Chairman Eklund and Committee members, it is an honor to speak with you this afternoon about the antitrust implications of big tech. My name is Felix Chang, and I am a Professor of Law and the Co-Director of the Corporate Law Center at the University of Cincinnati College of Law. I research and write primarily at the intersection of antitrust and financial regulation.

My testimony follows last week’s remarks by Professor Chris Sagers, our state’s foremost antitrust scholar. He was kind enough to share his prepared remarks, which allows me to limit overlap in my testimony. Today I will focus on the market power of big tech, by which I mean tech platforms that connect multiple markets, such as end users on one hand and retailers or content providers on the other. Taking Professor Sagers’ examples, this would mean Amazon (which connects buyers and sellers) and Google (consumers and advertisers/content providers), as well as internet service providers (“ISPs”) such as Comcast (which connect consumers and content providers). I have chosen to discuss market power because this concept is central to the economic understanding of the harms of big tech as well as the legal basis for curtailing their behavior—more precisely, exclusionary behavior. To that end, I am going to begin with the economic theories of leveraging and foreclosure, and then I will analyze the possible solutions in antitrust law. These solutions are couched primarily in Section 2 of the Sherman Act, which
prohibits monopolization by dominant firms and serves as the foundation for concepts such as net neutrality and essential facilities.

**Economic Harms**

Section 2 is framed as a prohibition on monopolization, and illegal monopolization has come to be understood as (i) the possession of monopoly power and (ii) the willful acquisition or maintenance of monopoly power.\(^1\) Put differently, the two requirements are (i) power and (ii) conduct. Section 2 checks single-firm behavior, typically through vertical arrangements, and it is often invoked against exclusionary conduct by a dominant firm.\(^2\) Exclusion is the ability of a firm to exclude rivals from its market. Classic cases include a dominant newspaper denying an upstart broadcaster access to advertisers,\(^3\) an incumbent power company denying an upstart electricity suppliers access to the incumbent’s power lines,\(^4\) a dominant skiing company breaking off a joint venture with a smaller rival,\(^5\) and Microsoft tying its Internet browser to its operating system and preventing the development of middleware as a challenge to the primacy of that operating system.\(^6\)

In each case, the premise for gauging economic harm is market power, because a firm that does not possess significant power will not be able to exclude its rivals. Mathematically,

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market power can be expressed as a relationship between price and marginal cost, where the larger the markup of price over marginal cost, the greater the firm’s market power.\(^7\)

Alternatively, market power can be expressed as an inverse relationship with the firm’s elasticity of demand.\(^8\) However, marginal cost and elasticity of demand are notoriously difficult to pin down, so quantifying market power traditionally defaults to the surrogate of (i) defining the relevant market and then (ii) measuring the market share of the scrutinized firms.\(^9\)

Market power can be especially acute at chokepoints where an upstream market and a downstream market converge. Big tech often operates at these chokepoints—in fact, they comprise the chokepoints. ISPs, for instance, deliver website content to consumers. In this respect, an ISP is a bottleneck for internet traffic. The market for internet service is an upstream market that operates as a necessary input into the downstream market for web content.

Economic harm ensues if the owner of the bottleneck attempts to strengthen its hand in the downstream market by constricting the access of rivals to the bottleneck itself.\(^10\) More concretely, two giant ISPs—Comcast and Time Warner—own large stakes in the streaming service Hulu.\(^11\) Comcast or Time Warner might hamper Hulu’s rival Netflix by slowing the speed at which Netflix content loads, a practice known as bandwidth throttling. This in turn directs consumers to Hulu, thereby augmenting its market share. In this scenario, the provider

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\(^8\) \(L = -1/E_d\), where \(E_d\) is the firm’s demand curve.


has leveraged its dominance in the upstream market for internet service into dominance in the downstream market for web content.

Exclusion can also happen when a dominant firm forecloses market access to rivals. For instance, if Google were to omit a rival price comparison site from Google’s search results, then, because Google is such a dominant search engine, the competitor would have a hard time surviving. Exclusion makes it more expensive for competitors to operate by forcing them to search for another access point into the market or to pay more for the traditional access point into that market.

The lessons from the field of industrial organization (‘‘IO’’) are useful for thinking through market power. IO teaches that market power can flow from network effects. Big tech firms exhibit strong economies of scale, so much so that some of these firms (e.g., the ISPs and perhaps search engines) can be classified as natural monopolies. A natural monopoly arises when a market is more efficiently serviced by one producer than multiple ones. Common examples of natural monopoly occur in industries such as utilities and telecommunications, which rely heavily on infrastructures. As an established infrastructure grows, it becomes increasingly cheaper for it to serve existing customers and attract new ones. Marginal cost decreases even


as—or, more accurately, because—the network attracts customers. ISP\textsuperscript{15} exhibit these traits, as
do Google and Amazon, whose dominance as search engines beget further dominance, in both
the search engine market and adjacent markets.

\textit{Legal Recourse}

Despite developments in economic theory on leveraging, foreclosure, and network
effects, the recourse under antitrust law for exclusion is currently weak. There are several
reasons for this. Here, I will focus on two: the market definition/market share paradigm and the
balancing of procompetitive justifications.

The intuition that market power is a predicate for illegal monopolization has stayed with
antitrust since \textit{Grinnell}. The conventional way of gauging market power is market
definition/market share. Even though antitrust allows plaintiffs to go straight to anticompetitive
effects to demonstrate market power,\textsuperscript{16} courts still hold onto market definition/market share.

Yet market definition for big tech can be confusing. Advocates of big tech argue that
these firms provide a platform for two markets (e.g., producers and consumer) and, thus, both
markets should figure in the platform’s market definition. This is consistent with an antitrust
defendant’s impulse to define the relevant market as broadly as possible. The two-sided market
argument scored a prominent victory in \textit{Ohio v. American Express}, where the Supreme Court
accepted the defendant’s characterization of a credit card company as platform catering to

\textsuperscript{15} \textit{See} \textsc{Herbert Hovenkamp}, \textsc{Federal Antitrust Policy: The Law of Competition and Its Practice} 32 (5th ed.
2011).

\textsuperscript{16} \textit{See} Steven C. Salop, \textit{The First Principles Approach to Antitrust, Kodak, and Antitrust at the Millennium}, 68
\textsc{Antitrust L.J.} 187 (2000).
merchants and consumers, and thus both markets were relevant to the market share calculation in assessing the harm of the company’s merchant antisteering provisions. ¹⁷

However, this argument can be taken too far; for newspapers (which bring together readers and advertisers) and shopping malls (stores and shoppers) could be characterized similarly as two-sided platforms. For big tech, it would seem to make sense to tailor market definition to the precise market in which harm is alleged.

To be sure, vertical arrangements that might be viewed as exclusionary can provide efficiencies. ¹⁸ A retailer’s acquisition of a producer brings production in house and therefore saves the retailer from having to negotiate with a wholesaler; part of the savings can be passed to consumers. Amazon’s purchase of Whole Foods, which operates in a very different market, allows consumers to do one-stop shopping at Amazon for groceries and other products.

Yet with big tech, a myopic focus on consumer welfare (e.g., through price savings for consumers or efficient shopping) obscures the damage that tech firms are amassing elsewhere—to competition in adjacent markets, workers, privacy, and even democracy and inequality. While noneconomic goals are likely beyond the scope of antitrust, I believe the efficiencies of big tech are overblown. I also believe that we can work with existing frameworks in antitrust to correct the industry’s anticompetitive effects.

Several of these solutions have emerged out of the centuries-old duties imposed upon common carriers—businesses which interfaced with the general public and were charged with

¹⁸ Here the most famous example arguments have come from Robert Bork, who held that the Sherman Act’s consumer welfare prescription was tantamount to economic efficiency. See ROBERT BORK, THE ANTITRUST PARADOX (1978). See also RICHARD POSNER, ANTITRUST LAW: AN ECONOMIC PERSPECTIVE (1976).
providing an equal level of service to all. Common carriers bore nondiscrimination duties devised centuries ago under English common law and codified in U.S. and English statutes governing railroads in the 1800s. One modern variation of this duty is network neutrality, a rule that the Federal Communications Commission considered which would have restricted the ability of ISPs to fast-track the content of favored websites.

There is an antitrust analog to federal regulation: essential facilities. An essential facilities claim is established if (i) a monopolist controls a facility which (ii) a competitor is unable practically or reasonably to duplicate and (iii) use of the facility is denied to the claimant, even though (iv) it is feasible for the monopolist to provide access. In the past, essential facilities has been invoked to open up access to a railroad terminal, ski slopes, electricity delivery, news wire membership, and local telephone exchanges. Yet this doctrine was all but gutted by the Supreme Court its 2004 Trinko decision. Trinko was consistent with a general

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21 MCI Comms’n Corp. v. AT&T Co., 708 F.2d 1081, 1132-33 (7th Cir. 1983).


23 Aspen Skiing, 472 U.S.

24 Otter Tail, 410 U.S.


skepticism toward the duty of a dominant firm to deal with its competitors. I see essential facilities and the duty to deal as the best starting points for reining in big tech, which have become networks essential to our daily lives. In the current framework, public utility style regulation is probably not tenable.\textsuperscript{27}

As a finance scholar, \textit{Trinko} troubles me more because of what it has done to the balance between antitrust and regulation. The \textit{Trinko} majority suggests that antitrust must yield if regulation has spoken.\textsuperscript{28} Thus, if regulators have promulgated a rule that may affect competition, competitors cannot bring an antitrust suit—even if the statute has an antitrust savings clause. More concretely, assume that financial regulators promulgate a rule that prohibits derivatives clearinghouses, a financial market infrastructure essential to the trading of financial derivatives, from setting excessively restrictive membership standards that exclude smaller financial firms.\textsuperscript{29} If a smaller financial firm is excluded nonetheless, \textit{Trinko} may well pre-empt an antitrust claim because of the presence of the rule.

Regulators are bound to weigh in on big tech. The FCC has already done so by rescinding its network neutrality rules. Future regulators, of whatever political persuasion, are likely to do the same, given the bipartisan ire that big tech has inspired. In \textit{Trinko}’s aftermath, a little regulation, however well intentioned, “can be a dangerous thing for competition enforcement.”\textsuperscript{30} Regulation sometimes protects incumbents to the detriment of insurgent competitors, and


\textsuperscript{28} See 540 U.S. at 406.

\textsuperscript{29} See 17 C.F.R. 39.12(a)(1).

regulators are vulnerable to capture by regulated industries. A robust antitrust regime offers an alternative, whereby competitors with a private right of action can patrol for anticompetitive conduct; indeed competitors may be better at discerning anticompetitive effects than regulators. Yet if a sector-specific regulator does not vigorously enforce a rule, then antitrust cannot step in, at least under the current regime.

I come then to the same conclusions as Professor Sagers. There is enough in current antitrust laws to curb the abuses of big tech. With a few adjustments and better enforcement, we can shore up antitrust law and competition policy to strike the right balance among innovation, efficiency, and competition.

Thank you again for this opportunity, and I welcome further discussion during Q&A.