NVCA Venture Monitor, depicted in Figure 2, which show that the number and value of United States “angel & seed activity”—defined as deals between \$200,000 and \$2 million—are down since 2015.²⁴

[Figure 2: U.S. Angel and Seed Activity by Year (2010–17)]²⁵



In contrast, for “early-stage VC,” defined as deals between \$2 million and \$20 million, the number of deals is down, but the value of deals is up since 2015.²⁶ For “late-stage VC,” defined as deals valued over \$20 million, the number of deals is down, but the value of deals is flat since 2015.²⁷ Although it is unclear whether or how the platforms’ monopoly or exclusionary behavior toward independent apps worsened in 2015, it is curious that angel

²⁴ Kyle Standord, *The State of the US Venture Industry in 15 Charts*, PITCHBOOK (Jan. 26, 2018), <https://pitchbook.com/news/articles/the-state-of-the-us-venture-industry-in-15-charts>.

²⁵ *Id.*

²⁶ *Id.*

²⁷ *Id.*

and seed activity declined as the United States economy expanded in 2016 and 2017.²⁸

Michael Luca and Timothy Wu show how a vertically integrated platform can decrease an edge rival's usage, a potential proxy for harm to edge innovation.²⁹ In a paper funded by Yelp and coauthored with Yelp's data scientists, the authors demonstrated that Google deviated from its organic search results to favor its own local web properties in a search for cafés in Louisville.³⁰ The European Union has advanced a similar theory, accusing Google in 2015 of diverting traffic from competitive rivals toward its own comparison-shopping site.³¹ When Google was induced to revert back to its organic search results, the rankings of competing independent properties were elevated in Google's search, and users were 40% more likely to engage with the search results, as measured by click activity.³² To the extent that fewer clicks means fewer matches between buyers and sellers on the internet, and fewer consummated transactions, Google's favoritism of its own local web properties is consistent with an output reduction. And antitrust generally condemns conduct of a firm with market power that restricts output or leads to higher prices without any efficiency justification.

Another piece of evidence linking platform power to innovation comes via a study of the mobile app market by Professors Wen Wen and Feng Zhu.³³ The authors find that after Google's entry threat into a specific app space increases, developers susceptible to Google's entry threat reduce innovation

²⁸ On the other hand, corporate investment may have increased during this time. McKinsey Global Institute estimates corporations spent \$2 to \$3 billion on AI-related M&A in the past couple years and \$18 to \$27 billion on internal AI-related R&D. JACQUES BUGHIN ET AL., MCKINSEY GLOB. INST., ARTIFICIAL INTELLIGENCE: THE NEXT DIGITAL FRONTIER? 10 (2017), <https://www.mckinsey.com/~media/mckinsey/industries/advanced%20electronics/our%20insights/how%20artificial%20intelligence%20can%20deliver%20real%20value%20to%20companies/mgi-artificial-intelligence-discussion-paper.ashx>.

²⁹ Michael Luca et al., *Does Google Content Degrade Google Search? Experimental Evidence* 19–22 (Harvard Bus. Sch., Working Paper No. 16-035, 2015), <http://people.hbs.edu/mluca/SearchDegradation.pdf>.

³⁰ *Id.* at 22–26.

³¹ James Kanter & Mark Scott, *Europe Challenges Google, Seeing Violations of Its Antitrust Law*, N.Y. TIMES (Apr. 15, 2015), <http://www.nytimes.com/2015/04/16/business/international/european-union-google-antitrust-case.html>.

³² Luca et al., *supra* note 29, at 25. Some argue that Professors Luca and Wu's experiment cannot speak to other types of internet searches outside Louisville cafés and that even if the results were representative of Google's conduct in general, evidence of search bias (or discrimination) is "not inherently anticompetitive." *E.g.*, GEOFFREY A. MANNE, R. BEN SPERRY & KRISTIAN STOUT, INTERNATIONAL CENTER FOR LAW & ECONOMICS, A CRITICAL ASSESSMENT OF THE LATEST CHARGE OF GOOGLE'S ANTICOMPETITIVE BIAS FROM YELP AND TIM WU 11–15, 19–21 (2016), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2850665.

³³ Wen Wen & Feng Zhu, *Threat of Platform-Owner Entry and Complementor Responses: Evidence from the Mobile App Market* (NET Institute, Working Paper No. 16-10, 2019), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2848533##.

(as measured by software updates) and raise the prices for the affected apps.³⁴ The authors measure both the innovation effects and price effects relative to apps in the same category that are unaffected by Google's entry threat.³⁵ After Google's entry, software updates are further reduced, and prices further increased.³⁶ Specifically, prior to Google's entry, the "affected developer reduces his updates on an affected app by 5 percent" and "increase[s] the prices of affected apps by 1.8 percent when the entry threat increases."³⁷ Once Google enters, the affected developer "reduces updates on the affected app by 8 percent" and "increase[s] the prices of affected apps . . . by 3.6 percent," consistent with entry accommodation.³⁸

The authors conclude that, when app developers are "threatened by the platform owner, they do not stop investing and innovating; rather, they shift innovation effort from affected markets to unaffected markets."³⁹ They further conclude that "Google's entry threats and actual entry [can] discourage further investment in developing duplicative features [yet] encourage app developers to introduce more new apps in other markets" by creating incentives to design around the platform owner.⁴⁰ The study therefore illustrates the potential for the CW standard's focus on price effects to generate false positives: seizing on higher app prices might miss the potential for increases in innovation and variety. Even the short-run price effects that the authors observe may be endogenous, assuming that Google's entry is a signal for app quality and that app prices are correlated with their quality. Their findings also highlight the potential for the CW standard, through its focus on output effects, to generate false negatives: if independents are merely displaced into new app spaces by discriminatory treatment such that total short-run output is unfazed, intervention is unwarranted under the CW standard even though a platform provider has altered the trajectory of innovation, potentially dampening the incentives for future edge innovation. Traditional antitrust enforcement, at least under the CW standard, could not do this balancing; Congress would need to make a balancing decision and set the rules.

B. *Is the Consumer-Welfare Standard Up for the Task?*

In response to claims that the CW standard might miss certain innovation harms, defenders of the standard are quick to point to the Department of

³⁴ *Id.* at 2.

³⁵ *Id.*

³⁶ *Id.*

³⁷ *Id.* at 9–10.

³⁸ *Id.*

³⁹ Wen & Zhu, *supra* note 33, at 19.

⁴⁰ *Id.*

Justice’s (“DOJ”) case against Microsoft.⁴¹ But antitrust generally, and the antitrust agencies specifically, are currently ill equipped to effectively pursue a platform owner that commands sufficient market power to stifle innovation. While the DOJ arguably prevailed over Microsoft, it was unable to do so fast enough to save Netscape, the innovative browser company that was run over by Microsoft’s unlawful support of Internet Explorer, its rival.⁴² Rival chip-maker AMD similarly twisted in the wind for years while *Intel Corp. v. Advanced Micro Devices, Inc.*⁴³ was resolved.⁴⁴ That the FTC or DOJ have not litigated a major Section 2 case since *Microsoft*—certainly not one involving platform technologies—is remarkable.⁴⁵ Especially in light of the European Commission’s investigation into Google,⁴⁶ it strains credulity to believe that there has been no anticompetitive, innovation-suppressing conduct in the last quarter-century in the largest economy in the world.⁴⁷

In today’s global internet marketplace, any delay of innovation in the United States will likely be countered by deployments of innovation elsewhere, disadvantaging United States companies and consumers. Attempting to address inequities in the fast-moving internet space with the hoop-jumping required by the Administrative Procedure Act of 1946 and the Federal Trade Commission Act of 1914 is as nonsensical as trying to govern the Internet with the 1934 Communications Act.

⁴¹ E.g., Joshua D. Wright, *Antitrust Provides a More Reasonable Regulatory Framework than Net Neutrality*, at 14 (Geo. Mason L. & Econ. Research Paper Series, No. 17-35, 2017), <https://ssrn.com/abstract=3020068>.

⁴² Some commentators have noted that by focusing on browsers, and more generally on middleware platform threats, Microsoft entirely missed opportunities for edge innovation in search and in mobile hardware. See, e.g., Charles Duhigg, *The Case Against Google*, N.Y. TIMES MAG. (Feb. 20, 2018), <https://www.nytimes.com/2018/02/20/magazine/the-case-against-google.html?mtref=t.co&gwh=B38C2DD8C7946EA89742317320F64EF4&gwt=pay>. Even if true, this would presumably not be much consolation to Netscape or its users.

⁴³ 542 U.S. 241 (2004).

⁴⁴ Like Microsoft, Intel was arguably distracted by the antitrust proceeding and may have failed to innovate in processors for tablets. Even if true, this would not be any consolation to AMD.

⁴⁵ Outside Section 2 jurisprudence, the FTC has invoked innovation harms in opposing mergers, including, for example, the Thoratec–HeartWare acquisition in 2009. See Joseph Farrell, Janis K. Pappalardo & Howard Shelanski, *Economics at the FTC: Mergers, Dominant-Firm Conduct, and Consumer Behavior*, 37 REV. INDUS. ORG. 263, 265–66 (2010).

⁴⁶ In June 2017, the European Commission fined Google €2.42 billion for allegedly “abusing dominance as [a] search engine by giving illegal advantage to [its] own comparison shopping service.” Press Release, European Commission, Antitrust: Commission Fines Google €2.42 Billion for Abusing Dominance as Search Engine by Giving Illegal Advantage to Own Comparison Shopping Service (June 27, 2017), http://europa.eu/rapid/press-release_IP-17-1784_en.htm.

⁴⁷ *Microsoft* is not an innovation case. Rather, it is a traditional monopoly-maintenance case. Microsoft used a variety of tools to fend off a would-be replacement for its operating system. As explained here, the challenged conduct was condemned only when Microsoft could not offer any compelling pro-competitive justification.

Speaking at an antitrust conference in April 2018, Makan Delrahim, the Assistant Attorney General for Antitrust at the DOJ, claimed that *Microsoft* proved that antitrust was sufficiently flexible to adapt to the times:

That [D.C. Circuit decision] was in 2001, and it rings true today. Rather than “amending” antitrust doctrine, the court applied established principles of market definition and monopolization under the Sherman Act to a product for which there was little agency or judicial experience.

The Microsoft case came at a pivotal moment in the expansion of technology and digital networks. We were on the brink of the Internet revolution with the launch of an efficient web browser developed by Marc Andreessen and his startup, Netscape. The Microsoft case proved that an evidence-based antitrust enforcement approach can be flexible in its application to new types of assets and markets—in that case, the computer code and software markets.⁴⁸

But this raises the question: why was the *last* pure-innovation theory of harm in a single-firm monopolization case pursued nearly two decades ago? Is it that neither antitrust agency has come across a case with a sufficiently powerful fact pattern to pursue? Or is it due to more stringent evidentiary standards for plaintiffs, including the government, which now demand empirical proof of antitrust impact or injury for consumers that can be tied to the conduct under scrutiny?⁴⁹

Given *Microsoft*'s prominence in the defense of the CW standard, it is worth quickly revisiting *Microsoft* on this question: plaintiff's burden for demonstrating anticompetitive effects in a single-firm-conduct case involving a platform monopolist. The D.C. Circuit ruled that “in a case brought by the Government, it must demonstrate that the monopolist's conduct harmed competition, not just a competitor.”⁵⁰ Summarizing its rationale for why *Microsoft*'s license restrictions with original equipment manufacturers

⁴⁸ Makan Delrahim, Assistant Attorney Gen., Keynote Address at the University of Chicago's Antitrust and Competition Conference: Don't Stop Believin': Antitrust Enforcement in the Digital Era (Apr. 19, 2018), <https://www.justice.gov/opa/speech/assistant-attorney-general-makan-delrahim-delivers-key-note-address-university-chicagos>.

⁴⁹ Not only are innovation-based Section 2 cases rare, but Section 2 monopolization cases generally are not pursued by antitrust agencies to the same degree as Section 1 cases. See, e.g., Darren Bush, *Out of the DOJ Ashes Rises the FTC Phoenix: How to Enhance Antitrust Enforcement by Eliminating an Antitrust Enforcement Agency*, 53 WILLAMETTE L. REV. 33, 49 (2016) (“Despite the claim that government antitrust enforcement has seen a resurgence in recent years, the data does not bear this out. . . . Economic thought, too, has shifted the enforcement of antitrust laws, and in particular has focused enforcement away from particular types of cases. For example, section 2 of the Sherman Act, with its focus on monopolization and unilateral conduct once quite prominent in antitrust enforcement, is but distant second to section 1 of the Sherman Act.”). Professor Bush cites “fear of or actual lack of success in federal court” as one of several reasons for the relative lack of Section 2 enforcement. *Id.* This is consistent with the claim that the current evidentiary standards under CW are sufficiently rigorous that any conduct not readily linked to price or output effects would escape scrutiny from federal enforcement.

⁵⁰ *United States v. Microsoft Corp.*, 253 F.3d 34, 59 (D.C. Cir. 2001).

(“OEMs”) were deemed anticompetitive, the court noted that “Microsoft *reduced rival browsers’ usage share* not by improving its own product but, rather, by preventing OEMs from taking actions that could increase rivals’ share of usage.”⁵¹ The court similarly found Microsoft’s integration of its browser and its operating system to be anticompetitive, because “the comingling [of browsing and nonbrowsing code] deters OEMs from pre-installing rival browsers, thereby *reducing the rivals’ usage share* and, hence, developers’ interest in rivals’ APIs [application programming interfaces] as an alternative to the API set exposed by Microsoft’s operating system.”⁵² Even after it expressly stated that harm to “just a competitor” was not sufficient, the court treated evidence of rival browsers’ usage (or market) share as a proxy for harm to competition.⁵³ Importantly, the court did not require evidence of any price or output effect.⁵⁴ And, on the question of innovation harms, the court seemed more concerned about innovation from Microsoft’s perspective—that is, an innovation harm in the platform market from regulation, and not in the edge or app markets.⁵⁵ The government won on claims where Microsoft had no efficiency justification; wherever Microsoft offered a justification, on the other hand, the court performed no actual weighing of the harms and benefits and instead deferred to Microsoft.⁵⁶ This failure to weigh suggests that the courts and the CW standard are ill equipped to address the issue of innovation harms.

Therefore, while Assistant Attorney General Delrahim, Professor Joshua Wright, and others are correct that *Microsoft* demonstrates courts’ willingness to bend the evidentiary standards to accommodate new theories of harm, *Microsoft* hardly provides a roadmap for pursuing the kind of innovation harms present in the modern economy. The court seemed more concerned with short-run harms to existing browser rivals than with any long-

⁵¹ *Id.* at 62 (emphasis added).

⁵² *Id.* at 66 (emphasis added).

⁵³ *Id.* at 59. In any exclusion case, the plaintiff must show harm to a competitor to establish harm to competition. The notion that antitrust is concerned with harm to competition, not to competitors, is best understood to mean that harm to a competitor is a necessary but not sufficient condition, or at least that it can be evidence of harm to competition, and not that harm to a competitor never violates antitrust laws.

⁵⁴ *Id.* at 79.

⁵⁵ *Id.* at 49–50. “[B]ecause innovation can increase an already dominant market share and further delay the emergence of competition, even monopolists have reason to invest in R&D.” *Id.* at 57. “[W]ooden application of per se rules in this litigation may cast a cloud over platform innovation in the market for PCs, network computers and information appliances.” *Id.* at 95. Indeed, of the nine times the phrase “innovation” appears in the decision, it appears in the context of edge innovation only once. *Id.* at 50.

⁵⁶ *Microsoft*, 253 F.3d 34, 67 (“The plaintiff bears the burden not only of rebutting a proffered justification but also of demonstrating that the anticompetitive effect of the challenged action outweighs it. In the District Court, plaintiffs appear to have done neither, let alone both; in any event, upon appeal, plaintiffs offer no rebuttal whatsoever. Accordingly, Microsoft may not be held liable for this aspect of its product design.”).

run innovation harm to would-be rivals.⁵⁷ In any event, no agency has brought a similar case in nearly two decades.

CW defenders also use the *Intel* decision to prove that innovation harms can be accommodated.⁵⁸ But proponents of this view fail to note that the FTC pulled the plug by settling, meaning the case has no precedential value for future plaintiffs.⁵⁹ It also fails to note that the FTC's theory of harm in *Intel* involved both short-run price effects and innovation harms. A quick review of the complaint reveals the FTC's price-based theory of harm:

* "On the one hand, *Intel threatened to and did increase prices*, terminate product and technology collaborations, shut off supply, and reduce marketing support to OEMs that purchased too many products from Intel's competitors."⁶⁰

* "Intel's use of penalties, rebates, lump-sum and other payments across multiple products, differential pricing, and other conduct alleged in this Complaint maintained or is likely to maintain Intel's monopoly power to the detriment of competition, customers, and consumers. Intel would not have been able to *continue charging comparably higher prices* across its product lines but for its conduct, as alleged in this Complaint, that harmed competition."⁶¹

* "To combat this competition, Intel charged those OEMs *significantly higher prices* because they used a non-Intel graphics chipset or GPU."⁶²

* "Intel's conduct adversely affects competition and consumers by, including but not limited to: . . . *causing higher prices of CPUs and GPUs* and the products containing microprocessors."⁶³

* "Absent such relief, for OEMs and consumers of the relevant products, the consequences have been and likely will continue to be *supracompetitive prices*, reduced quality, and less innovation."⁶⁴

⁵⁷ Of course, the examples of innovation harms cited above involve current rivals—for example, Facebook and Google are likely reducing the market share of independent apps by bundling their affiliated applications and functionalities. Thus, a *Microsoft* logic could be invoked to cover those examples.

⁵⁸ Wright, *supra* note 41, at 12–13.

⁵⁹ See Press Release, Federal Trade Commission, FTC Settles Charges of Anticompetitive Conduct Against Intel (Aug. 4, 2010), <https://www.ftc.gov/news-events/press-releases/2010/08/ftc-settles-charges-anticompetitive-conduct-against-intel>.

⁶⁰ Complaint ¶ 6, *In re Intel Corp.*, No. 9341 (Dec. 16, 2009) (emphasis added).

⁶¹ *Id.* ¶ 55 (emphasis added).

⁶² *Id.* ¶ 89 (emphasis added).

⁶³ *Id.* ¶ 94 (emphasis added).

⁶⁴ *Id.* ¶ 95 (emphasis added).

Economists have demonstrated that, under certain conditions, monopolists can use share-based loyalty discounts to extract supracompetitive prices; when a firm enjoys monopoly power over a buyer's initial requirements (or "noncontestable units"), the firm can offer to waive a "penalty price" on the noncontestable units in exchange for higher prices on the contestable units.⁶⁵ Because Intel allegedly employed this precise strategy to secure higher chip prices, the case is a poor counterexample to this paper's argument regarding lax antitrust enforcement of pure innovation-based cases.

Finally, Professor Wright cites *In re Grifols, S.A.*⁶⁶ as an example of a "conduct case[] where the theory of harm was decreased innovation."⁶⁷ But *Grifols* arose in a merger context, where the government enjoys a lower burden for establishing a substantial lessening of competition under Section 7 of the Clayton Act, relative to a monopolization case under Section 2 of the Sherman Act, and thus may pursue nontraditional theories of harm.

To summarize, eliminating the rigorous requirements of the CW standard in Section 2 cases would likely result in more vigorous regulatory enforcement to prevent edge innovation harms. Enhanced enforcement could lead to greater innovation by edge firms (and more venture funding) relative to what has taken place. Importantly, to the extent that edge innovation is a complement to, and not a substitute for, platform innovation, increased edge innovation would likely improve aggregate social welfare.

II. THE SECOND POTENTIAL GAP: MONOPSONY HARMS

As any standard economics textbook can attest, the economic harm resulting from the exercise of monopsony power is directly analogous to that resulting from monopoly power. Yet while the latter has been the core focus of antitrust practitioners since the inception of the Sherman Act, the former has generally attracted scant attention from public or private antitrust enforcement, despite the fact that a worker who receives a subcompetitive wage is likely harmed just as much, if not more, than a consumer paying a supracompetitive price.⁶⁸ There is also a symmetric loss in economic efficiency: a monopolist restricts output of a good or service below efficient levels within a given product market, and a monopsonist restricts employment

⁶⁵ Kevin Caves & Hal Singer, *Assessing Bundled and Share-Based Loyalty Rebates: Application to the Pharmaceutical Industry*, 8 J. COMPETITION L. & ECON. 889, 891 (2012).

⁶⁶ Docket No. C-4322, 2011 WL 2258026 (F.T.C. May 31, 2011).

⁶⁷ Wright, *supra* note 41, at 12.

⁶⁸ In the final year of the Obama administration, the Council of Economic Advisors issued a report focusing on monopsony harms. COUNCIL OF ECON. ADVISORS, LABOR MARKET MONOPSONY: TRENDS, CONSEQUENCES, AND POLICY RESPONSES (2016), https://obamawhitehouse.archives.gov/sites/default/files/page/files/20161025_monopsony_labor_mrkt_cea.pdf.

below efficient levels within a given labor market.⁶⁹ This section reviews evidence of monopsony harms in the economy and assesses whether the CW standard is up to the task of protecting against such harms.

A. *Evidence of Monopsony Harms*

The United States economy has been expanding for nearly a decade, yet wage growth has been sluggish—particularly for less-skilled workers—while labor force participation has remained stubbornly low.⁷⁰ Since the 1970s, real wages for the average worker have increased by only about 3%; the bottom 20% have seen their real wages decline over this same period.⁷¹ As explained below, economists and antitrust practitioners have increasingly linked such trends to the exercise of monopsony power by employers.

Professors Alan Krueger and Eric Posner identify three contributors to the increased monopsonization of or collusion in labor markets.⁷² First, a combination of merger activity spanning several decades and the rise of industries with strong network effects, which tends to result in what could be called natural monopsonies, has created “massive employers who apparently enjoy market power in various labor markets.”⁷³ Second, employers have increasingly used noncompete agreements designed to discourage workers from seeking competing offers from other employers, placing downward pressure on wages.⁷⁴ Third, there is evidence that so-called “no-poaching agreements”—in which employers agree not to hire workers away from another—have increasingly been incorporated into franchisors’ contracts with their franchisees.⁷⁵

⁶⁹ *Id.* at 2.

⁷⁰ See *Labor Force Statistics from the Current Population Survey*, BUREAU OF LABOR STATISTICS, <https://data.bls.gov/timeseries/LNS11300000> (last visited Aug. 15, 2018); Nick Timiraos, *Jobs Report Should Keep Fed on Path of Gradual Rate Increases*, WALL ST. J. (Mar. 9, 2018, 10:40 AM), <https://www.wsj.com/articles/jobs-report-should-keep-fed-on-path-of-gradual-rate-increases-1520609825> (“The [jobs] report suggests a steadily growing economy is drawing more Americans from the sidelines of the labor force back into jobs. ‘It seems increasingly plausible that the economy is still well short of full employment,’ said Andrew Levin, a Dartmouth College economics professor and former Fed adviser.”).

⁷¹ JAY SHAMBAUGH ET AL., BROOKINGS INSTITUTION, THIRTEEN FACTS ABOUT WAGE GROWTH 2 (2017), https://www.brookings.edu/wp-content/uploads/2017/09/thp_20170926_thirteen_facts_wage_growth.pdf.

⁷² ALAN B. KRUEGER & ERIC A. POSNER, BROOKINGS INSTITUTION, A PROPOSAL FOR PROTECTING LOW-INCOME WORKERS FROM MONOPSONY AND COLLUSION 4 (2018), <https://www.brookings.edu/research/a-proposal-for-protecting-low-income-workers-from-monopsony-and-collusion/>.

⁷³ *Id.*

⁷⁴ *Id.* Evidence suggests this has affected employee mobility. See, e.g., Matt Marx & Lee Fleming, *Non-compete Agreements: Barriers to Entry...and Exit?*, 12 INNOVATION POL’Y & ECON. 39, 45 (2012).

⁷⁵ KRUEGER & POSNER, *supra* note 72, at 5.

Such agreements featured prominently in *In re High-Tech Employee Antitrust Litigation*,⁷⁶ one of the few cases in which antitrust enforcement focused on anticompetitive effects in the labor market. In that case, top executives at several of the most prominent firms in Silicon Valley, including Adobe, Apple, Intel, and Google, allegedly conspired to restrict recruiting and hiring of technical, creative, and research-and-development employees via so-called “do not call lists” as a mechanism for suppressing compensation.⁷⁷ Despite a backdrop of rising wages, the plaintiffs’ economist showed that wages were lower than they would have been in the absence of the no-poaching agreements.⁷⁸ It follows that the mere fact that wages may be rising in certain high-tech sectors does not imply that monopsony power is not being exercised; even under monopsony, an outward shift in the demand for labor will increase wages, albeit at a slower rate than under competitive labor markets.⁷⁹

Professors Hovenkamp and Ioana Marinescu review evidence from Professor José Azar and others, indicating that the markets from which firms obtain their labor inputs are generally at least as concentrated as product markets into which firms sell their output.⁸⁰ Professors Azar, Marinescu, and Marshall Steinbaum used data compiled from the website CareerBuilder.com to calculate the degree of labor market concentration in over 8,000 geographic–occupational labor markets in the United States.⁸¹ Holding other factors constant, they found that compensation falls by 5 to 17% when moving from the 25th to the 75th percentile in labor market concentration.⁸²

Labor’s share of United States gross domestic product (“GDP”) has decreased significantly over time. Figure 3 plots the share of nonfarm business-sector income captured by labor since 1970, as recorded by the Bureau of Labor Statistics. As seen below, the labor share has declined from nearly 70% in 1970 to below 60% in recent years.

⁷⁶ 985 F. Supp. 2d 1167 (N.D. Cal. 2013).

⁷⁷ Kevin Caves & Hal Singer, *Analyzing High-Tech Employee: The Dos and Don'ts of Proving (and Disproving) Classwide Antitrust Impact in Wage Suppression Cases*, ANTITRUST SOURCE 1 (Feb. 2015), https://www.americanbar.org/content/dam/aba/publishing/antitrust_source/feb15_caves_2_11f_authcheckdam.pdf.

⁷⁸ *Id.* at 4.

⁷⁹ *Id.* at 3–4 figs.1 & 2, 3 n.12 (“In general, compensation and employment may well increase under collusion, albeit at a slower pace than under competition.”).

⁸⁰ Ioana Elena Marinescu & Herbert J. Hovenkamp, *Anticompetitive Mergers in Labor Markets* 1 (Univ. of Pa. Law Sch., Research Paper No. 18-8, 2018), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3124483.

⁸¹ José Azar, Ioana Marinescu & Marshall I. Steinbaum, *Labor Market Concentration* 1–2 (Nat’l Bureau of Econ. Research, Working Paper No. 24,147, 2017), <http://www.nber.org/papers/w24147>.

⁸² *Id.* at 2, 16; see also José Azar, Ioana Marinescu, Marshall Steinbaum & Bledi Taska, *Concentration in US Labor Markets: Evidence from Online Vacancy Data* 18 (Nat’l Bureau of Econ. Research, Working Paper No. 24,395, 2018), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3133344 (finding that 60% of all U.S. labor markets are highly concentrated).

[Figure 3: Nonfarm Business Sector Labor Share]⁸³

This long-term decline in the labor share has received substantial attention in the economics literature, particularly given the historical stability of the labor share.⁸⁴ Several economists have found a connection between market concentration and labor share. For example, one group of economists found that each percentage point rise in an industry’s concentration index predicts a 0.4 percentage point fall in its labor share.⁸⁵ The authors attribute the sustained decline in the labor share to the rise of “superstar firm[s],” which have “increasingly concentrate[d] sales among firms with superior products or higher productivity, thereby enabling the most successful firms to control a larger market share.”⁸⁶ Because superstar firms are more profitable, the share of income paid to labor is smaller.⁸⁷ The authors find no strong relationship between concentration and average wages,⁸⁸ suggesting that the increased productivity of superstar firms is not passed through to labor in the form of higher compensation.

Professor Simcha Barkai found that the share of income paid to both labor and capital has declined over time and that this trend largely has been driven by declining competition and increasing markups of price over cost.⁸⁹

⁸³ This graph was generated by the Federal Reserve Bank of St. Louis Economic Data website using U.S. Bureau of Labor statistics. See ECONOMIC RESEARCH: FEDERAL RESERVE BANK OF ST. LOUIS, <https://fred.stlouisfed.org/categories/10> (last visited Aug. 22, 2019). Shaded areas indicate U.S. recessions.

⁸⁴ David Autor et al., *Concentrating on the Fall of the Labor Share*, 107 AM. ECON. REV.: PAPERS & PROC. 180, 180 (2017) (“There has been an upswing of interest in economics and the media over the decline in the share of GDP going to labor. The stability of the labor share of GDP was one of the famous Kaldor (1961) ‘stylized facts’ of growth.” (quoting Nicholas Kaldor, *Capital Accumulation and Economics Growth*, in THE THEORY OF CAPITAL 178 (F.A. Lutz and D.C. Hague, eds., 1961))).

⁸⁵ *Id.* at 184; see also David Autor et al., *The Fall of the Labor Share and the Rise of Superstar Firms* 47 tbl.2 (Nat’l Bureau of Econ. Research, Working Paper No. 23,396, 2017), <https://economics.mit.edu/files/12979>.

⁸⁶ Autor et al., *supra* note 84, at 185.

⁸⁷ *Id.*

⁸⁸ *Id.* at 184.

⁸⁹ Simcha Barkai, *Declining Labor and Capital Shares* 5, 27–32 (Stigler Ctr. for the Study of the Econ. & the State, Univ. of Chi. New Working Paper Series No. 2, 2016), <http://home.uchicago.edu/~barkai/doc/BarkaiDecliningLaborCapital.pdf>.

The author estimated that if competition increased to levels last observed in 1984, wages would increase by 24%, output would increase by 10%, and investment would rise by 19%.⁹⁰

Professors Efraim Benmelech, Nittai Bergman, and Hyunseob Kim analyzed the relationship among local labor market concentration, wages, and productivity.⁹¹ Using Census data, the authors find a negative relationship between concentration in local labor markets and wages, similar to Professors Azar, Marinescu, and Steinbaum.⁹² They also find that the negative relationship between concentration and wages is stronger in areas where unionization is less pronounced and that the link between productivity growth and wage growth is weaker where labor markets are more concentrated.⁹³

B. *Is the Consumer-Welfare Standard Up to the Task?*

Despite the theoretical symmetry described in economics textbooks between the economic harm flowing from monopolized output markets and monopsonized input markets, antitrust practitioners have focused almost exclusively on the former. There have been a few notable exceptions, including *In re High-Tech Employee* and *Johnson v. Arizona Hospital & Healthcare Ass'n*,⁹⁴ in which specialized recruiting agencies allegedly colluded in setting compensation for temporary nurses.⁹⁵

Nevertheless, “monopsonies usually fly under the radar when compared to monopolies, their more well-known economic counterpart.”⁹⁶ And when agreements among buyers are evaluated under a rule-of-reason standard, “a showing of a benefit to consumers seems to entirely trump harm to input sellers.”⁹⁷ In merger review, the elimination of overlapping jobs or the suppression of labor costs achieved through greater buying power is sometimes viewed as a procompetitive merger synergy as opposed to an anticompetitive

⁹⁰ *Id.* at 4.

⁹¹ Efraim Benmelech, Nittai Bergman & Hyunseob Kim, *Strong Employers and Weak Employees: How Does Employer Concentration Affect Wages?* 1–5 (Nat'l Bureau of Econ. Research, Working Paper No. 24307, 2018), http://www.kellogg.northwestern.edu/faculty/benmelech/html/BenmelechPapers/BBK_2018_January_31.pdf.

⁹² *Id.* at 23; Azar, Marinescu & Steinbaum, *supra* note 81, at 19.

⁹³ Benmelech, Bergman & Kim, *supra* note 91, at 3–4.

⁹⁴ No. CV 07-1292-PHX-SRB, 2009 WL 5031334 (D. Ariz. July 14, 2009).

⁹⁵ *Id.* at *1. Both Authors of this Article served as consultants for the plaintiffs in *Johnson*.

⁹⁶ Jordyn Giannone, *Is Current Antitrust Policy Neglecting Monopsony Power?*, COLUM. BUS. L. REV. (2017), <https://cblr.columbia.edu/is-current-antitrust-policy-neglecting-monopsony-power/>.

⁹⁷ Laura Alexander, Note, *Monopsony and the Consumer Harm Standard*, 95 GEO. L.J. 1611, 1627 (2007).

effect. Professors Hovenkamp and Marinescu note that “[t]o the best of our knowledge no court has ever condemned a merger because of its anticompetitive effects in labor markets.”⁹⁸ When it comes to underenforcement of monopsony harms, the problem is one of agency discretion, as opposed to black letter law.

III. HOW TO FILL THE GAPS

This section presents remedies to address the potential gaps left behind from the application of the CW standard to innovation and monopsony harms. Innovation harms would be better addressed outside antitrust for reasons relating to both speed in adjudicating disputes and regulatory symmetry. A tribunal or even an administrative law judge (“ALJ”) hearing a single type of case or small set of cases should be able to move faster than a generalist court. The tribunal can tailor procedural rules to fit its limited subject matter, while federal courts cannot unless each individual judge in each individual case does the tailoring. By way of example, even in the context of antitrust, the FTC’s ALJ reaches decisions faster than most federal court antitrust cases because it is required to so.⁹⁹ A legislative proposal could dictate the time for a decision or problem to be solved, or the independent body could design rules that expedite the process. Moreover, this proposal eliminates the need to adjudicate issues such as antitrust standing, market definition, and consumer injury, which should also lead to a quicker process. A comparison of (1) the average duration of all program carriage complaints adjudicated by the FTC’s ALJ and (2) prominent Section 2 monopolization complaints adjudicated by a federal district court since 1990 shows that a specialized tribunal could reduce the time to an initial decision by nearly 50%, from thirty-five months to eighteen months.¹⁰⁰ With respect to monopsony harms, in contrast, such harms can and should be addressed using standard tools of antitrust enforcement.

A. *Innovation Harms*

By focusing on short-run price and output effects, the CW standard largely insulates dominant tech platforms from antitrust scrutiny. One

⁹⁸ Marinescu & Hovenkamp, *supra* note 80, at 1.

⁹⁹ For example, *FTC v. Star Pipe Products, Ltd.* was an exclusive-dealing case from the Obama administration, which came up through the FTC administrative process. The FTC filed an administrative complaint in January 2012, and the ALJ had an initial decision filed in May 2013, just sixteen months later. *McWane, Inc.*, 155 F.T.C. 903 (2013), *aff’d in part and rev’d in part*, 2014-1 Trade Cas. P. (CCH) 78670, 2014 WL 556261 (F.T.C. Jan 30, 2014), *aff’d*, 783 F.3d 814 (11th Cir. 2015), *cert. denied*, 136 S. Ct. 1452 (2016).

¹⁰⁰ *See infra* Table 1.

remedy is for agencies to pursue pure innovation-based harms more aggressively by pushing the boundaries of the CW standard. Alternatively, innovation harms could be addressed outside antitrust pursuant to a nondiscrimination standard. Of these two choices, the second is preferable.¹⁰¹

In particular, this Article proposes an *ex post* regime patterned loosely on the tribunal used to adjudicate discrimination complaints against cable video operators pursuant to Section 616 of the Cable Television Consumer Protection and Competition Act of 1992 (“Cable Act”).¹⁰² Although that tribunal operates under the FCC, the tribunal proposed here could be independent, like Article I courts,¹⁰³ operating free from reversals by political appointees at federal agencies. The potential defendants in any discrimination complaint would be vertically integrated platforms, including internet service providers and dominant tech platforms.

Like a rule-of-reason case under antitrust, the complainant would bear the burden to show that the differential treatment violated the nondiscrimination standard, assuming it could meet certain evidentiary criteria.¹⁰⁴ Importantly, the tribunal need not import the evidentiary criteria verbatim from antitrust—for example, there would be no need to establish market power, profit sacrifice, or short-term harm to consumers in the form of price or output effects. For example, Section 616 of the Cable Act does require the complainant to prove that the conduct “unreasonably restrain[ed]” its ability to compete.¹⁰⁵ Instead, the complaining cable network bears the burden of

¹⁰¹ For a longer justification of a nondiscrimination standard to combat innovation harms, see Hal J. Singer, *Paid Prioritization and Zero Rating: Why Antitrust Cannot Reach the Part of Net Neutrality Everyone Is Concerned About*, ANTITRUST SOURCE 1, 3–6, 13 (Aug. 2017), https://www.americanbar.org/content/dam/aba/publishing/antitrust_source/aug17_singer_8_2f.authcheckdam.pdf. For a discussion of additional litigation and policy approaches, see Samuel Himel & Robert Seamans, *Artificial Intelligence, Incentives to Innovate, and Competition Policy*, CPI ANTITRUST CHRON. 2–10 (Dec. 2017), <https://www.competitionpolicyinternational.com/wp-content/uploads/2017/12/CPI-Himel-Seamans.pdf>.

¹⁰² 47 U.S.C. § 536 (2012).

¹⁰³ Article I judges and arbitration boards (which do not work within an agency) and ALJs (who work within an agency) have the power to perform adjudicatory functions within the federal system but, unlike federal court judges, possess neither life tenure nor salary guarantees. See Judith Resnik, *The Mythic Meaning of Article III Courts*, 56 COLO. L. REV. 581, 586 (1985), http://digitalcommons.law.yale.edu/fss_papers/919.

¹⁰⁴ Borrowing from discrimination complaints in employment law, the burden could shift back to the platform owner once the complainant proves discrimination.

¹⁰⁵ 47 U.S.C. § 536(a)(3). Pursuant to that mandate, the FCC adopted general rules consistent with the statute’s specific prohibitions. See Implementation of Sections 12 and 19 of the Cable Television Consumer Prot. & Competition Act of 1992, 9 FCC Red. 2642 (1993) (Second Report and Order). For a similar, case-by-case approach grounded in Section 706 of the Telecommunications Act (as opposed to Section 616 of the Cable Act), see Tejas N. Narechania, *Federal and State Authority for Broadband Regulation*, 18 STAN. TECH. L. REV. 456 (2015). Professor Narechania explains that “applying strict antitrust standards [under Section 616 of the Cable Act] might have the effect of rendering the statute superfluous to the antitrust laws themselves” and that “requiring antitrust scrutiny here also takes an overly restrictive

overturning the presumption that any differential treatment was nondiscriminatory by showing that (1) it was similarly situated to the affiliated network, (2) it was afforded inferior treatment relative to the affiliated network for reasons relating to affiliation, and (3) it was unreasonably restrained or impaired in its ability to compete due to the disparate treatment.¹⁰⁶ Regarding the third prong, although the concept of impairment was likely borrowed from antitrust, proof of impairment ends with a showing of harm to the independent rival (for example, via evidence of inflated incremental costs or that critical economies of scale were denied)—there is no further requirement, as in antitrust, to demonstrate that harm to a rival redounded to a consumer harm.

Rather than ban vertical integration by cable operators (the platform) into programming, Congress permitted it. As a compromise, Congress empowered the FCC to police certain kinds of discriminatory conduct that harmed independent programmers (the edge), presumably by discouraging innovation by independent voices or reducing program diversity. These protections were codified in Section 616 of the Cable Act in 1992.¹⁰⁷ Importantly, Congress recognized that antitrust was too unwieldy an instrument and established an evidentiary burden—harm to the independent programmer—that was less than the burden in antitrust—harm to competition.

By adding these nondiscrimination protections, Congress meant to fill a gap in antitrust protection. At the time the Cable Act was amended, the largest cable operator in the country, TCI, served fewer than 20% of national cable subscribers;¹⁰⁸ an antitrust complaint by a national cable network against TCI was sure to fail the market-power requirement. In the alternative, Congress sought to elevate noneconomic concerns in regulated industries without reverting to a world where antitrust can have non-welfare-based goals.

view of the FCC's authority under the [Cable Act]." *Id.* at 475 n.111 (citing H.R. REP. NO. 102-628, at 111 (1992)).

¹⁰⁶ 47 U.S.C. § 536(a)(3) (noting that the FCC regulation must "contain provisions designed to prevent a multichannel video programming distributor from engaging in conduct the effect of which is to *unreasonably restrain* the ability of an unaffiliated video programming vendor to compete fairly by discriminating in video programming distribution on the basis of affiliation or nonaffiliation of vendors in the selection, terms, or conditions for carriage of video programming provided by such vendors" (emphasis added)).

¹⁰⁷ *Id.*

¹⁰⁸ *TCI to Boost Number of Cable Channels*, L.A. TIMES (Dec. 3, 1992), http://articles.baltimoresun.com/1992-12-03/business/1992338008_1_tci-channels-cable-services ("The announcement by Tele-Communications Inc., which serves more than [sic] 9 million homes nationwide, is the first major step in what is expected to be a worldwide shift to so-called 'digital video' technology."). The number of total cable video subscribers as of 1992 was 55.2 million. *See Annual Assessment of the Status of Competition in Markets for the Delivery of Video Programming*, 13 FCC Rcd. 1034, 1174 (1997) (Fourth Annual Report).

Two major drawbacks for any *ex post* enforcement—whether application of the *CW* or nondiscrimination standard—are timeliness and enforcement costs. To expedite this process, the new forum could require injunctive relief so that, while on appeal, the disparate treatment ends upon a finding of discrimination by the ALJ. Alternatively, the decision by the ALJ could be binding, as in certain merger orders, or the implementation of injunctive relief prior to any appeal could be left to the factfinder’s discretion, using a standard of “significant likelihood of success on the merits” and a weighing of respective harms.

Proponents of the use of antitrust to police discriminatory conduct on the internet are silent when it comes to speed. The breakup of AT&T occurred ten years after the DOJ’s complaint in 1974, and *Microsoft* also took a decade to resolve. That means Netscape and others operating on the edge of Microsoft’s platform were allowed to twist in the wind for ten years. This is how edge innovation dies. In contrast to the five-to-ten-year ordeal of antitrust litigation,¹⁰⁹ a specialized tribunal tasked only with determining whether discrimination had occurred and, as a result, the complainant was materially injured, should be able to adjudicate cases in one to two years. Antitrust law may bring massive penalties, such as treble damages or even a breakup; in that case, we tolerate the time and cost. But where the remedy is narrow, a more expedited process has obvious advantages. In an antitrust case, regardless of whether the relief is narrow or broad, the same complicated, costly, and time-consuming procedure must be followed.

To measure the potential speed improvement, consider the following six program carriage cases adjudicated by the FCC’s ALJ, as well as the Section 2 cases adjudicated by a federal district court since 1990 that were referenced in the DOJ’s Section 2, single-firm-conduct report from 2008.¹¹⁰ Table 1 shows the duration for each case. For FCC program carriage cases, the duration measured was the number of months between the complaint and the earlier of the ALJ’s decision or the settlement; for Section 2 cases, the duration measured was the number of months between the complaint and the earlier of a settlement or resolution of the case at the district court level. Settlements are informative of duration to the extent that the settlement date depends on

¹⁰⁹ It is worth noting that antitrust enforcement against this conduct also could generate a deterrence effect.

¹¹⁰ DEP’T OF JUSTICE, COMPETITION AND MONOPOLY: SINGLE-FIRM CONDUCT UNDER SECTION 2 OF THE SHERMAN ACT 191–94 (2008), <https://www.justice.gov/atr/competition-and-monopoly-single-firm-conduct-under-section-2-sherman-act>. The DOJ leadership under the Obama administration withdrew the findings in the report based on a disagreement over the policy implications. *See* Press Release, Department of Justice, Justice Department Withdraws Report on Antitrust Monopoly Law (May 11, 2009), <https://www.justice.gov/opa/pr/justice-department-withdraws-report-antitrust-monopoly-law>. Despite this controversy, the 2008 report presents an overview of Section 2 enforcement in a way that is not likely biased with respect to average duration of the cases surveyed at the district court level.

the expected resolution of the case at trial; in any event, the results below are depicted both with and without the settled cases.

[Table 1: Duration of FCC Program Carriage Complaints and Modern Section 2 Cases]

Case	Complaint	Resolution	Duration (months)
NFL Network v. Comcast	May-08	May-09*	12
Tennis Channel v. Comcast	Jan-10	Dec-11	23
GSN v. Cablevision	Oct-11	Nov-16	61
MASN v. Comcast	Aug-08	Dec-09*	15
WealthTV v. Comcast	Dec-07	Oct-09	21
beIN v. Comcast	Mar-18	Pending	NA
Average			26
Average without GSN			18
United States v. Microsoft II	May-98	Apr-00	22
Leegin Creative Leather Prods., Inc. v. PSKS, Inc.	Apr-03	May-04	12
AMD v. Intel	Jun-05	Nov-09*	52
Ill. Tool Works Inc. v. Indep. Ink, Inc.	Aug-98	Jun-02	45
Cascade Health Sols. v. PeaceHealth	Jan-02	May-05	39
Brooke Group Ltd. v. Brown & Williamson Tobacco Corp.	Jul-84	Aug-90	73
Concord Boat Corp. v. Brunswick Corp.	Dec-95	Aug-98	32
Virgin Atlantic Airways Ltd. v. British Airways PLC	Oct-93	Oct-99	72
Masimo Corp. v. Tyco Health Care Group	May-02	Jun-07	60
J.B.D.L. Corp. v. Wyeth-Ayerst Labs., Inc.	Oct-01	Jun-05	43
MetroNet Servs. Corp. v. Qwest Corp.	Jan-00	Apr-01	15
Minn. Mining & Mfg. Co. v. Appleton Papers Inc.	Sep-95	Jun-99*	44
United States v. Dentsply Int'l, Inc.	Jan-99	Aug-03	55
U.S. Healthcare, Inc. v. Healthsource, Inc.	Mar-91	Jan-92	10
Omega Envtl., Inc. v. Gilbarco, Inc.	Apr-94	Dec-95	20
Stop & Shop Supermarket Co. v. Blue Cross & Blue Shield of R.I.	Jun-99	Jun-03	48
United States v. AMR Corp.	May-99	Apr-01	23

Spirit Airlines, Inc. v. Nw. Airlines, Inc.	Mar-00	Mar-03	36
Stearns Airport Equip. Co. v. FMC Corp.	Dec-95	Mar-97	15
Confederated Tribes of Siletz Indians v. Weyerhaeuser Co.	Dec-00	Apr-03	28
Advo, Inc. v. Phila. Newspapers, Inc.	Jun-93	Jun-94	11
Multistate Legal Studies, Inc. v. Harcourt Brace Jovanovich Legal and Prof'l Publ'ns	Oct-90	Apr-91	6
Average			35

Notes: * Resolved via settlement.

As Table 1 shows, the average duration of the FCC program carriage case was twenty-six months across all cases. Because the ALJ intentionally delayed *Game Show Network, LLC v. Cablevision Systems Corp.*¹¹¹ to allow the D.C. Circuit to issue its opinion in *Comcast Cable Communications, LLC v. FCC*,¹¹² *Game Show Network* (“GSN”) is a clear outlier; when GSN is dropped from the sample, the average duration falls to eighteen months.¹¹³ In contrast, the average duration of a Section 2 case adjudicated by a federal district court since 1990 was thirty-five months.¹¹⁴ Accordingly, to the extent that these measures capture the difference between adjudicating a discrimination complaint at the proposed tribunal and in an antitrust court, the duration of adjudication prior to appeal could be reduced by nearly 50%.

Finally, a Net Tribunal that applied a nondiscrimination standard to internet service providers (“ISPs”) and dominant tech platforms alike would achieve symmetric regulation. Symmetry is the notion that no set of dominant firms is immunized from the regulation.¹¹⁵ It makes little sense to design a net neutrality regime that polices ISPs, and only ISPs, for discriminatory

¹¹¹ 31 FCC Rcd. 13,841 (2016), *rev'd*, 32 FCC Rcd. 6160 (2017).

¹¹² 717 F.3d 982 (D.C. Cir. 2013).

¹¹³ See, e.g., Mike Farrell & John Eggerton, *FCC Postpones Cablevision-GSN Hearing*, MULTICHANNEL NEWS (Apr. 3, 2013), <https://www.multichannel.com/news/fcc-postpones-cablevision-gsn-hearing-325944>.

¹¹⁴ Complaint and resolution data were available for twenty-two of the cases mentioned in the DOJ Section 2 report that were resolved since 1990. Some cited cases in the DOJ’s report were excluded. For example, *United States v. Microsoft I* was excluded because the resolution at the district court was via preliminary injunction, as opposed to an adjudication on the merits. 56 F.3d 1448, 1456 (D.C. Cir. 1995). *Verizon v. Trinko* and *Wallace v. IBM* were excluded because the district court dismissed the complaint instead of adjudicating on the merits. *Verizon Commc’ns, Inc. v. Law Offices of Curtis V. Trinko, LLP*, 540 U.S. 398, 405 (2004); *Wallace v. Int’l Bus. Machs. Corp.*, 467 F.3d 1104, 1106 (7th Cir. 2006). Including these cases reduces the average duration of Section 2 enforcement from thirty-five to thirty-one months.

¹¹⁵ See, e.g., Thomas W. Hazlett & George S. Ford, *The Fallacy of Regulatory Symmetry: An Economic Analysis of the “Level Playing Field” in Cable TV Franchising Statutes*, 3 BUS. & POL. 21, 22 (2001).

conduct, while permitting the dominant tech platforms to discriminate against independent edge providers with impunity. A tribunal that created a forum for edge providers to bring discrimination complaints against *both* tech platforms and ISPs, evaluated pursuant to the same evidentiary criteria, would achieve layer-neutral protections against innovation harms.

B. *Monopsony Harms*

In contrast to innovation harms, there is reason to believe that monopsony harms can be brought under the umbrella of the CW framework, provided that antitrust enforcement priorities can be rebalanced to assign a weight to anticompetitive effects in labor markets comparable to that routinely given to price and output effects in product markets. Put differently, the problem of underenforcement of monopsony harms is not the CW standard or the courts, but rather prosecutorial decision, due to a misunderstanding of the full implications of consumer welfare. The problem is not with the CW standard in theory, but instead how the CW standard is applied.

In the first place, the federal antitrust agencies could bring more monopsony cases, as the DOJ has begun to in the case of “no-poaching” agreements similar to those in *In re High-Tech Employee*.¹¹⁶ In October 2016, the DOJ issued antitrust guidance to human resource professionals, stating that “[a]n agreement among competing employers to limit or fix the terms of employment for potential hires may violate the antitrust laws if the agreement constrains individual firm decision-making with regard to wages, salaries, or benefits; terms of employment; or even job opportunities.”¹¹⁷ In April 2018, the DOJ announced a new challenge to a “no-poaching” agreement.¹¹⁸ Notably, the settlement that the Antitrust Division reached with Knorr-Bremse AG and Westinghouse Air Brakes Technologies treated the companies’ no-poaching agreements as civil antitrust violations rather than criminal violations.¹¹⁹

Both the DOJ and the FTC have confirmed—albeit in the relatively recent past—that naked wage-fixing and no-poaching agreements are per se violations of antitrust law.¹²⁰ In contrast, unilateral noncompete agreements

¹¹⁶ See Eleanor Tyler, *Justice Dept. Is Going After “No-Poach” Agreements*, BLOOMBERG LAW (Jan. 19, 2018), <https://biglawbusiness.com/justice-dept-is-going-after-no-poach-agreements>.

¹¹⁷ DEP’T OF JUSTICE, ANTITRUST DIV. & FED. TRADE COMM’N, ANTITRUST GUIDANCE FOR HUMAN RESOURCE PROFESSIONALS 1 (2016), <https://www.justice.gov/atr/file/903511/download>.

¹¹⁸ Complaint ¶ 3, *United States v. Knorr-Bremse AG*, No. 1:18-cv-00747-CKK (D.D.C. Apr. 3, 2018).

¹¹⁹ Proposed Final Judgment, *Knorr-Bremse AG*, No. 1:18-cv-00747-CKK (D.D.C. July 11, 2018).

¹²⁰ Michael Lindsay, Jaime Stilson & Rebecca Bernhard, *Employers Beware: The DOJ and FTC Confirm that Naked Wage-Fixing and “No-Poaching” Agreements Are Per Se Antitrust Violations*, ANTITRUST SOURCE 1 (Dec. 2016), https://www.americanbar.org/content/dam/aba/publishing/antitrust_source/dec16_lindsay_12_12f.authcheckdam.pdf.

may still be enforceable, “subject to reasonable geographic and time limitations.”¹²¹ The Treasury Department found in 2015 that noncompete clauses are frequently included in the employment contracts of low-income workers and those lacking a college degree, even when such employees would seem unlikely to possess trade secrets.¹²² For example, the sandwich chain Jimmy John’s required employees to sign a two-year noncompete agreement until the New York attorney general intervened.¹²³

To the extent that agencies require guidance or further tools to protect workers, several bills pending in Congress would offer such assistance. Noting that the “antitrust laws apply to reductions in competition for employees as readily as they do to reductions in product market competition,” legislators have called on antitrust enforcement agencies to utilize the “extensive enforcement tools at [their] disposal” to “ensure that workers have meaningful choices that allow them to fairly bargain among potential employers.”¹²⁴ In addition, legislation has been introduced that would make it easier for mergers to be challenged under the Clayton Act and would add the term “monopsony” to the statute.¹²⁵

Economists’ view is that anticompetitive harms in labor markets deserve just as much weight as those in product markets. Thus, from an economic perspective, there is little question that the DOJ and FTC are correct to condemn explicit wage-fixing and no-poaching agreements, both of which are the mirror image of price-fixing and market-allocation schemes, which have been strictly forbidden in product markets, presumably for as long as any living antitrust practitioner can remember. What is remarkable, then, is that it took the agencies until 2016 to arrive at this seemingly economically obvious conclusion.¹²⁶

¹²¹ *Id.* at 11.

¹²² DEP’T OF THE TREASURY, OFFICE OF ECON. POLICY, NON-COMPETE CONTRACTS: ECONOMIC EFFECTS AND POLICY IMPLICATIONS 4 (2016), <https://www.treasury.gov/resource-center/economic-policy/Documents/UST%20Non-competes%20Report.pdf>.

¹²³ Press Release, Office of N.Y. Att’y Gen., A.G. Schneiderman Announces Settlement with Jimmy John’s to Stop Including Non-Compete Agreements in Hiring Packets (June 22, 2016), <https://ag.ny.gov/press-release/ag-schneiderman-announces-settlement-jimmy-johns-stop-including-non-compete-agreements>; accord Marshall Steinbaum, *A Missing Link: The Role of Antitrust Law in Rectifying Employer Power in Our High-Profit, Low-Wage Economy*, ROOSEVELT INST. 4–5 (Apr. 2018), <http://rooseveltinstitute.org/missing-link/>.

¹²⁴ Letter from Sen. Cory A. Booker, Senator, to Makan Delrahim, Assistant Attorney Gen., and Maureen K. Ohlhausen, Acting Chairman, Fed. Trade Comm’n (Nov. 1, 2017), <https://www.scribd.com/document/363201855/Monopsony-Letter>.

¹²⁵ Louise Aberg, Gregory Heltzer & Lisa Peterson, *Senate Democrats Push for Tougher Merger Enforcement*, JD SUPRA (Sept. 19, 2017), <https://www.jdsupra.com/legalnews/senate-democrats-push-for-tougher-81663/>.

¹²⁶ See Lindsay, Stilson & Bernhard, *supra* note 120, at 1.

Similarly, there is no good economic justification for ignoring labor-market effects in merger reviews.¹²⁷ When the agencies review a potential merger, they define the relevant product market and analyze the potential for anticompetitive effects, typically upward pricing pressure, within that market. Although a comparable analysis is not routinely performed with respect to labor markets, in principle there is no reason that the agencies could not also analyze the degree to which prospective mergers would increase labor-market concentration and produce downward pressure on wages. If the likely economic harm in the labor market substantially exceeds any potential welfare gains in the product market, the transaction should be rejected on efficiency grounds.¹²⁸ This paper thus agrees with antitrust practitioners who have proposed approaches incorporating analyses of monopsony power into standard antitrust frameworks for merger review, such as the antitrust agencies' Horizontal Merger Guidelines.¹²⁹ These analytical frameworks are "derived entirely from well established economic doctrine and traditional antitrust rules concerning competitive harm."¹³⁰

Finally, although noncompete clauses certainly have the potential to harm competition (as their name suggests) by deterring labor mobility, they should be assessed on a case-by-case basis, like other types of vertical restraints used by firms in product markets. The rule-of-reason analysis could be conducted using economic tools that have been developed to analyze vertical restraints. For example, the standard economic framework of raising rivals' costs ("RRC") establishes conditions under which a dominant firm can harm competition by engaging in exclusionary conduct that "totally or partially 'forecloses' competitors from access . . . to critical inputs."¹³¹ Such foreclosure can prevent other firms from exercising competitive discipline, allowing the dominant firm to exercise market power. It follows that a dominant firm with monopsony power in a relevant labor market, or multiple firms capable of collectively exercising monopsony power, could use non-competes to foreclose competition in the labor market. Firms seeking to defend vertical restraints in the labor market might argue that these are necessary to protect investments in their employees—for example, to prevent their

¹²⁷ See Marinescu & Hovenkamp, *supra* note 80, at 16; Steinbaum, *supra* note 123, at 6–7.

¹²⁸ Indeed, under *United States v. Philadelphia National Bank*, reductions in competition in a single line of commerce cannot be offset by increases in competition in others, suggesting that a proven monopsony harm could be sufficient to block a merger under antitrust case law. 374 U.S. 321, 370 (1963).

¹²⁹ Marinescu & Hovenkamp, *supra* note 80, at 2; Steinbaum, *supra* note 123, at 6–7.

¹³⁰ Marinescu & Hovenkamp, *supra* note 80, at 2.

¹³¹ Steven C. Salop, *The Raising Rivals' Cost Foreclosure Paradigm, Conditional Pricing Practices, and the Flawed Incremental Price-Cost Test*, 81 ANTITRUST L.J. 371, 376 (2017) ("The RRC foreclosure paradigm generally describes exclusionary conduct that totally or partially 'forecloses' competitors from access either to critical inputs or customers, with the effect of causing them to raise their prices or reduce their output, thereby allowing the excluding firm to profit by setting a supracompetitive output price, with the effect of harming consumers.").

employees from free-riding off employer investments in costly training programs by switching to a competing employer for a higher wage as soon as the training is complete. Such efficiency defenses would bear the burden of demonstrating that these investments could not be protected by other means, such as by offering employees financial incentives not to switch.¹³²

Although this Article prefers rule-of-reason treatment, there is a coherent economic rationale underlying targeted proposals to ban noncompetes for low-income workers (e.g., those earning less than \$13 per hour); in these cases, the efficiency justifications relating to free-riding on training or trade secrets are more tenuous.¹³³ Moreover, a per se rule could also be justified when noncompetes are used in parallel fashion in an oligopsonistic labor market, which would be tantamount to a horizontal no-poaching agreement.

CONCLUSION

This Article is generally supportive of the CW standard but, unlike the New Brandeis movement, does not call for its overthrow. Yet this Article recognizes that the CW standard, as in the case of any standard, could generate false positives and false negatives in theory. This Article primarily focuses on the false negatives that, in practice, lead to underenforcement in certain areas. There is substantial evidence that the CW standard has led to underenforcement with respect to monopsony harms, despite the fact that a narrow focus on welfare effects in the product market to the exclusion of welfare effects in the labor market is economically indefensible. At the same time, the fundamental symmetry between the economic harms from monopoly and monopsony means there is no reason in principle why the CW framework could not be adapted to encompass monopsony harm. Indeed, some progress in this direction has been made in recent years.

While the evidence on innovation harms is less developed, there is a reasonable basis to conclude that by requiring concrete evidence of consumer injury attributable to the exclusionary conduct, the CW standard could lead to underenforcement in the area of innovation harms as well. Indeed, the federal agencies have not pursued a pure innovation-based theory of harm under Section 2 in nearly two decades. Even if the CW standard could be bent to accommodate innovation harms, it is unlikely that the slow pace of antitrust enforcement could keep up with the fast pace of high-tech markets. For this reason, this Article advocates pursuing innovation harms outside the CW standard. This aspect of the proposal could accommodate the concerns of

¹³² See KRUEGER & POSNER, *supra* note 72, at 13.

¹³³ *Id.* at 12.

antitrust traditionalists, who wish to see the *CW* standard preserved, and the concerns of the New Brandeisians, who (correctly) recognize that something more must be done to preserve innovation and prevent monopsony harms.