is provided by a privately owned producer. A price control approach employs governmental entry and price constraints to ensure that the producer is able to maintain minimum efficient scale and doesn't charge supracompetitive prices. Franchise bidding similarly restricts entry but employs competition for the right to produce, rather than price regulation, as the primary means of preventing monopolistic pricing. With both approaches, though, the producer is owned and (primarily) controlled by a private entity.

A third approach to the natural monopoly problem is to have a government-owned entity provide the product or service at issue. For example, Amtrak (a provider of passenger rail service) and the Tennessee Valley Authority (an electricity provider) are both publicly owned participants in industries exhibiting some natural monopoly characteristics.\(^{37}\)

The theory underlying this approach is that a publicly owned producer - one not beholden to its investors - would not seek profit-maximization, the objective that leads privately owned monopolists to reduce output and hike price (see Figure 7.5), but would instead respond to the demand of voters, who are both the owners and the customers of the producer. If the producer were run in a manner that failed to maximize productive efficiencies, voters, as the producer's owners, would punish those in control of the entity. But, wearing their consumer hats, voters would also punish supracompetitive pricing.\(^{38}\) Public accountability, then, could lead the controllers of the public enterprise to manage it so as to minimize productive and allocative inefficiency.

The chief problem with public ownership is that political accountability is far less effective than market discipline as a means of promoting productive efficiency. A publicly owned producer's prices may be salient to voters; its costs almost never are. Moreover, whereas a privately owned producer must constrain its costs in order to raise capital and will fold if its costs consistently exceed its revenues, a public entity can almost always access the public fisc and can never really fail. (Consider, for example, the perpetually in-the-red US Postal Service.) The incentive for public firm managers, then, is to hold prices down while largely ignoring costs.

Not only do public entities escape the cost-constraining discipline that comes from having to access the capital markets and worry about failure, they also avoid the disciplining effect of the market for corporate control. As explained in Chapter 6, the threat of a takeover is a powerful force for constraining agency costs in a private corporation. If private managers slack off or act opportunistically to the detriment of company business, their firms' stock prices will fall, and they may lose their jobs in a takeover. Recognition of that possibility encourages them to be both diligent and loyal. This requires, though, that ownership interests in the firm be transferable. Voluntary sales and purchases of such interests (e.g., stock) produce an entity's market price, the metric of managerial performance, and enable the ouster of poorly performing managers. Ownership interests in publicly owned (government) firms, however, are not transferable. For such firms, there is neither a market-based measure of managerial performance (i.e., a stock price) nor a political mechanism for punishing bad managers. Not surprisingly, then, publicly owned natural monopolies tend to be less efficient than their privately owned counterparts.\(^{39}\)

Direct Regulation of Market Power in the Absence of Natural Monopoly: The Case of Net Neutrality Rules

A key question for policymakers confronting potential market power is whether to leave the matter to antitrust or instead to impose some form of direct regulation. As we have seen, antitrust is poorly positioned to address natural monopoly conditions, which often call for ex ante, industry-specific regulation. But what if there's not a natural monopoly? Might direct regulation still be the better way to address potential exercises of market power?

That question has recently arisen in the debate over whether and how to regulate the Internet. Proponents of so-called net neutrality maintain that the entities controlling data transmission across the Internet - primarily Internet Service Providers (ISPs), such as cable and telephone companies - should not be allowed to treat different data packets differently. In particular, ISPs should be prohibited from providing faster transmission of the data from some content, or "edge," provider (e.g., Netflix) in exchange for money or some other benefit. Nor should ISPs be allowed to slow down data from content providers that haven't paid for a fast lane.

So far, ISPs have generally refrained from blocking or "throttling" Internet content. Indeed, the FCC, which has come down firmly in favor of net neutrality, could identify only four troubling instances of non-neutral network

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\(^{37}\) Public ownership is far more common abroad. For example, whereas most of the non-passenger railroad transporters and all domestic commercial airlines are privately owned in the United States, both industries are almost entirely government-owned in most European countries.

\(^{38}\) Supracompetitive pricing would provide some benefit to voters by increasing the publicly owned firm's profits, but the increase in profit would be less than the decrease in consumer welfare resulting from the supracompetitive pricing (see Figure 7.5). Accordingly, such pricing would entail a net loss for voters.

\(^{39}\) See Viscusi, et al., supra note 4, at 515-16 (discussing empirical evidence).
management over the entire history of the commercial Internet. Nevertheless, proponents of net neutrality (including, at the time of this writing, a majority of the sitting FCC commissioners) point to a parade of horrors that could occur if non-neutral transmission practices were to proliferate. Those adverse effects include degraded Internet performance (as ISPs disfavor edge providers that refuse to pay for fast lanes), reduced innovation by edge providers (which will have less money for R&D if they must pay for priority transmission), and higher prices for Internet content (as edge providers pass on prioritization changes to consumers).

Market power is the disease that could produce these adverse symptoms. If they faced vigorous competition, ISPs would seek to win business by managing network traffic in accordance with consumer preferences. Unfortunately, competition among broadband service providers is somewhat anemic in many parts of the country. Absent the threat of losing business to rivals, ISPs might decide to transport data in a manner that fails to optimize the end-user experience. In particular, they may favor content providers with which they have a relationship or disfavor those that somehow compete with them or their affiliates. ISP and cable provider Comcast, for example, could opt to speed up content from the Internet video service HULU, which streams the television programming of Comcast’s NBC subsidiary, or might slow down content from Netflix, whose streaming video competes with Comcast’s own cable programming.

The existing statutory landscape offers several options for addressing potentially anticompetitive instances of non-neutral network management. The simplest approach would be to leave the matter to antitrust, which applies in the absence of more focused direct regulation. ISPs’ network management practices are the sort of “vertical restraints of trade” with which antitrust tribunals are quite familiar. In recent decades, courts have revised the standards governing such restraints so that antitrust, which used to treat vertical restraints in a ham-fisted fashion, now does a pretty good job separating pro-consumer restraints from anti-consumer ones. There is no natural monopoly rationale for eschewing an antitrust approach; most regions of the country are served by multiple ISPs, all of which appear to be wholly sustainable, and the explosion of wireless broadband service suggests that competition among broadband providers will only grow. Taking no further regulatory action and relying on antitrust, then, could be the best way to address competitive concerns arising from non-neutral network management practices.

That is not the tack the FCC has taken. Instead, the Commission has sought to impose ex ante rules forbidding the blocking, throttling, or paid prioritization of Internet traffic. The Commission first tried to impose such rules in 2010, but a federal appeals court invalidated them because the Commission had not cited an adequate statutory basis for its rulemaking. The Commission tried again in 2014. That time, it claimed authority under Section 706 of the 1996 Telecommunications Act, which directs the FCC to “encourage the deployment on a reasonable and timely basis of advanced telecommunications capability to all Americans.” Prohibiting the blocking, throttling, and paid prioritization of data, the Commission contended, would encourage innovation by edge providers (e.g., Netflix, Facebook), which would stimulate consumer demand for high-speed Internet access, which would encourage greater investment in broadband networks.

The appeals court accepted the purported statutory basis for the rules, but it identified another problem with them: They effectively transformed ISPs into “common carriers.” Title II of the 1934 Communications Act subjects common carriers to a host of obligations. Among other things, they must “furnish . . . communication service upon reasonable request,” avoid “unjust or unreasonable discrimination in charges, practices, classifications, regulations, facilities, or services,” and charge only “just and reasonable” rates. But the statute provides that entities providing only “information services,” not “telecommunications services,” may not be subjected to such intrusive common carrier rules. Because the FCC had previously characterized the provision of broadband Internet access as an information service, ISPs couldn’t be regulated as common carriers. And since the Commission’s bans on blocking, throttling, and paid prioritization of Internet traffic constituted common carrier regulation, the court reasoned, they exceeded the FCC’s authority. Notably, the court suggested ways the rules might be tweaked so that they wouldn’t constitute common carrier regulation and could thus be sustained under Section 706.

Using the court’s second opinion as a roadmap, the FCC set about revising its net neutrality rules to avoid transforming broadband providers into common carriers. Reclassifying ISPs as providers of telecommunications services and subjecting them to full Title II regulation, the Commission maintained, was far too draconian for such a dynamic industry—one that had achieved astonishing success with little ex ante regulation.

41 See Comcast Corp. v. FCC, 680 F.3d 642 (D.C. Cir. 2012).
44 47 U.S.C. § 1513(b), (a).
46 Verizon, 740 F.3d at 653–59.
Things changed when President Barack Obama, seizing the opportunity to weigh in on an issue of interest to his core base of political supporters, posted a YouTube video encouraging the FCC to abandon its targeted rulemaking and subject broadband providers to Title II regulation. That same day, activists picketed the home of FCC Chairman Tom Wheeler, demanding full Title II regulation of Internet broadband. Soon afterwards, the FCC abruptly changed its position: Title II reclassification went from being too draconian to being the preferred policy option. The nominally independent commissioners voted 3–2 along party lines to reclassify ISPs as telecommunications services and subject them to net neutrality obligations. It promised, however, to “forebear” from forcing them to comply with a number of Title II rules, including all rate regulation.

At the time of this writing, then, network management by ISPs is policed not by antitrust but by direct, ex ante regulations imposed by the FCC. Moreover, because the Commission abandoned its Section 706 rules and acceded to President Obama’s demand that ISPs be reclassified as common carriers, the regulation does not consist merely of the targeted rules previously promulgated but potentially entails the full panoply of Title II rules and standards.

This is not the optimal remedy for potentially anticompetitive instances of non-neutral network management. Relying on antitrust would have been superior to either form of direct regulation. And between the two types of direct regulation – targeted rules under Section 706 or full common carrier regulation under Title II – the former would have been better than the latter.

The choice between antitrust and direct regulation generally (under either Section 706 or Title II) involves a trade-off between flexibility and determinacy. Antitrust is flexible but somewhat indeterminate; it would condemn non-neutral network management practices that are likely to injure consumers, but it would permit such practices if they would lower costs, improve quality, or otherwise enhance consumer welfare. The direct regulatory approaches are rigid but clearer; they declare all instances of non-neutral network management to be illegal per se.

Determinacy and flexibility influence decision and error costs. Because they are more determinate, ex ante rules should impose lower decision costs than would antitrust. But direct regulation’s inflexibility — automatic condemnation, no questions asked — will generate higher error costs. That’s because non-neutral network management is often good for end users. For example, speeding up the transmission of content for which delivery lags are particularly detrimental to the end-user experience (e.g., an Internet telephone call, streaming video) at the expense of content that is less lag-sensitive (e.g., digital photographs downloaded from a photo-sharing website) can create a net consumer benefit and should probably be allowed. A per se rule against non-neutral network management would therefore err fairly frequently. Antitrust’s flexible approach, informed by a century of economic learning on the output effects of contractual restraints between vertically related firms (like content producers and distributors), would probably generate lower error costs.

Although both antitrust and direct regulation offer advantages vis-à-vis each other, this isn’t simply a wash. The error cost advantage antitrust holds over direct regulation likely swamps direct regulation’s decision cost advantage. Extensive experience with vertical restraints on distribution have shown that they are usually good for consumers. For that reason, antitrust courts in recent decades have discarded their old per se rules against such practices — rules that resemble the FCC’s direct regulatory approach — in favor of structured rules of reason that assess liability based on specific features of the market and the restraint at issue. While these rules of reason (standards, really) may be less determinate than the old, error-prone per se rules, they are not indeterminate. By relying on past precedents and the overarching principle that legality turns on consumer welfare effects, business planners and adjudicators ought to be able to determine fairly easily whether a non-neutral network management practice passes muster. Indeed, the fact that the FCC has uncovered only four instances of anticompetitive network management over the commercial Internet’s entire history — a period in which antitrust, but not direct regulation, has governed ISPs — suggests that business planners are capable of determining what behavior is off-limits. Direct regulation’s per se rule against non-neutral network management is thus likely to add error costs that exceed any reduction in decision costs. It is probably not the remedy that would be selected under this book’s recommended approach.

In any event, direct regulation under Title II, the currently prevailing approach, is certainly not the optimal way to address potentially anticompetitive instances of non-neutral network management by ISPs. Whereas any ex ante regulation of network management will confront the familiar knowledge problem, opting for direct regulation under Title II, rather than the more cabined approach under Section 706, adds adverse public choice concerns to the mix.

47 See Brian Fung, Obama to the FCC: Adopt “the strongest possible rules” on net neutrality, including Title II, Wash. Post (Nov. 10, 2014).
49 See supra note 16 and accompanying text.
As explained earlier, reclassifying ISPs to bring them under Title II empowers the FCC to scrutinize the “justice” and “reasonableness” of nearly every aspect of every arrangement between content providers, ISPs, and consumers. Granted, the current commissioners have pledged not to exercise their Title II authority beyond mandating network neutrality, but public choice insights suggest that this promised forbearance is unlikely to endure. FCC officials, who remain self-interest maximizers even when acting in their official capacities, benefit from expanding their regulatory turf; they gain increased power and prestige, larger budgets to manage, a greater ability to “make or break” businesses, and thus more opportunity to take actions that may enhance their future career opportunities. They will therefore face constant temptation to exercise the Title II authority that they have committed, as of now, to leave fallow. Regulated businesses, knowing that FCC decisions are key to their success, will expend significant resources lobbying for outcomes that benefit them or impair their rivals. If they don’t get what they want because of the commissioners’ voluntary forbearance, they may bring legal challenges asserting that the Commission has failed to assure just and reasonable practices as Title II demands. Many of the decisions at issue will involve the familiar concentrated benefits/diffused costs dynamic that tends to result in under-representation by those who are adversely affected by a contemplated decision. Taken together, these considerations make it unlikely that the current commissioners’ promised restraint will endure. Reclassification of ISPs so that they are subject to Title II regulation willprobably lead to additional constraints on edge providers and ISPs.

Indeed, in the first few months following the FCC’s reclassification of ISPs into common carriers subject to Title II, the Commission received thousands of requests to regulate Internet pricing, business practices, and products. The producer of the struggling Blackberry smartphone, for example, demanded that Netflix be forced to stream its video content on Blackberry’s unpopular phones. Organizations representing heavy Internet users have pushed for the elimination of policies charging higher fees to subscribers who exceed broadband data limits, a development that would require consumers who use the Internet for only email and casual web browsing to subsidize round-the-clock video gamers and those who watch hours of movies and television on their smartphones. In the face of continual requests for expanded regulation, maintaining their forbearance policy will require significant fortitude on the part of the commissioners, particularly new ones who were not part of the original forbearance arrangement.

The recent experience of telecommunications provider T-Mobile suggests how fragile the FCC’s promised forbearance is likely to be. In November 2015, the FCC’s chairman praised as “innovative” T-Mobile’s “Binge On” service, which offered cost-conscious subscribers unlimited access to Netflix, ESPN, HBO, and several other popular streaming video providers. Ridiculing the notion that Title II regulation would chill innovative offerings like T-Mobile’s, he remarked:

I also kind of chuckle at the fact that as we were debating the open Internet, everybody was saying, “Oh, this is going to thwart innovation, it’s going to be terrible. People are going to have to come to the FCC to say, ‘Mother, may I’ before they do anything in the market.” Well that certainly didn’t happen here.50

It seems the chairman spoke too soon. Within a few weeks of his remarks, complaints by a number of well-organized interest groups led the FCC to demand that T-Mobile appear before Commission staff to defend offering service packages that discriminate among content providers.51 The company was, in fact, ordered to seek permission to offer a service its cost-conscious consumers have demanded. Implicitly acknowledging that Title II regulation does effectively require FCC permission for virtually all innovation by ISPs, edge providers, and other Internet businesses, the Commission recently established a system for obtaining non-binding pre-approval of innovations. Unfortunately, the pre-approval mechanism will do little to alleviate business planners’ concerns.

According to the rules implementing the FCC’s Internet innovation pre-approval program,

A proposed course of conduct for which an advisory opinion is sought must be sufficiently concrete and detailed so as to be more than merely hypothetical; it must be sufficiently defined to enable the Bureau to conduct an in-depth evaluation of the proposal. In addition, the Bureau will not respond to requests for opinions that relate to ongoing or prior conduct.52

The set of innovations that are not “hypothetical” but yet remain unimplemented so that they are not “ongoing” would seem to be small indeed. Presumably, the Commission means that the innovator must have developed

50 See L. Gordon Crovitz, Obamanet Goes to Court, Wall St. J. (Nov. 29, 2015).
or unreasonable solely because they make things harder for the perpetrator's rivals. Business planners are thus really "at sea" when it comes to assessing the legality of novel practices.

All this implies that Internet businesses regulated by Title II need to court the FCC's favor, that FCC officials have more ability than ever to manipulate government power to private ends, that organized interest groups are well-poised to secure their preferences when the costs are great but widely dispersed, and that the regulators' dictated outcomes—immune from market pressures reflecting consumers' preferences—are less likely to maximize net social welfare. In opting for a Title II solution to what is essentially a market power problem, the powers that be gave short shrift to an antitrust approach, even though there was no natural monopoly justification for direct regulation. They paid little heed to the adverse consequences likely to result from rigid per se rules adopted under a highly discretionary (and politically manipulable) standard. They should have gone back to basics, assessing the disease to be remedied (market power), the full range of available remedies (including antitrust), and the potential side effects of each. In other words, they could have used this book.

LESSONS FOR POLICYMAKERS

Available remedies for the market power disease divide into standards that are fleshed out ex post (i.e., antitrust: "don't unreasonably restrain trade or engage in unreasonably exclusionary conduct") and rules whose strictures are specified ex ante (i.e., price regulation: "don't charge more than x"; franchise bidding: "don't sell in this market unless you were the lowest-priced bidder, and in that case, charge only your bid price"; and public ownership: "don't compete against the government in this market"). The first thing policymakers confronting potential market power must decide, then, is whether to rely on antitrust, the residual regulator, or to impose some form of direct regulation.

Because both the knowledge problem and public choice concerns are more severe for rigid rules than for flexible standards, antitrust should be used unless there is some reason to believe it would be ineffective. That will usually be the case with natural monopolies, but not otherwise. As experience under the FCC's politically motivated net neutrality rules is showing, direct regulation is a poor response to market power concerns in markets not involving natural monopoly. Relying on antitrust would be a better approach.

As for the substance of antitrust, policymakers should continue the US Supreme Court's approach of construing substantive liability standards