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August 20, 2018

Donald Clark
Federal Trade Commission
Office of the Secretary
600 Pennsylvania Avenue NW
Suite CC-5610 (Annex C)
Washington, DC 20580

RE: Competition and Consumer Protection in the 21st Century Hearings, Project Number P181201

Dear Secretary Clark,

The Information Technology & Innovation Foundation (ITIF) is pleased to submit these comments in response to the request for comment (RFC) from the Federal Trade Commission (FTC) on whether broad-based changes in the economy, evolving business practices, new technologies, or international developments might require adjustments to competition and consumer protection enforcement law, enforcement priorities, and policy.¹

ITIF is a nonprofit, non-partisan public policy think tank committed to articulating and advancing a pro-productivity, pro-innovation and pro-technology public policy agenda internationally, in Washington, and in the states. Through its research, policy proposals, and commentary, ITIF is working to advance and support public policies that boost innovation, e-transformation, and productivity.

Please find our response to the following topic:

¹ "Hearings on Competition and Consumer Protection in the 21st Century," Federal Trade Commission, n.d.
<https://www.ftc.gov/policy/hearings-competition-consumer-protection>.

EVALUATING THE COMPETITIVE EFFECTS OF CORPORATE ACQUISITIONS AND MERGERS

Whether the doctrine of potential competition is sufficient to identify and analyze the competitive effects (if any) associated with the acquisition of a firm that may be a nascent competitive threat;

The identification and evaluation of differentiated but potentially competing technologies, and of disruptive or generational changes in technology, and how such technologies affect competitive effects analysis

These two questions raise several more specific questions that regulators must ask themselves before they make decisions on either general policy or the appropriate response to an alleged anticompetitive action or merger.

What is the appropriate antitrust framework to evaluate acquisitions of nascent technologies?

The general approach that agencies adopt toward nascent technologies can matter a lot. Regulators should by and large welcome new technologies and encourage their growth even if they raise complicated policy issues or challenge the current regulatory framework. In addition, regulators should try to understand the role and nature of new technologies, including the value they potentially deliver and whether multiple versions of similar technology are likely to appear. This will require an appropriate increase in agency resources devoted to keeping talented staff and continuously educating them about the impact of new technology and innovations.

Regulators also need to realize that smaller companies can sometimes have an advantage in developing new technologies because of their focus and specialization. Investors need a way to monetize successes and compensate for risk. Restricting the role of acquisitions may therefore lower the supply of innovation. One way for government to foster the internal growth of small innovators is to revisit some of the Sarbanes-Oxley restrictions enacted in 2002. Regulatory changes that make Initial Public Offerings (IPOs) easier can reduce the pressure to sell.

Even with reforms to IPO laws, many small companies will prefer to be acquired. Larger companies often have the resources needed to take an innovation to scale. A case in point was Google's acquisition of start-up mapping company Keyhole in 2004. Google's very deep pockets, coupled with a willingness of the Google

founders to think boldly, let Keyhole—what became Google Maps—become orders of magnitude larger than anything the Keyhole founders imagined, all the while dropping the price to free.²

Moreover, as Wesley Cohen and Steven Keppler found, in large firms the benefits of one innovation are spread out across more units and products, boosting overall R&D efficiency.³ Moreover, in some industries, such as pharmaceuticals and some internet industries, it is often not realistic to expect a new firm to grow internally. The ability to spend large sums on testing and distribution is vital. Platforms, which already benefit from network effects, may be especially suited to help new technology scale. But even firms in traditional industries can benefit from acquisitions, especially if they access larger distribution networks. A good nontechnical example is Coke's partnership and eventual purchase of the specialty drinks company Honest Tea. Coke vastly expanded the distribution of Honest Tea and gave its investors a profitable exit.

When evaluating mergers involving nascent technology, regulators should ask the following questions:

1. Whether the acquired firm desires to remain independent but is being pressured to sell by targeted competition. If owners of the small company genuinely believe that the acquisition represents their best opportunity for expanding a technology's use and maximizing the firm's value, regulators should be cautious about opposing it. On the other hand, if the firm has been the target of a focused effort to pressure owners to sell, regulators should take a closer look.
2. Whether the acquired firm has the resources to grow without being acquired. As mentioned, IPO reforms may be able to give firms a viable alternative to an acquisition without requiring a change in merger law. But unless nascent technology has an outlet to grow, it cannot have a large impact on markets and benefit consumers and economic growth.
3. Whether the acquirer is likely to use the new technology to enter a new market or stifle it in existing markets.
4. The degree to which users of the new technology must also use the acquirer's existing products in order to benefit from them. In the latter case, the potential for an anticompetitive effect is greater. In the former case, the acquiring firm's profits will depend on ensuring that the technology delivers significant benefits to users.

² Robert D. Atkinson, "Review of Never Lost Again: The Google Mapping Revolution That Sparked New Industries and Augmented Our Reality," *New York Journal of Books*, June 2018, <https://www.nyjjournalofbooks.com/book-review/never-lost-again>.

³ Wesley M. Cohen and Steven Klepper, "A Reprise of Size and R & D," *Economic Journal* 106, no. 437 (July 1996): 948, <http://www.jstor.org/stable/2235365>.

How should the FTC evaluate whether a nascent technology is likely to develop into a competitive threat in dynamic, high-tech markets?

Determining the value of nascent technology is extremely difficult. One reason is that success can depend on the company's business model and competency even more than on the specific technology. Many companies have had great technology but lacked the insight and leadership to develop and market it. Regulators should engage in discussions with all parties, including those both supportive and opposed to a merger, to increase their understanding of the significance and likely future of new technology. Interviews with professional investors can also provide independent views about future outcomes.

Regulators can also look to see whether similar technologies are being developed elsewhere. The existence of similar technology is a sign that its introduction will be broad based rather than limited to one company. This raises fewer antitrust concerns since customers will have more sources to benefit from the technology. It also indicates that the technology is likely to have a significant impact on the market.

Other signs regarding the degree of competitive threat are the amount of patent protection (more protection means that other sources for the technology may not be quickly available) and the internal resources of the owner of the technology. Regulators also need to look at regulatory barriers to nascent technology, including at the state and local level. Regulation can often be a greater barrier to innovation than any alleged anticompetitive behavior. When appropriate, the Commission should attack these regulatory barriers to competition.

What is the appropriate evidentiary standard for potential competition and loss of innovation cases?

Antitrust law should remain focused on consumer benefit, innovation and economic efficiency. Using the consumer welfare test, regulators should have to explain by a preponderance of the evidence why a proposed merger will either 1) eliminate a potential challenger who is both likely to become a significant competitor and develop and scale the technology in question as well or better than the combined firm; or 2) give the buyer a significant technological advantage in a market where there is little competition and where this reduced competition is likely to be used to reduce consumer welfare. This latter point requires accurate market definition, because in the case of free internet services, for example, the relevant market is advertising. These two factors would establish a rebuttable presumption that the merger should not go forward. The company should then get a chance to rebut the government's case.

The main standard should remain consumer welfare (or more broadly, innovation and economic efficiency). There is currently an active debate about whether antitrust law should also try to accomplish other objectives such as privacy and job protection and whether regulators should oppose consolidation even when it presents no harm to consumers. The policies of the last 30 years have resulted in a consensus about the proper role of antitrust policy in the economy. Debate will continue about exactly how to apply the consumer welfare

standard and how to resolve difficult cases, but agencies should not throw out these accomplishments by introducing more uncertainty into how the law will be applied. Job loss and privacy in particular are not issues that should be included in competition policy. For the former, one major goal of competition is productivity growth. Mergers that result in greater productivity clearly boost economic growth and consumer welfare. Restricting business behavior, including mergers, because it might lead to job loss is to turn competition policy into a tool to restrict economic growth.

For the latter, privacy deserves no consideration in competition policy, including merger review. Privacy policy is already enforced by the FTC's Bureau of Consumer Protection. Moreover, if two firms with different privacy policies merge, the merged firm cannot apply the weaker, more permissive policy to all the data in the now combined firm, unless its policies already allows such a change or it obtains affirmative permission from its customers.

Regulators should also ask whether acquiring firms continuously invest in new technologies. Do they spend a high portion of value added on research and development (both with and without mergers)? Companies that focus heavily on innovation are unlikely to relapse into a stagnant defense of their existing market share. They are also more likely to maximize the social value of a nascent technology whether it is developed internally or is acquired through a merger. Another important variable is the degree to which the industry is susceptible to Schumpeterian competition. Is the potential for disruptive technological change high? If it is, companies that do not continuously seek to increase consumer value through innovation are likely to lose market share. Similarly, regulators should ask about the overall pace of technology in the industry. If it is high, then the impact of specific deals is likely to be less. The presence of constant innovation is usually more important than the level of short-term competition.

Mergers are more problematical if the acquisition of new technology enhances a company's presence in an existing, relatively mature market as opposed to boosting its competitiveness in a new market. Technology that lets a large company expand into new markets raises fewer problems because the company does not have a dominant position to protect and likely faces a number of challengers.

Should the Horizontal Merger Guidelines be revised to clarify potential/nascent competition analysis?

For most purposes the existing Guidelines are accurate. They represent consensus opinions rooted in decades of agency actions and court decisions. But updated Guidelines on specific issues, such as the role of nascent technology and innovative industries, can provide companies and courts with greater certainty about how the government will apply antitrust laws. This can increase the number of beneficial mergers and cut the number of bad ones. Guidelines also protect the agencies from outside pressure to challenge mergers that do not violate the guidelines.

Should data-driven dominance be factored into antitrust reviews of nascent technology acquisitions? If so, how?

Data should be looked at in antitrust cases. Like technology, an experienced workforce, physical capital and access to suppliers, it increasingly represents an important input into many markets. But before concluding that data gives a company an unfair competitive advantage, regulators should consider that:

1. The volume of data is often less important than the algorithms or business practices that derive value from it. As with nascent technologies, the mere possession of good data does not automatically result in market power or high profits. The data has to be used in a way that confers real value to users.
2. Large amounts of data are often available privately to any party that wants to buy it. The key constraint is translating the data into a competitive product.
3. Data often has a short shelf-life. Any market advantage it provides is temporary. Thus, companies that do not continuously offer the best services at the best prices will gradually lose market share.
4. Large amounts of data are often vital to the network effects and efficiencies of scale that maximize consumer value. Having more data increases social value. The tendency of many markets, including those dominated by platforms, is toward concentration. This is not due to anticompetitive actions. It is due to diminishing costs and increasing value as products capture a larger market share. Consumers are usually the main beneficiaries of this scale.
5. Data is nonrivalous. Sharing it with one party does not preclude a consumer from sharing it with others. And one party's use of data seldom infringes on another party's use of the same data.
6. Forced sharing of data raises important questions of consent and security. Moreover, the gathering and use of data needs to be protected by appropriate protections for intellectual property because without this the incentives to invest in data collection, development and innovation would be reduced.

THE CONSUMER WELFARE IMPLICATIONS ASSOCIATED WITH THE USE OF ALGORITHMIC DECISION TOOLS, ARTIFICIAL INTELLIGENCE, AND PREDICTIVE ANALYTICS

Some people are concerned that algorithmic decision-making will result in racial bias, such as financial institutions denying loans on the basis of race. However, in many cases, because flawed algorithms hurt the company using them, businesses have strong incentives to not use biased algorithms and regulators are unlikely to need to intervene. For example, banks making loans would be motivated to ensure their algorithms are not biased because, by definition, errors such as granting a loan to someone who should not receive one, or not granting a loan to someone who is qualified, costs banks money. In addition, even if some companies do not have a financial incentive to avoid biased algorithms, existing laws that prohibit such discrimination, such as the Fair Credit Reporting Act and the Equal Credit Opportunity Act, still apply.

Another argument regarding the inadequacy of privacy laws to protect consumer welfare is that the collection of large amounts of data allows companies to discriminate against consumers, including practicing price

discrimination, charging different consumers different prices depending upon the likelihood that they will buy a product.⁴

Indeed, there is some evidence that companies are getting quite good at doing this.⁵ This is often combined with the worry that disadvantaged groups will end up paying higher prices. But there are two reasons why price discrimination might not be a bad thing. First, to the extent that a platform has market power and can only set one price, its incentive is to raise prices on everyone and decrease supply. This allows the company to capture more value from the product and lowers the total benefit to society. If the company can charge different prices to different users, this social loss is reduced. Some consumers might still pay higher prices, but buyers will not purchase a product unless it makes them better off. Second, the ability to charge different prices is not limited to raising prices. Companies also have an incentive to lower prices for consumers who are reluctant to purchase the good.⁶ This effect might actually be progressive. The company will charge a higher price to those users whose demand is inelastic. To the extent that lower-income consumers are more price responsive, they will benefit from price discrimination.⁷

More broadly, the FTC should recognize that consumers as a whole are going to benefit from greater use of algorithms, particularly artificial intelligence (AI). Though there are concerns about the potential harms that could arise from the use of AI, such as AI exacerbating unconscious human bias, the proposals that have gained popularity among consumer advocates to address these harms would be at best largely ineffective and at worst cause more harm than good. The two most popular ideas—requiring companies to disclose the source code to their algorithms and explain how they make decisions—would cause more harm than good by regulating the business models and the inner workings of the algorithms of companies using AI, rather than holding these companies accountable for outcomes.

⁴ Nathan Newman, “The Costs of Lost Privacy: Consumer Harm and Rising Economic Inequality in the Age of Google,” *William Mitchell Law Review* 40, no. 2 (2014), <http://open.mitchellhamline.edu/cgi/viewcontent.cgi?article=1568&context=wmlr>.

⁵ Burton G. Malkiel, “The Invisible Digital Hand,” *The Wall Street Journal*, updated November 28, 2016, <http://www.wsj.com/articles/the-invisible-digital-hand-1479168252>

⁶ Manne and Sperry, “The Problems and Perils of Bootstrapping Privacy and Data Into an Antitrust Framework,” 7. “It is inconsistent with basic economic logic to suggest that a business relying on metrics would want to serve only those who can pay more by charging them a lower price, while charging those who cannot afford it a larger one.”

⁷ The White House, *Big Data and Differential Pricing* (Washington, DC: The White House, February 2015), 17, https://obamawhitehouse.archives.gov/sites/default/files/whitehouse_files/docs/Big_Data_Report_None_mbargo_v2.pdf.

The first idea—“algorithmic transparency”—would require companies to disclose the source code and data used in their AI systems. Beyond its simplicity, this idea lacks any real merits as a wide-scale solution. Many AI systems are too complex to fully understand by looking at source code alone. Some AI systems rely on millions of data points and thousands of lines of code, and decision models can change over time as they encounter new data. It is unrealistic to expect even the most motivated, resource-flush regulators or concerned citizens to be able to spot all potential malfeasance when that system’s developers may be unable to do so either.⁸

Additionally, not all companies have an open-source business model. Requiring them to disclose their source code reduces their incentive to invest in developing new algorithms, because it invites competitors to copy them. Bad actors in China, which is fiercely competing with the United States for AI dominance but routinely flouts intellectual property rights, would likely use transparency requirements to steal source code.⁹

The other idea—“algorithmic explainability”—would require companies to explain to consumers how their algorithms make decisions. The problem with this proposal is that there is often an inescapable trade-off between explainability and accuracy in AI systems. An algorithm’s accuracy typically scales with its complexity, so the more complex an algorithm is, the more difficult it is to explain. While this could change in the future as research into explainable AI matures—DARPA devoted \$75 million in 2017 to this problem—for now, requirements for explainability would come at the cost of accuracy.¹⁰ This is enormously dangerous. With autonomous vehicles, for example, is it more important to be able to explain an accident or avoid one? The cases where explanations are more important than accuracy are rare.

Fortunately, regulators have an alternative to these flawed approaches. Instead of pursuing heavy-handed regulations or ignoring these risks, they should adopt the tried-and-true approach of emphasizing light-touch regulation, with tailored rules for certain regulated sectors that fosters the growth of the algorithmic economy while minimizing potential harms. The challenge for regulators stems from the fact that innovation, by its very nature, involves risks and mistakes—the very things regulators inherently want to avoid. Yet, from a societal perspective, there is a significant difference between mistakes that harm consumers due to maleficence, negligence, willful neglect, or ineptitude on the part of the company, and those that harm

⁸ Will Knight, “The Dark Secret at the Heart of AI,” *MIT Technology Review*, April 11, 2017, <https://www.technologyreview.com/s/604087/the-dark-secret-at-the-heart-of-ai/>.

⁹ Joe Uchill, “China Broke Hacking Pact Before New Tariff Fight,” *Axios*, April 10, 2018, <https://www.axios.com/china-broke-hacking-pact-before-new-tariff-tiff-d19f5604-f9ce-458a-a50a-2f906c8f12ab.html>.

¹⁰ Cliff Kuang, “Can A.I. Be Taught to Explain Itself?,” *New York Times Magazine*, November 21, 2018, <https://www.nytimes.com/2017/11/21/magazine/can-ai-be-taught-to-explain-itself.html>.

consumers as a result of a company striving to innovate and benefit society. Likewise, there should be a distinction between a company's actions that violate regulations and cause significant harm to consumers or competitors, and those that cause little or no harm. If regulators apply the same kind of blanket penalties regardless of intent or harm, the result will be less innovation.¹¹

To achieve a balance, regulators should take a harms-based approach to protecting individuals, using a sliding scale of enforcement actions against companies that cause harm through their use of algorithms, with unintentional and harmless actions eliciting little or no penalty while intentional and harmful actions are punished more severely. Regulators should focus their oversight on operators, the parties responsible for deploying algorithms, rather than developers, because operators make the most important decisions about how their algorithms impact society.

This oversight should be built around algorithmic accountability—the principle that an algorithmic system should employ a variety of controls to ensure the operator can verify algorithms work in accordance with its intentions and identify and rectify harmful outcomes. When an algorithm causes harm, regulators should use the principle of algorithmic accountability to evaluate whether the operator can demonstrate that, in deploying the algorithm, the operator was not acting with intent to harm or with negligence, and to determine if an operator acted responsibly in its efforts to minimize harms from the use of its algorithm. This assessment should guide their determination of whether, and to what degree, the algorithm's operator should be sanctioned. Defining algorithmic accountability in this way also gives operators an incentive to protect consumers from harm and the flexibility to manage their regulatory risk exposure without hampering their ability to innovate.

This approach would effectively guard against algorithms producing harmful outcomes, without subjecting the public- and private-sector organizations that use the algorithms to overly burdensome regulations that limit the benefits algorithms can offer.

Sincerely,

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¹¹ Daniel Castro and Alan McQuinn, "How and When Regulators Should Intervene," (Information Technology and Innovation Foundation, February 2016), <http://www2.itif.org/2015-how-when-regulators-intervene.pdf>.

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