

Comments of the International Center For Law and Economics:

*The FTC's Advance Notice of Public Rulemaking Concerning Future
Amendments to the HSR Rules*

February 1, 2021

*Geoffrey Manne, President & Founder
Sam Bowman, Director of Competition Policy
Dirk Auer, Senior Fellow, Law & Economics*

We thank the Commission for the opportunity to comment on its Advance Notice of Proposed Rulemaking (“ANPRM”) concerning future amendments to the premerger notification rules under the Hart-Scott-Rodino Antitrust Improvements Act (“HSR”).

The International Center for Law and Economics (ICLE) is a nonprofit, nonpartisan research center whose work promotes the use of law & economics methodologies to inform public policy debates. We believe that intellectually rigorous, data-driven analysis will lead to efficient policy solutions that promote consumer welfare and global economic growth.¹

ICLE’s scholars have written extensively on competition and consumer protection policy. Some of our writings are included as references in the comment below. Additional materials may be found at our website: www.laweconcenter.org.

Our comment argues that the FTC’s rulemaking initiatives should be informed by the error-cost framework. As we explain, the framework offers several key insights that authorities should carefully consider when reviewing existing merger rules and guidance.

Among other things, it demonstrates that the societal costs stemming from false negatives (i.e. anti-competitive mergers that evade antitrust enforcement) are inextricably linked to those that originate from false positives (efficient mergers that are prohibited or deterred) and administrative costs (the social costs that are created by the operation of a given regulatory regime). As a result, any attempt to reduce one of these costs necessary entails a tradeoff as far as the others are concerned. All three costs should thus be considered together.

In short, we urge the FTC to take a holistic view when updating HSR rules and interpretations of those rules. In particular, it is important to consider the overall welfare costs of new rules, and not just their ability to plug existing enforcement gaps.

¹ ICLE has received financial support from numerous companies, organizations, and individuals, including firms with interests both supportive of and in opposition to the ideas expressed in this and other ICLE-supported works. Unless otherwise noted, all ICLE support is in the form of unrestricted, general support. The ideas expressed here are the authors’ own and do not necessarily reflect the views of ICLE’s advisors, affiliates, or supporters. Please contact us with questions or comments at icle@laweconcenter.org.

I. Introduction

In September 2020, the Federal Trade Commission and the Antitrust Division of the U.S. Department of Justice proposed changes to the rules and interpretations implementing the Hart-Scott-Rodino Act.² In comments on the state of U.S. antitrust merger enforcement, then-Commissioner Rohit Chopra argued at the time that too many anticompetitive transactions avoid antitrust scrutiny by falling through the cracks of HSR premerger notification thresholds. In his words:

Adequate premerger reporting is a helpful tool used to halt anticompetitive transactions before too much damage is done. However, the usefulness of the HSR Act only goes so far. This is because many deals can quietly close without any notification and reporting, since only transactions above a certain size are reportable. **The FTC ends up missing a large number of anticompetitive mergers every year.** In addition, since amendments to the HSR Act in 2000 raised the size thresholds on an annual basis, the number of HSR-reportable transactions has decreased. I want to commend agency staff for their work in identifying potential blind spots in the premerger reporting regime. I also want to thank state legislatures and state attorneys general for enacting and implementing their own premerger notification laws to fill in some of these gaps.³

Commissioner Chopra's comments are in line with several high-profile academic articles and reports that claim to have identified important gaps in current merger enforcement rules, notably in so far as they relate to the pharmaceutical industry and digital platforms.⁴ As a result of these perceived deficiencies, scholars have called for tougher rules, including the introduction of lower merger filing thresholds and substantive changes, such as the inversion of the burden of proof when authorities review mergers and acquisitions in the digital platform industry.⁵

² Federal Trade Commission, *FTC and DOJ Seek Comments on Proposed Amendments to HSR Rules and Advanced Notice of Proposed HSR Rulemaking* (Sept. 21, 2020), at <https://www.ftc.gov/news-events/press-releases/2020/09/ftc-doj-seek-comments-proposed-amendments-hsr-rules-advanced>.

³ Rohit Chopra, *Statement of Commissioner Rohit Chopra*, 85 FEDERAL REGISTER 231, 77052 (2020), at <https://www.ftc.gov/comment/reply/1584250#comment-form>.

⁴ See Colleen Cunningham, Florian Ederer & Song Ma, *Killer acquisitions*, AVAILABLE AT SSRN 3241707, 1-106 (2019). See also, Sai Krishna Kamepalli, Raghuram Rajan & Luigi Zingales, *Kill Zone*, NBER WORKING PAPER, 1-47 (2020). See also, STIGLER CENTER FOR THE STUDY OF THE ECONOMY AND THE STATE, STIGLER COMMITTEE ON DIGITAL PLATFORMS – FINAL REPORT (2019). DIGITAL COMPETITION EXPERT PANEL, UNLOCKING DIGITAL COMPETITION (2019). See also, AUSTRALIAN COMPETITION & CONSUMER COMMISSION, DIGITAL PLATFORMS INQUIRY – FINAL REPORT (2019). See also, JACQUES CRÉMER, YVES-ALEXANDRE DE MONTJOYE, HEIKE SCHWEITZER, COMPETITION POLICY FOR THE DIGITAL ERA FINAL REPORT (2019)

⁵ As far as jurisdictional thresholds are concerned, see, e.g., CREMER ET AL., *id.* at 10 (“Jurisdictional thresholds. Many of these acquisitions may escape the Commission’s jurisdiction because they take place when the start-ups do not yet generate sufficient turnover to meet the thresholds set out in the EUMR. This is because many digital startups attempt first to build a successful product and attract a large user base while sacrificing short-term profits; therefore, the competitive potential of such start-ups may not be reflected in their turnover. To fill this gap, some Member States have introduced alternative thresholds based on the value of the transaction, but their practical effects still have to be verified.”). As far as inverting the burden of proof is concerned, see, e.g., CREMER ET AL., *id.* at 11 (“The test proposed here would imply a heightened degree of control of acquisitions of small start-ups by dominant platforms and/or ecosystems, to be analysed as a possible strategy against partial user defection from the ecosystem. Where an acquisition is plausibly part of such a strategy, the notifying parties should bear the burden of showing that the adverse effects on competition are offset by merger-specific efficiencies.”).

However, as we explain in our comments, these arguments tend to overlook the important tradeoffs that would ensue from attempts to decrease the number of false positives reduced by existing merger rules and thresholds. In other words, while merger enforcement ought to be mindful of the theories of harm they identify, they do not tell us that the costs of permitting the behavior they identify is greater than the costs would be of increasing enforcement to prohibit it.

II. Antitrust and the error-cost framework

Every year, firms around the world spend trillions of dollars on corporate mergers, acquisitions, and R&D investments.⁶ Most of the time, this leads to cost-reductions, synergies, new or improved products, and lower prices for consumers. For smaller firms, the possibility of being acquired can be vital to making a product worth developing. However, there are also instances where firms increase their market power and reduce output. Therein lies *the* fundamental challenge for antitrust authorities: among these myriad transactions, investments and business decisions, is it possible to effectively sort the wheat from the chaff? In more concrete terms, the question is whether there are rules and standards that enforcers could use to filter-out anticompetitive practices while letting beneficial ones follow their course. And if so, can this be done in a timely and cost-effective manner?⁷

What might appear to be a herculean task has, in fact, been considerably streamlined, and vastly improved, by the emergence of the error-cost framework – itself a byproduct of pioneering advances in microeconomics and industrial organization.⁸ The error-cost framework is designed to enable authorities to focus their limited resources on that conduct most likely to have anticompetitive effects. In practice, this is done by applying several successive filters that separate potentially anticompetitive practices from ones that are likely innocuous.⁹ Depending on this initial classification, practices are then submitted to varying levels of scrutiny, that range from *per se* prohibitions to presumptive legality.¹⁰

Take the example of mergers and acquisitions. Of the millions of transactions that take place each year, only a few must be notified to antitrust authorities, and fewer still are subject to in-depth reviews. For instance, in both the US and the EU, only deals that meet certain transaction value and/or revenue thresholds require merger notifications.¹¹ Accordingly, US antitrust authorities

⁶ See *Value of mergers and acquisitions (M&A) worldwide from 1985 to 2020*, STATISTA (Jan. 15, 2021), <https://www.statista.com/statistics/267369/volume-of-mergers-and-acquisitions-worldwide/>. See *Gross domestic spending on R&D*, OECD (last visited, Jan.29, 2021) <https://data.oecd.org/rd/gross-domestic-spending-on-r-d.htm>.

⁷ Running the antitrust system is itself a cost to society.

⁸ See, e.g., Oliver E Williamson, *Economies as an antitrust defense: The welfare tradeoffs*, 58 THE AMERICAN ECONOMIC REVIEW, 18 (1968). See also, Frank H Easterbrook, *Limits of antitrust*, 63 TEX. L. REV., 1 (1984). See also, Henry G Manne, *Mergers and the market for corporate control*, 73 JOURNAL OF POLITICAL ECONOMY, 110 (1965). See also, William M Landes & Richard A Posner, *Market power in antitrust cases*, HARVARD LAW REVIEW, 937 (1981).

⁹ See Easterbrook, *id.* at 17 (“The task, then, is to create simple rules that will filter the category of probably-beneficial practices out of the legal system, leaving to assessment under the Rule of Reason only those with significant risks of competitive injury.”).

¹⁰ *Id.*

¹¹ See 15 USC 18a. See also, *Federal Trade Commission, HSR threshold adjustments and reportability for 2020* (Jan. 31, 2020),

receive somewhere in the vicinity of 2000 merger filings per year, while the European Commission usually receives a few hundred.¹² Typically less than 5% of these mergers are ultimately subjected to in-depth reviews.¹³ These cases are selected by applying yet another set of filters that include: looking at the relationship between the merging firms (horizontal, vertical, conglomerate); calculating market shares and concentration ratios; and checking whether transactions fall within several recognized theories of harm.¹⁴

Similar filtering mechanisms apply to other forms of conduct. For instance, incumbent firms routinely decide to enter adjacent markets, or adopt strategies that might incidentally reduce competition in markets where they are already present. As with mergers, authorities and courts apply a series of filters/presumptions to home in on those practices most likely to cause anticompetitive harm.¹⁵ Firms with low market shares are deemed less likely to possess market power (and thus less likely to harm competition); vertical agreements are widely seen as being less problematic than horizontal ones; and vertical integration is widely regarded as procompetitive absent other accompanying factors.¹⁶

This system is certainly not perfect – filtering cases in this manner almost inevitably lets some anticompetitive practices fall through the cracks. Nevertheless, the strengths of this paradigm arguably outweigh its weaknesses. Today’s antitrust apparatus is administrable (it requires only limited government resources to function), predictable (companies can self-assess potential strategies and adapt their behavior accordingly), and, in the case of merger enforcement, it ensures that deals are reviewed in a timely manner, after which companies can get on with business (even in-depth merger

<https://www.ftc.gov/news-events/blogs/competition-matters/2020/01/hsr-threshold-adjustments-reportability-2020>. See also, Council Regulation (EC) No 139/2004 of 20 January 2004 on the control of concentrations between undertakings, 24 O.J. L., 1-22.

¹² See Federal Trade Commission & U.S. Department of Justice, *Hart-Scott-Rodino Annual Report Fiscal Year 2019* (Jul. 8, 2020), at https://www.ftc.gov/system/files/documents/reports/federal-trade-commission-bureau-competition-department-justice-antitrust-division-hart-scott-rodino/p110014hsrannualreportfy2019_0.pdf. See also, European Commission, *Merger Statistics, 21 September 1990 to 31 December 2020* (2021), at <https://ec.europa.eu/competition/mergers/statistics.pdf>. Note that national competition authorities also review a large number of transactions in the EU.

¹³ *Id.*

¹⁴ See Federal Trade Commission & U.S. Department of Justice, *Horizontal Merger Guidelines* (Aug. 19, 2010), at <https://www.justice.gov/atr/horizontal-merger-guidelines-08192010>. See also, Federal Trade Commission & U.S. Department of Justice, *Vertical Merger Guidelines* (June 30, 2020), at https://www.ftc.gov/system/files/documents/reports/us-department-justice-federal-trade-commission-vertical-merger-guidelines/vertical_merger_guidelines_6-30-20.pdf. See also, *Guidelines on the assessment of non-horizontal mergers under the Council Regulation on the control of concentrations between undertakings*, O.J. C 265/6 (Oct. 18, 2008), at <https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2008:265:0006:0025:en:PDF>.

¹⁵ See Federal Trade Commission & U.S. Department of Justice, *Antitrust Guidelines for the Licensing of Intellectual Property*, 15 (Jan. 12, 2017) (“The existence of a horizontal relationship between a licensor and its licensees does not, in itself, indicate that the arrangement is anticompetitive. Identification of such relationships is merely an aid in determining whether there may be anticompetitive effects arising from a licensing arrangement.”). See also, European Commission, *Communication from the Commission – Guidance on the Commission’s enforcement priorities in applying Article 82 of the EC Treaty to abusive exclusionary conduct by dominant undertakings*, O.J. C. 45, 7–20 (Feb. 24, 2009).

¹⁶ See *Antitrust Guidelines for the Licensing of Intellectual Property*, *id.* See also, European Commission, *Guidelines on Vertical Restraints*, O.J. C. 130, 1–46 (May. 19, 2010).

investigations are typically concluded in less than a couple of months).

The contours of this system have profound ramifications for substantive antitrust policy. Potential reforms need to account for the tradeoffs inherent to this vision of antitrust enforcement – between false positives and false negatives, between timeliness and thoroughness, etc. Accordingly, the relevant policy question is not whether existing provisions allow certain categories of potentially harmful conduct to go unchallenged. Instead, policymakers should ask whether there is a better set of filters and heuristics, that would enable authorities and courts to prevent previously unchallenged anti-competitive conduct without overburdening the system or disproportionately increasing false positives. In short, as Harold Demsetz wisely observed, antitrust enforcers must avoid the so-called “nirvana fallacy”, and existing policies should thus always be weighed against alternative institutional arrangements (as opposed to merely identifying instances where they lead to false negatives).¹⁷

III. Calls for a reform of merger enforcement rules and thresholds

Against this backdrop, a growing body of economic literature has identified potential inadequacies in both the U.S. and EU merger control regimes, as well as the antitrust rules that govern the business practices of digital platforms (notably vertical integration and tying).¹⁸ These critiques focus on ways in which incumbents might prevent rivals from introducing innovative new products and services that could disrupt their existing businesses. In short, this recent economic literature purports to show how incumbents might use their dominant market positions to reduce innovation.

For instance, empirical research purports to show that mergers of *pharmaceutical companies* with overlapping R&D pipelines result in higher project termination rates, thus reducing innovation. These are referred to as “killer acquisitions”.¹⁹ Others have argued that killer acquisitions also occur in the tech sector, though the empirical evidence offered to support this second claim is much weaker, because it does not differentiate between legitimate, efficient discontinuations of acquired products (such as the product being unsuccessful on the market, or the acquisition being done to hire the staff of the acquired firm) and the elimination of potential competitors.²⁰

¹⁷ Harold Demsetz, *Information and efficiency: another viewpoint*, 12 THE JOURNAL OF LAW AND ECONOMICS, 1 (1969). (“The view that now pervades much public policy economics implicitly presents the relevant choice as between an ideal norm and an existing “imperfect” institutional arrangement. This nirvana approach differs considerably from a comparative institution approach in which the relevant choice is between alternative real institutional arrangements.”).

¹⁸ See Cunningham et al., *supra* note 4. See also, Zingales et al., *supra* note 4. See also, Kevin A Bryan & Erik Hovenkamp, *Antitrust limits on startup acquisitions*, 56 REVIEW OF INDUSTRIAL ORGANIZATION, 615 (2020). See also, Mark A Lemley & Andrew McCreary, *Exit Strategy*, SSRN WORKING PAPER (2020).

¹⁹ See Cunningham et al. *id.* at 1 (“We argue that an incumbent firm may acquire an innovative target and terminate the development of the target’s innovations to preempt future competition. We call such acquisitions “killer acquisitions,” as they eliminate potentially promising, yet likely competing, innovation.”).

²⁰ See, e.g., Axel Gautier & Joe Lamesch, *Mergers in the digital economy*, INFORMATION ECONOMICS AND POLICY (2000). (“There are three reasons to discontinue a product post acquisition: the product is not as successful as expected, the acquisition was not motivated by the product itself but by the target’s assets or R&D effort, or by the elimination of a potential competitive threat. While our data does not enable us to screen between these explanations, the present analysis shows that most of the startups are killed in their infancy.”).

Along similar lines, it is sometimes argued that large tech firms create so-called “kill zones” around their core businesses.²¹ Finally, some scholars find that incumbent digital platforms might seek to foreclose rivals in adjacent markets by “copying” their products, or by using proprietary datasets that tilt the scales in their favor.²² All of these practices are said to harm innovation. The overarching theme of the above research is that existing antitrust doctrine is ill-equipped to handle these novel practices, or at the very least, that it should be enforced more diligently in these settings.

But while the above research is of undeniable academic merit, it is important to recognize its inherent limits when it comes to informing normative policy decisions. Indeed, there is a vast difference between identifying *categories of conduct* that *sometimes* harm consumers, on the one hand, and being able to isolate *individual* instances of anticompetitive behavior in a cost-effective manner, on the other. In other words, the error-cost framework reveals that the existence of false negatives is not a *sufficient* condition for increased government intervention. Instead, it must always be the case that government intervention, with its inherent tradeoffs, ultimately increases social welfare.

Take the example of Google. The company has acquired at least 270 companies over the last two decades.²³ It has been argued that some of these might have been anticompetitive. However, the real test for regulators is whether they could identify those mergers out of Google’s 270 acquisitions *and*, under an error cost analysis, do less harm to consumers with false positives than false negatives. If the anticompetitive mergers are such a tiny percentage of the total mergers—and identifying them a priori is difficult—then a precautionary principle strategy that results in many false positives for enforcement would likely not merit the benefits from blocking one or two anticompetitive mergers. Indeed, but for Google and Facebook’s investments in YouTube and Instagram – to cite but two examples – it is far from clear that a mere “video-hosting service” or “photo-sharing app” would have grown into the competitor that advocates assume.

With this in mind, we urge the Commission to carefully consider the following questions when evaluating the merits – and policy implications – of economic research in this space:

1. Do these papers identify *categories of conduct* that, on average, harm consumer welfare?
2. If not, do the papers identify additional factors that would enable authorities to infer the existence of anticompetitive effects in *individual cases*?
3. If so, would it be feasible for authorities to add these factors to their analysis (in terms of time and resources)?
4. Finally, would prohibiting these practices at an individual or category level prevent efficiencies that would otherwise outweigh these anticompetitive harms? And could these

²¹ See Zingales et al. *supra* note 4.

²² See, e.g., Kevin Caves & Hal Singer, *When the Econometrician Shrugged: Identifying and Plugging Gaps in the Consumer-Welfare Standard*, 26 GEO. MASON L. REV. 396 (2018). (“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.”).

²³ See Carl Shapiro, *Antitrust in the Time of Populism*, 61 INT’L J. OF INDUS. ORG. 714 (2018).

efficiencies be analyzed on a case-by-case basis?

In addition to these error-cost-related questions, it is also necessary to question whether the results of these studies are relevant outside of the specific markets that they examine, and whether they give sufficient weight to countervailing procompetitive justifications.

In what follows we explain why several of these academic theories fall short on these questions. We examine two leading papers that purport to show the need for a reform of merger rules and thresholds (**Subsections A and B**). Our overall conclusion is that they tend to suffer from important flaws that make them unreliable for policymaking purposes. In addition, none of them suggests policy reforms that meet the requirements of the error-cost framework. In short, despite their academic merit, they are of limited relevance for antitrust policy. We then discuss ongoing regulatory attempts to undo Facebook's acquisitions of Instagram and WhatsApp (Subsection C). Despite being reviewed by the FTC and antitrust authorities around the world, these mergers have become veritable poster children for the need to reform existing rules and thresholds. They have notably spurred lawsuits that call for their *ex post* dissolution.²⁴ However, our study of these mergers tends to confirm our analysis that tightening merger rules to prevent innovation harms may prove costly to society.

A. Is there a "kill-zone" in tech markets?

One of the most significant allegations that has been leveled against large tech firms is that their very presence in a market may hinder investments, entry and innovation. Several observers have expressed concern that large incumbents in the technology industry are behaving anticompetitively by serving as an innovation bottleneck.

The strongest expression of this kill-zone idea, at least in the economic literature, stems from a working paper by Sai Krishna Kamepalli, Raghuram Rajan, and Luigi Zingales.²⁵ The paper makes two important claims, one theoretical and one empirical. From a theoretical standpoint, the authors argue that the prospect of an acquisition by a dominant platform deters consumers from joining rival platforms, and that this, in turn, hampers the growth of these rivals. The authors then test a similar hypothesis empirically. They find that acquisitions by a dominant platform – Google or Facebook – decreased investment levels and venture capital deals in markets that are “similar” to that of the target firm.

However, as we explain below, both findings are premised upon significant assumptions about the way in which competition develops in the digital space. Moreover, the policy reforms that the authors suggest to address these issues do not seem to satisfy the requirements of the error-cost framework.

Let us start with the authors' **theoretical model**. The model's underlying intuition is as follows:

Consider the decision of techies [i.e. early adopters]. They care primarily about the

²⁴ Complaint for injunctive relief, *Federal Trade Commission v. Facebook* (Dec. 9, 2020), <https://www.ftc.gov/system/files/documents/cases/1910134fbcomplaint.pdf>. Complaint, *State Attorney Generals v. Facebook* (Dec. 3, 2020) https://ag.ny.gov/sites/default/files/facebook_complaint_12.9.2020.pdf.

²⁵ See Zingales et al., *supra* note 4.

fundamental technical quality of the platform. However, they also engage deeply in any technology, so they have high switching costs (of learning every minor aspect of any platform they adopt). **If techies expect two platforms to merge, they will be reluctant to pay the switching costs and adopt the new platform early on, unless the new platform significantly outperforms the incumbent one.** After all, they know that if the entering platform's technology is a net improvement over the existing technology, it will be adopted by the incumbent after merger, with new features melded with old features so that the techies' adjustment costs are minimized. Thus, the prospect of a merger will dissuade many techies from trying the new technology. By staying with the incumbent, however, they reduce the stand-alone value of the entering platform.²⁶

This theoretical model is built upon the central assumption that early adopters of a new platform – called “techies” – face high switching costs because of their desire to learn these platforms in detail. But it seems facially contradictory to claim that “techies” both have the highest switching costs and switch the most. Unfortunately, this key behavioral assumption drives the results of the theoretical model, and the paper presents no evidence to support its presence in real-world settings.

Similarly, the authors assume that “techies” would incur lower adoption costs if they remained on the incumbent platform, and waited for the rival platform to be acquired (at which point they could adopt the rival service at lower cost):

If techies expect two platforms to merge, they will be **reluctant to pay the switching costs and adopt the new platform early on**, unless the new platform significantly outperforms the incumbent one. After all, they know that if the entering platform's technology is a net improvement over the existing technology, it will be **adopted by the incumbent after merger, with new features melded with old features so that the techies' adjustment costs are minimized.**²⁷

The authors do not provide any real-world examples to support this assumption. Anecdotal evidence seems to cut in the opposite direction. Take the example of Facebook's acquisition of Instagram.²⁸ Under the authors' model, existing Facebook users would have faced lower adoption costs if they decided to join Instagram after its acquisition by Facebook (as opposed to adopting Instagram before the merger). However, nothing in the history of that merger suggests that this happened. Most importantly, the cost of learning to use Instagram does not appear to have been affected by the merger. To this day, the two services mostly remain separate (they are notably controlled by separate apps).²⁹ Skeptics may counter that, after the merger, existing Facebook users could simply login to Instagram using their Facebook credentials.³⁰ However, this idea is hampered by, at least, two flaws. First, this

²⁶ *Id.* at 3.

²⁷ *Id.*

²⁸ See *Facebook to Acquire Instagram*, FACEBOOK WEBSITE (Apr. 9, 2012) <https://about.fb.com/news/2012/04/facebook-to-acquire-instagram/>.

²⁹ See, e.g., *Top Apps Worldwide for July 2020 by Downloads*, SENSORTOWER (Aug. 5, 2020), <https://sensortower.com/blog/top-apps-worldwide-july-2020-by-downloads>.

³⁰ See Instagram's website (last visited, Jan. 29, 2020) at <https://www.instagram.com/accounts/emailsignup/?hl=en>.

is possible for many other apps that are in no way related to Facebook – Spotify, Fortnite and TikTok, to cite but a few.³¹ Second, even if this was not possible, the costs imposed upon users are mostly negligible. This is especially true for “techies”. In short, the authors present no evidence to support this critical (and counterintuitive) assumption.

Because of these unrealistic assumptions, the authors’ theoretical conclusions appear of little relevance to the underlying reality of the platform industry. Indeed, there is little to suggest that techies join new platforms at a sub-optimal rate (and thus that they fail to generate positive externalities for late adopters).

This discrepancy – between the model and reality – is not surprising. Throughout economic history, scholarly portrayals of externalities have repeatedly been at odds with the realities of underlying markets. For instance Arthur Cecil Pigou famously predicted that externalities precluded the creation of privately-operated lighthouses.³² However, as Ronald Coase pointed out, the British lighthouse system at the time was private.³³ Along similar lines, it was argued that externalities prevented the emergence of markets for bee pollination – as bees can fly where they desire.³⁴ This too was debunked.³⁵ And Elinor Ostrom famously showed that economic agents often – though not always – found ways to solve the tragedy of the commons (i.e. a situation where the lack of property rights encourages economic agents to overconsume common pool resources).³⁶ Finally, in the mid to late 1980s, it was argued that network effects (and path dependency) explained the victory of the QWERTY keyboard layout over the DVORAK alternative. This too was thoroughly debunked.³⁷

In short, there is a long intellectual history of theoretical externality claims not holding up in practice. Sai Krishna Kamepalli, Raghuram Rajan and Luigi Zingales’ working paper offers little to suggest their theoretical model avoids this trap.

The **empirical analysis** put forward in the paper is also unreliable for policymaking purposes. The authors notably conclude that:

³¹ See Spotify’s website (last visited, Jan. 29, 2020) at <https://www.spotify.com/us/signup/>. See also, Epic Games’ website (last visited, Jan. 29, 2020) at https://www.epicgames.com/id/register/customized?loginSubheading=Connexion®Subheading=Inscription&productName=fortnite&lang=fr&redirectUrl=https%3A%2F%2Fwww.epicgames.com%2Ffortnite%2Ffr%2Fhome&client_id=cd2b7c19c9734a2ab98dc251868d7724&noHostRedirect=true. See also, TikTok’s website (last visited, Jan. 29, 2020) at <https://www.tiktok.com/en/>. This was not possible for Instagram at the time of the Facebook merger, but it could well have become so at a later point in time. See Dan Frommer, *Here’s How To Use Instagram*, BUSINESSINSIDER (Nov. 1, 2010) <https://www.businessinsider.com/instagram-2010-11?IR=T#type-in-the-usual-information-choose-a-user-photo-etc-2>.

³² See ARTHUR C. PIGOU, *ECONOMICS OF WELFARE*, 183-184 (4th ed. 1938).

³³ See Ronald H Coase, *Lighthouse in Economics*, *The*, 17 *JL & ECON.*, 360 (1974).

³⁴ See J. E. Meade, *External Economies and Diseconomies in a Competitive Situation*, 52 *Econ. J.*, 54 (1952).

³⁵ See Steven NS Cheung, *The fable of the bees: An economic investigation*, 16 *THE JOURNAL OF LAW AND ECONOMICS*, 13 (1973). (“It will be shown that the observed pricing and contractual arrangements governing nectar and pollination services are consistent with efficient allocation of resources.”).

³⁶ See ELINOR OSTROM, *GOVERNING THE COMMONS*, (Cambridge university press. 2015).

³⁷ See Stan J Liebowitz & Stephen E Margolis, *The fable of the keys*, 33 *THE JOURNAL OF LAW AND ECONOMICS* (1990).

We collect data on the number of deals and dollar amounts invested by the venture capitalist in specific sectors, after major acquisitions by Facebook and Google are announced. **We find that normalized VC investments in start-ups in the same space as the company acquired by Google and Facebook drop by over 40% and the number of deals falls by over 20% in the three years following an acquisition.** In comparison, a similar calculation for other acquisitions in the software industry suggests that normalized VC investments in start-ups in the same space as the company acquired goes up (not down) by over 40 percent, while the number of deals goes up slightly in the three years following an acquisition.³⁸

Unfortunately, these results are derived from the analysis of only nine transactions.³⁹ Although this does not necessarily invalidate those results, it does suggest that they should be interpreted with some degree of circumspection by policymakers.

Similarly, the empirical data upon which the paper relies may be prone to selection bias. The authors arbitrarily limit their analysis to Facebook and Google acquisitions that exceeded a \$500 million threshold.⁴⁰ However, as the authors themselves concede, markets go through product cycles where venture capital investments peak and then decline as the market matures.⁴¹ This raises an important question: is it conceivable that a merger's size is a proxy for market maturity? If so, one would want to know the size of mergers in *both* the control and treated groups, something the paper fails to report (the nine mergers in the treatment group were worth between \$625million and \$19 billion⁴²).

But even if one were to assume that the authors' theoretical and empirical findings are correct, the paper still does not make a strong case to reform existing antitrust rules. In other words, the paper does not provide evidence that existing antitrust regimes fail to achieve an optimal **error-cost** balance.

The main problem is that the paper has indeterminate welfare implications. Indeed, as the authors note, the declines in investment in spaces adjacent to the incumbent platforms occurred during a time of rapidly rising venture capital investment (both in terms of the number of deals and dollars invested). From a consumer welfare perspective, it is entirely plausible that venture capital merely shifted to other sectors, as opposed to being reduced. And if the incumbent platforms successfully integrated the technology of acquired companies (an assumption of the authors' model⁴³), then

³⁸ Zingales et al, at 4.

³⁹ *Id.* at 38-39.

⁴⁰ *Id.* at 23 ("We select all the software companies purchased by Facebook and Google for more than \$500M. There are 9 acquisitions that satisfies these criteria: 7 by Google and 2 by Facebook.").

⁴¹ *Id.* at 27 ("The pre-trend decline in the relative number of deals is not surprising. In early stages, the VC investment rounds are more frequent (Gompers, 1995). As firms mature, rounds become less frequent: hence a decline in the raw number of deals.").

⁴² *Id.* at 39.

⁴³ *Id.* at 3 ("... After all, they know that if the entering platform's technology is a net improvement over the existing technology, it will be adopted by the incumbent after merger, with new features melded with old features so that the techies' adjustment costs are minimized.").

consumers benefit from seeing the innovation deployed at scale, as well as whatever innovations may come from the displaced investment. This is a similar dynamic to one of the results in another paper, by Wen and Zhu, which studies the effect of Google developing a native app for Android that competes with a segment of third-party developers.⁴⁴ The study finds that developers shift efforts to unaffected markets rather than completely exiting software development:

after Google's entry threat increases, affected developers reduce innovation and raise the prices for the affected apps. Once Google enters, the developers reduce innovation and increase prices further. However, app developers' incentives to innovate are not completely suppressed; rather, they shift innovation to unaffected and new apps. Given many apps already offering similar features, Google's entry may reduce social inefficiency.⁴⁵

In other words, a variety of effects, often running in different directions, attend Google's decision to incorporate a feature into Android that was hitherto handled by third-party app providers. Thus, when considering a larger view of welfare effects, consumers may be better off on an even more important dimension: potential *innovation*. Firms that successfully build and sell apps for Android develop generalized skills and techniques for their operation, such that they can reuse their expertise to build apps in subsequent app niches. In this sense, developers are incentivized not only to build apps, but to continually discover future niches that meet consumer demand, resulting in a higher total level of innovative behavior. Because of this, the authors rightly conclude:

It would be premature to draw any policy conclusion on antitrust enforcement based solely on our model and our limited evidence.⁴⁶

B. Killer Acquisitions

Scholars have also argued that so-called “killer acquisitions” may reduce competition and innovation, particularly in the pharmaceutical and tech sectors. These killer acquisitions are effectively a subset of the potentially anticompetitive mergers that were discussed in the previous section. According to Colleen Cunningham and her co-authors, they can be defined as situations where:

[A]n incumbent firm may acquire an innovative target and terminate the development of the target's innovations to preempt future competition.⁴⁷

The authors add:

⁴⁴ See Wen Wen & Feng Zhu, *Threat of platform-owner entry and complementor responses: Evidence from the mobile app market*, 40 STRATEGIC MANAGEMENT JOURNAL, 1138 (2019). (“We find that relative to unaffected developers' apps in the same category, app developers vulnerable to Google's entry threat reduce innovation on affected apps by 5.1% and increase these apps' prices by 1.8%. They do not, however, abandon the platform; rather, when the entry is imminent, they shift innovation efforts to unaffected markets, manifested in a 4% increase in updates on existing apps and a 3% to 10% increase in the introduction of new apps. Consistent with our hypothesis, developers that have popular products being affected by an entry threat react differently from other affected developers: they increase innovation by 7.8% for affected apps and 15% for unaffected apps.”)

⁴⁵ *Id.*

⁴⁶ See Zingales et al, *supra* note 4, at 5.

⁴⁷ See Cunningham et al., *supra* note 4, at 52.

Importantly, some degree of acquirer-target overlap is necessary for the killer acquisition motive to exist.⁴⁸

The specificity of killer acquisitions is thus that an incumbent acquires a rival *in order to discontinue* its competing R&D efforts (or its own). Economic theory suggests that this may occur because of two contributing forces: The first is that monopoly profits are larger than the joint duopoly profits that both firms could earn together.⁴⁹ Accordingly a competing R&D project is, other things being equal, more valuable to an incumbent monopolist (who could purchase the R&D project to maintain its monopoly profits) than for a rival seeking to enter the market (who could at best hope for half of the duopoly profits, *if it cannot hope to overthrow the incumbent entirely*). Absent this, both parties would likely be unable to reach a mutually advantageous deal (the rival's R&D pipeline might be more valuable to itself than to the incumbent). Second, killer acquisitions theory assumes that incentives to innovate decrease with the number of firms in the market (this is a restatement of Arrow's replacement effect).⁵⁰ Otherwise, there would be no reason to believe the elimination of a competing R&D pipeline would lower innovative output. Together these two forces provide both the alleged *motive* (monopoly maintenance) and *effect* (reduced R&D output) of killer acquisitions. However, neither of these underlying intuitions is new, and both have been subject to significant theoretical and empirical scrutiny.⁵¹

Although the underlying intuition that concentration *might* lower innovation has been discussed for decades now, theories of anti-innovation mergers have gained increasing prominence over the past couple of years. This is particularly true in the tech sector, where critics have taken aim at the large number of acquisitions made by digital platforms. This is notably due to popular concerns about Big Tech. But it is also due to the publication of several empirical papers that purport to confirm Arrow's replacement effect theory, and which might thus give antitrust enforcers stronger reasons to challenge tech acquisitions.⁵²

The empirical results of these papers are far from unequivocal, however, and enforcers should thus interpret their findings with an appropriate amount of circumspection. More importantly, while their empirical rigor is commendable, these works generally pay insufficient attention to error cost considerations. This weakens their relevance for policymaking purposes.

⁴⁸ *Id.* at 2.

⁴⁹ *Id.*

⁵⁰ See Cunningham et al., *supra* note 4, at 3. ("This is a general, well-known result: the monopolist's disincentive created by his preinvention monopoly profits" (Arrow, 1962). We show that this disincentive to innovate can be so strong that an incumbent firm may acquire an innovative start-up simply to shut down the start-up's projects and thereby stem the "gale of creative destruction" of new inventions (Schumpeter, 1942)."). See also Kenneth Arrow, *Economic welfare and the allocation of resources for invention*, in THE RATE AND DIRECTION OF INVENTIVE ACTIVITY: ECONOMIC AND SOCIAL FACTORS 622 (1962). ("The only ground for arguing that monopoly may create superior incentives to invent is that appropriability may be greater under monopoly than under competition. Whatever differences may exist in this direction must, of course, still be offset against the monopolist's disincentive created by his preinvention monopoly profits.").

⁵¹ For a discussion of this, see, e.g., Dirk Auer, *Structuralist Innovation: A Shaky Legal Presumption in Need of an Overhaul*, CPI ANTITRUST CHRONICLE, DECEMBER (2018).

⁵² *Supra* note 18.

Much of the regained interest in the effect that mergers exert on innovation can be traced to the publication of a highly influential paper by Colleen Cunningham, Song Ma and Florian Ederer.⁵³ The authors study thousands of pharmaceutical mergers and conclude that between 5.3% and 7.4% of them are killer acquisition.⁵⁴ In their own words:

[W]e empirically compare development probabilities of overlapping acquisitions, which are, in our theory, motivated by a mix of killer and development intentions, and non-overlapping acquisitions, which are only motivated by development intentions. We find an increase in acquisition probability and a decrease in post-acquisition development for overlapping acquisitions and interpret that as evidence for killer acquisitions. [...]

[W]e find that projects acquired by an incumbent with an overlapping drug are 23.4 percent less likely to have continued development activity compared to drugs acquired by non-overlapping incumbents.⁵⁵

From a policy standpoint, the big question is what weight antitrust authorities, courts and legislators should give these findings. Stated differently, does the paper provide sufficient evidence to warrant a reform of existing merger filing thresholds and review standards – especially in the tech sector? Several important notes of caution are in order that counsel decisionmakers to proceed with caution.

To start, the study's industry-specific methodology means that it may **not be a useful guide to understand tech acquisitions**. One reason is that drug development is highly regulated. As a result, all drugs must go through several development milestones that include clinical trials and market authorization procedures. These usually take years to complete.⁵⁶ Accordingly, incumbent drug companies have a fairly accurate picture of the competitive landscape within a multi-year timespan. In other words, it is generally straightforward to identify substitute products. This is not the case for digital markets where products are highly differentiated and where the way consumers use a given platform can evolve rapidly (unlike the pharmaceutical sector where drugs go through trials and receive authorizations for *a specific treatment*).⁵⁷ For example, when Facebook acquired Instagram and WhatsApp, it was not entirely clear whether either of these services might one day become competitors to the main Facebook platform.⁵⁸ The upshot is that, in the tech sector, neither acquirers nor regulators can be as readily presumed able to identify potential competitors.

A second important note of caution is that, even if one assume that the findings of Cunningham et al. are correct and that they apply with equal force in the tech sector, it is **unclear that they warrant**

⁵³ See Cunningham et al., *supra* note 4.

⁵⁴ *Id.* at 6.

⁵⁵ *Id.* at 3 & 6.

⁵⁶ See, e.g., US Food & Drug Administration, *Step 3: Clinical Research*, FDA Website (last visited, Jan 29, 2021), at <https://www.fda.gov/patients/drug-development-process/step-3-clinical-research>. See also, Abbvie, *Chow Long do Clinical Trials Take*, CLINICALTRIALSANDME (last visited, Jan 29, 2021), at <https://www.clinicaltrialsandme.com/resources/how-long-do-clinical-trials-take.html>.

⁵⁷ *Id.*

⁵⁸ See, e.g., Case No COMP/M.7217 *Facebook/WhatsApp* (Oct. 3, 2014). See also, *Anticipated acquisition by Facebook Inc of Instagram Inc* ME/5525/12 (Aug. 22, 2012).

a departure from the *status quo*. Indeed, according to the authors' findings, "killer acquisitions" represent only a small fraction – 6% – of the pharmaceutical acquisitions studied. But antitrust enforcers operate under uncertainty. The critical policy question is thus whether the companies that are in are in that 6% can be identified *ex ante*? If not, is there a heuristic that would enable enforcers to identify more of these without producing excessive false positives?

With this in mind, the main heuristic identified by the authors is arguably of little use for policy purposes. The authors focus on the effect that overlapping R&D pipelines have on project discontinuations. In the case of non-overlapping mergers, acquired projects continue 17.5% of the time, while this number is 13.4% when there are overlapping pipelines.⁵⁹ The authors argue that this gap is evidence of killer acquisitions, where incumbents acquire rivals to discontinue their competing R&D pipelines. But this misses the bigger picture: under the author's numbers and definition of "killer acquisition," a vast majority of overlapping acquisitions are perfectly benign, and prohibiting them would thus have important social costs. The authors skirt this issue by basing their cost-benefit analysis on the assumption that prohibiting overlapping acquisitions would lead to the baseline project development rate (i.e., that which they find for non-acquired projects).⁶⁰ But this assumption is plucked out of thin air. It notably ignores potential selection effects: the projects that are acquired in the author's sample may be qualitatively different than the ones that continue independently. In other words, the alternative to a "killer acquisition" might well be bankruptcy, and zero development, rather than the baseline project-continuation rate. For instance, even non-overlapping acquisitions have a lower development rate than the baseline where no acquisition takes place.⁶¹ In short, the authors base their cost-benefit analysis on an unrealistic counterfactual.⁶²

Using "overlapping acquisitions" as a heuristic for antitrust decision-making would be even more problematic in the tech sector. Indeed, as has already been explained above, it is much harder to determine whether tech products and R&D projects overlap. For a start, it is easier to quickly redeploy assets (called "pivoting" in the VC sphere) than it is in the pharmaceutical sector (drugs need to go through new clinical trials in order to be approved for different uses).⁶³ Moreover, the way that consumers use a given service can rapidly evolve. This may explain why, when reviewing tech mergers, antitrust authorities often struggle to determine whether or not firms are competitors, and whether they are likely to become ones in the near future.

Another potential heuristic would be to look at the size of the payments made by incumbents to

⁵⁹ See Cunningham et al., *supra* note 4, at 47.

⁶⁰ *Id.* at 49. ("Consider first the case in which acquisitions of overlapping projects are no longer allowed and that all such projects instead have the same development probability (19.9 percent) as non-acquired projects (47.5 percent of all projects).")

⁶¹ *Id.* at 47-49.

⁶² Harold Demsetz, *Information and efficiency: another viewpoint*, 12 THE JOURNAL OF LAW AND ECONOMICS 1 (1969). ("The view that now pervades much public policy economics implicitly presents the relevant choice as between an ideal norm and an existing "imperfect" institutional arrangement. This nirvana approach differs considerably from a comparative institution approach in which the relevant choice is between alternative real institutional arrangements.")

⁶³ *Supra* note 56.

acquire their rivals. As is the case with reverse-patent settlements, the underlying intuition is that larger-than-expected payments may conceal attempts to preserve monopoly rents.⁶⁴ However, even if authorities could infer whether the acquisition price for a target's assets was larger than expected, it would still prove almost impossible to determine whether these "large" valuations are driven by the expectation of significant synergies or an incumbent maintaining its monopoly position.

The challenge goes beyond identifying potential killer acquisitions. There are several problems with describing this kind of behavior as harmful. The first is that because this kind of **behavior could increase innovation by boosting the returns to innovation**, as acknowledged by Cunningham et al.⁶⁵ Consider two possible outcomes for a new product: outcome one is to compete with the incumbent, reducing the *total* rents available to the incumbent and the new entrant, as well as the rents available to the incumbent because of lost sales to the new entrant. The second is to be acquired and shut down, preserving the total rents available to the incumbent. In the latter case, the amount the incumbent should be willing to pay will be approximately equal to the expected lost rents in the competitive scenario. The more significant the expected price reductions in the competitive scenario, the larger the premium the incumbent should be willing to pay. That means that, in many cases the buyout premium should exceed the expected value of competing for the entrant, raising the returns to their innovation.

It is widely accepted that the prospect of acquisition is an important channel for investors in startups to make a return, along with IPOs.⁶⁶ Between 2010 and 2018 there were 21,844 acquisitions of tech startups for a total deal value of \$1.193 trillion.⁶⁷ By comparison, according to data compiled by Jay R. Ritter, a professor at the University of Florida, there were 331 tech IPOs for a total market capitalization of \$649.6 billion over the same period.⁶⁸ Research by Phillips and Zhdanov that analyses venture capital investments and M&A activity in 48 countries found that "the passage of a pro-takeover law in a country is associated with more subsequent VC deals in that country, while the enactment of a business combination antitakeover law in the U.S. has a negative effect on subsequent VC investment."⁶⁹ Because of factors like this, the error-costs of overenforcement in

⁶⁴ See, e.g., Aaron Edlin, Scott Hemphill, Herbert Hovenkamp & Carl Shapiro, *The actavis inference: Theory and practice*, 67 RUTGERS UL REV., 585 (2015).

⁶⁵ See Cunningham et al, *supra* note 4, at 6 ("The overall effect on social welfare is ambiguous because these acquisitions may also increase ex-ante incentives for the creation of new drug projects.").

⁶⁶ See INTERNATIONAL CENTER FOR LAW & ECONOMICS, FINAL REPORT ON THE FTC HEARINGS ON COMPETITION & CONSUMER PROTECTION IN THE 21ST CENTURY: THE WEAKNESS OF INTERVENTIONIST CLAIMS, 99-10 (Jun. 2019), at <https://laweconcenter.org/wp-content/uploads/2019/07/Concluding-Comments-The-Weaknesses-of-Interventionist-Claims-FTC-Hearings-ICLE-Comment-11.pdf>.

⁶⁷ MIND THE BRIDGE & CRUNCHBASE, TECH STARTUP M&AS 2018 REPORT (2018) available at <https://s3.amazonaws.com/cdn.orrick.com/files/MTBCrunchbaseTechStartupMAs2018.pdf>.

⁶⁸ Jay R. Ritter, Initial Public Offerings: Technology Stock IPOs (Dec. 31, 2018), available at <https://site.warrington.ufl.edu/ritter/files/2019/04/IPOs2018Tech-Stock.pdf>.

⁶⁹ Gordon M. Phillips & Alexei Zhdanov, Venture Capital Investments and Merger and Acquisition Activity Around the World, (Turk Sch. of Bus., Working Paper No. 3072665, 2017), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3072665.

acquisitions may be substantial.

Thus, regulatory intervention that reduces the likelihood of reaching a profitable exit could reduce the incentive for venture capitalists to invest in startups and may inhibit new business formation. A research paper by Gordon Phillips and Alexei Zhdanov analyzed data on venture capital investments and mergers and acquisitions activity in 48 countries to study this relationship rigorously. They found that:

subsequent VC activity responds to both [positive and negative] shocks. First, the passage of a pro-takeover law in a country is associated with more subsequent VC deals in that country, while the enactment of a business combination antitakeover law in the U.S. has a negative effect on subsequent VC investment.⁷⁰

Second, the “killer acquisitions” literature assumes that rivals cannot expect to overthrow incumbents or that they are **risk-averse**. A business will not allow itself to be sold for less than the value it expects from competing. If the rival expects to become a monopolist, then the incumbent could only acquire it, profitably, if it can deploy the rivals’ assets more efficiently.⁷¹ It may be argued that businesses or their owners are loss-averse, and so will be willing to accept a smaller guaranteed payoff to risking a larger but uncertain payoff from competing. In this case, it may be socially optimal for them to take the risk and compete despite this preference. But this risk aversion runs both ways and should deter a company from forming and/or attracting investment, as well. The increased certainty of being able to profit from an investment should counteract would-be entrepreneurs’ risk aversion, increasing company formation and investment.

A third reason is that in most cases there is nothing stopping a third company from **copying the acquired company’s product**. This may not be the case in industries where patent protections give a monopoly on specific innovations. An incumbent may buy a company with patents that replicate the performance of the incumbent’s own patented products in order to reliably control the market in whatever it is that product does. But in a market like software, for example, where patent protections range from weak to non-existent, there is little to stop another company from copying the functions of an acquired product. Indeed, this is precisely the behavior found in Cunningham et al – the likelihood of a “killer acquisition” is greater the longer the patent term of the acquiring company.⁷²

Put together, acquisitions that bear the hallmarks of “killers” are therefore not clearly anticompetitive even in their own right, since they increase the total amount and reliability of returns to entry, and since they cannot effectively prevent any firm from competing. At best, they can buy incumbents time to improve their own product (another pro-competitive effect).

⁷⁰ Gordon M. Phillips & Alexei Zhdanov, *Venture Capital Investments and Merger and Acquisition Activity Around the World*, (Turk Sch. of Bus., Working Paper No. 3072665, 2017), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3072665.

⁷¹ See, e.g., Henry G Manne, *Mergers and the market for corporate control*, 73 JOURNAL OF POLITICAL ECONOMY 110 (1965).

⁷² See Cunningham et al., *supra* note 4, at 37 (“Consistent with our predictions, we find that if the relevant acquirer patents are near expiration, the decrease in development associated with acquisition appears to be mitigated.”).

C. Case study: Facebook's acquisition of Instagram

The doubts expressed in the previous sections are not just theoretical. They are best evidenced by recent legal complaints and commentary surrounding Facebook's acquisitions of Instagram (2012) and WhatsApp (2014), notably the House Committee on the Judiciary investigation of competition in digital markets⁷³ and the antitrust complaints lodged by the FTC and 46 state attorneys general.⁷⁴ These developments show that successfully identifying and preventing "killer acquisitions" would prove challenging for authorities. Indeed, even with the benefit of hindsight, it is extremely difficult to accurately determine whether a merger ultimately harmed consumers, since the counterfactual may be of Instagram failing to succeed without Facebook's investment and management decisions.

Take Facebook's acquisition of Instagram in 2012. Emails from 2012 between Mark Zuckerberg and Facebook's then-Chief Financial Officer David Ebersman, in which Zuckerberg lays out his rationale for buying Instagram, have prompted many to speculate that the deal may not have been cleared if antitrust agencies had access to Facebook's internal documents at the time.⁷⁵ The issue is Zuckerberg's description of Instagram as a nascent competitor and potential threat to Facebook:

These businesses are nascent but the networks established, the brands are already meaningful, and if they grow to a large scale they could be very disruptive to us. Given that we think our own valuation is fairly aggressive and that we're vulnerable in mobile, I'm curious if we should consider going after one or two of them.⁷⁶

Ebersman objects that a new rival would just enter the market if Facebook bought Instagram. In response, Zuckerberg wrote:

There are network effects around social products and a finite number of different social mechanics to invent. Once someone wins at a specific mechanic, it's difficult for others to supplant them without doing something different.⁷⁷

These email exchanges may not paint a particularly positive picture of Zuckerberg's intent in doing the merger, and it is possible that they may have caused antitrust agencies to scrutinize the merger more carefully at the time. But they do not tell us that the acquisition was ultimately harmful to consumers, or about the counterfactual of the merger being blocked. While we know that Instagram became enormously popular in the years following the merger, it is not clear that it would have been just as successful without the deal, or that Facebook and its other products would be less popular

⁷³ HOUSE COMMITTEE ON THE JUDICIARY, INVESTIGATION OF COMPETITION IN DIGITAL MARKETS (Oct. 7, 2020) https://judiciary.house.gov/uploadedfiles/competition_in_digital_markets.pdf.

⁷⁴ Complaint for injunctive relief, *Federal Trade Commission v. Facebook* (Dec. 9, 2020), <https://www.ftc.gov/system/files/documents/cases/1910134fbcomplaint.pdf>. Complaint, *State Attorney Generals v. Facebook* (Dec. 3, 2020) https://ag.ny.gov/sites/default/files/facebook_complaint_12.9.2020.pdf.

⁷⁵ Casey Newton & Nilay Patel, 'INSTAGRAM CAN HURT US': MARK ZUCKERBERG EMAILS OUTLINE PLAN TO NEUTRALIZE COMPETITORS, THE VERGE (Jul. 29, 2020), at <https://www.theverge.com/2020/7/29/21345723/facebook-instagram-documents-emails-mark-zuckerberg-kevin-systrom-hearing>.

⁷⁶ *Id.*

⁷⁷ Randy Picker, *The House's Big Tech Hearing: Break Ups Large and Small?*, PROMARKET (Aug. 4, 2020) <https://promarket.org/2020/08/04/the-houses-big-tech-hearing-break-ups-large-and-small/>.

today. Moreover, it fails to account for the fact that Facebook had the resources to quickly scale Instagram up to a level that provided immediate benefits to an enormous number of users, instead of waiting for the app to potentially grow to such scale organically.

I. The rationale

Writing for Pro Market, Randy Picker argued that these emails hint that the acquisition was essentially about taking out a nascent competitor:

Buying Instagram really was about controlling the window in which the Instagram social mechanic invention posed a risk to Facebook ... Facebook well understood the competitive risk posed by Instagram and how purchasing it would control that risk.⁷⁸

This is a plausible interpretation of the internal emails, but it is not without limits. The most important one is that Instagram was not the only company Facebook considered buying. The internal emails cited by Facebook's detractors reveal that the company was also thinking about acquiring Path and Foursquare.⁷⁹ If the goal was to neutralize potential competition, why only acquire one of these rivals? And what does it say that the two firms that Facebook *did not* acquire ultimately faltered?⁸⁰

At the very least, this raises the prospect of an alternative story: one where Facebook's acquisition of Instagram was mostly about improving both firms' products. In that regard, Mark Zuckerberg's email could be construed as saying that buying Instagram would improve *Facebook*, and make it good enough to fend off other entrants (this interpretation is much more consistent with the notion that Facebook chose to acquire one of many promising firms):

If we incorporate the social mechanics they were using, those new products won't get much traction since we'll already have their mechanics deployed at scale.⁸¹

If this was the rationale, rather than simply trying to kill a nascent competitor, it would be pro-competitive. It is good for consumers if a product makes itself *better* to beat its rivals by acquiring undervalued assets to deploy them at greater scale and with superior managerial efficiency, even if the acquirer hopes that in doing so it will prevent rivals from ever gaining significant market share.⁸² Further, despite popular characterization, on its face, the acquisition was not about trying to destroy a consumer option, but only to ensure that Facebook was competitively viable in providing that option. Another reasonable interpretation of the emails is that Facebook was wrestling with the age-

⁷⁸ *Id.*

⁷⁹ Casey Newton & Nilay Patel, *supra* note 75.

⁸⁰ The Path app was closed down in October 2018. See John Russel, *Mobile social network Path, once a challenger to Facebook, is closing down*, TECHCRUNCH (Sept. 17, 2018) <https://techcrunch.com/2018/09/17/rip-path/#:~:text=The%20eight%2Dyear%2Dold%20service,Path%20service%20will%20be%20discontinued>. The Foursquare app is still active, but its growth has stalled. See, e.g., Basma AlBanna, Mahmoud Sakr, Sherin Moussa & Ibrahim Moawad, *Interest aware location-based recommender system using geo-tagged social media*, 5 ISPRS INTERNATIONAL JOURNAL OF GEO-INFORMATION, 3 (2016).

⁸¹ See, Casey Newton & Nilay Patel, *supra* note 75.

⁸² See Manne, *supra* note 8, at 110.

old make-or-buy dilemma faced by every firm at some point or another.

2. *Was the merger anticompetitive?*

But let us assume that eliminating competition from Instagram was indeed the merger's sole rationale. Would that necessarily make it anticompetitive? Chief among the objections is that both Facebook and Instagram are networked goods. Their value to each user depends, to a significant extent, on the number (and quality) of other people using the same platform. Many scholars have argued that this can create self-reinforcing dynamics where the strong grow stronger. Such an outcome is certainly not a given, since other factors about the service also matter and networks can suffer from diseconomies of scale, as well, where new users reduce the quality of the network.

This network effects point is central to the reasoning of those who oppose the merger: Facebook purportedly acquired Instagram because Instagram's network had grown large enough to be a threat. With Instagram out of the picture, Facebook could thus take on the remaining smaller rivals with the advantage of its own much larger installed base of users.

However, this network tipping argument could cut both ways. It is plausible that the proper counterfactual was not duopoly competition between Facebook and Instagram, but either Facebook or Instagram offering both firms' features (only later). In other words, a possible framing of the merger is that it merely accelerated the cross-pollination of social mechanics between Facebook and Instagram – something that would likely prove beneficial to consumers. This finds some support in Mark Zuckerberg's reply to David Ebersman:

Buying them would give us the people and time to integrate their innovations into our core products.⁸³

The exchange between Zuckerberg and Ebersman also suggests another pro-competitive justification: bringing Instagram's "social mechanics" to Facebook's much larger network of users. We can only speculate about what "social mechanics" Zuckerberg actually had in mind, but at the time Facebook's photo-sharing functionality was largely based around albums of unedited photos, whereas Instagram's core product was a stream of filtered, cropped single images. Zuckerberg's plan to gradually bring these features to Facebook's users – as opposed to them having to familiarize themselves with an entirely different platform – would likely cut in favor of the deal being cleared by enforcers.

Another possibility is that it was Instagram's network of creators – the people who had begun to use Instagram as a new medium, distinct from the generic photo albums Facebook had, and who would eventually come to be known as "influencers" – who were the valuable thing. Bringing them onto the Facebook platform would undoubtedly increase its value to regular users. For example, Kim Kardashian, one of Instagram's most popular users, joined the service in February 2012,⁸⁴ two months before the deal went through. We can see the importance of a service's most creative users

⁸³ See, Casey Newton & Nilay Patel, *supra* note 75.

⁸⁴ See, Instagram (last visited Jan. 29, 2021), [at https://www.instagram.com/p/HN1cDtuS6d/?utm_source=ig_share_sheet&igshid=dapglnd0vtfc](https://www.instagram.com/p/HN1cDtuS6d/?utm_source=ig_share_sheet&igshid=dapglnd0vtfc).

today, as Facebook tries to pay TikTok creators to move to its TikTok clone Reels.⁸⁵ But if this was indeed the rationale, not only is this a sign of a company in the midst of fierce competition – rather than one on the cusp of acquiring a monopoly position – but more fundamentally, it suggests that Facebook was always going to come out on top. Or, at least, it thought it would.

3. *The benefit of hindsight*

The benefit of hindsight inherently biases contemporary takes on the Facebook/Instagram merger. For instance, it seems almost self-evident with hindsight that Facebook would succeed and that entry in the social-media space would only occur at the fringes of existing platforms (the combined Facebook/Instagram platform) – think of the emergence of TikTok. However, at the time of the merger, such an outcome was anything but a foregone conclusion.

For instance, critics argue that Instagram no longer competes with Facebook because of the merger. However, it is equally plausible that Instagram only became so successful *because* of its combination with Facebook (notably thanks to the addition of Facebook’s advertising platform, and the rapid rollout of a stories feature in response to Snapchat’s rise).⁸⁶ Indeed, Instagram grew from roughly 24 million users at the time of the acquisition to over 1 billion users in 2018.⁸⁷ Likewise, it earned zero revenue at the time of the merger.⁸⁸ This might explain why the acquisition was widely derided at the time.

This is critical from an antitrust perspective. Antitrust enforcers adjudicate merger proceedings in the face of extreme uncertainty. All possible outcomes, including the counterfactual setting, have certain probabilities of being true that enforcers and courts have to make educated guesses about, assigning probabilities to potential anticompetitive harms, merger efficiencies, and so on. Authorities at the time of the merger could not ignore these uncertainties. What was the likelihood that a company with a fraction of Facebook’s users (24 million to Facebook’s 1 billion), and worth \$1 billion, could grow to threaten Facebook’s market position? At the time, the answer seemed to be “very unlikely.” Moreover, how could authorities know that Google+ (Facebook’s strongest competitor at the time) would fail?⁸⁹ These outcomes were not just hard to ascertain, they were simply unknowable.

Of course, this is precisely what neo-Brandesian antitrust scholars object to today: among the many seemingly innocuous big tech acquisitions that are permitted each year, there is bound to be at least one acquired firm that might have been a future disruptor. True as this may be, identifying that one successful company among all the others is the antitrust equivalent of finding a needle in a haystack. Instagram simply did not fit that description at the time of the merger. Critics also ignore the benefits

⁸⁵ See Euirim Choi, *Facebook Offers Money to Reel In TikTok Creators*, THE WALL STREET JOURNAL (Jul. 28, 2020) <https://www.wsj.com/articles/facebook-seeks-to-reel-in-tiktok-creators-raising-stakes-in-social-media-rivalry-11595928600>.

⁸⁶ See *Facebook and Instagram Advertising Go Together Like...*, FACEBOOK WEBSITE (March 4, 2016) <https://www.facebook.com/business/news/facebook-and-instagram-ads>.

⁸⁷ See *Anticipated acquisition by Facebook Inc of Instagram Inc*, *supra* note 54, at 36.

⁸⁸ *Id.* at 2.

⁸⁹ *Id.* at 35.

that may arise from such arrangements.

In short, while it is tempting to reassess the Facebook Instagram merger in light of new revelations, such an undertaking is not without pitfalls. Hindsight bias is perhaps the most obvious, but the difficulties run deeper. If we think that the Facebook/Instagram merger has been and will continue to be good for consumers, it would be strange to think that we should nevertheless break them up because we discovered that Zuckerberg had intended to do things that would harm consumers. Conversely, if you think a breakup would be good for consumers today, would it change your mind if you discovered that Mark Zuckerberg had the intentions of an angel when he went ahead with the merger in 2012, or that he had angelic intent today?

Ultimately, merger review involves making predictions about the future. While it may be reasonable to take the intentions of the merging parties into consideration when making those predictions (although it's not obvious that we should⁹⁰), these are not the only or best ways to determine what the future will hold. As Ebersman himself points out in the emails, history is filled with over-optimistic mergers that failed to deliver benefits to the merging parties. That this one succeeded beyond the wildest dreams of everyone involved – except maybe Mark Zuckerberg – does not tell us that competition agencies should have ruled on it differently.

IV. Concluding remarks

Our comments suggest that current calls for a reform of merger rules and thresholds – notably in order to capture potential killer acquisitions – fail to satisfy the requirements of the error-cost framework. Indeed, while critics have argued that existing rules may sometimes enable problematic mergers to go unchallenged or even unreviewed, they have failed to put forward alternative institutional arrangements that would improve social welfare. In other words, they mistakenly analyze the occurrence of false negatives in isolation. In doing so, they ignore how measures that aim to reduce such judicial errors may lead to others errors, as well as higher enforcement costs. In short, they paint a world where policy decisions involve no tradeoffs, and this undermines their policy recommendations.

Given these significant limitations, we urge the FTC to consider this body of academic research with an appropriate amount of caution. For all the criticism it has faced, the current merger review system is mostly a resounding success. It is administrable, predictable, and timely. Yet it also eliminates a vast majority of judicial errors – even its critics concede that false negatives make up only a tiny fraction of decisions. The FTC must decide whether the benefits from catching the very few anti-competitive mergers that currently escape prosecution outweigh the significant costs that are required to achieve this goal. There is currently little evidence to suggest that this is indeed the case.

⁹⁰ See, e.g., Geoffrey A Manne & E Marcellus Williamson, *Hot Docs vs. Cold Economics: The Use and Misuse of Business Documents in Antitrust Enforcement and Adjudication*, 47 ARIZ. L. REV., 609 (2005).