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POLICY

How Platforms Should (and Should Not) Be Regulated

In the fall of 2014, the New York City subways were suddenly filled with ads for a business many city residents were just beginning to learn about—Airbnb. These were not ordinary ads aimed at convincing potential customers to try out the room rental services provided by Airbnb. They were what advertising people call corporate image ads, designed to burnish the reputation of the company itself. “Airbnb is great for New York City,” read the slogan on every ad.

But not all subway riders agreed. Within days, many of the ads had been “edited” by marker-wielding graffiti writers with their own thoughts about Airbnb. Journalist Jessica Pressler recorded some of the choicest comments in *New York* magazine. One poster had been supplemented with the observation, “Airbnb accepts NO Liability.” Another had been marked with

the scrawl, “The dumbest person in your building is passing out a set of keys to your front door!” And on several posters, the phrase “for New York City” had been replaced with a different handwritten conclusion: “Airbnb is great *for Airbnb*.”

The war of the posters reflected a bigger conflict already being waged in New York City and in other cities around the world where Airbnb was expanding its foothold. Airbnb’s corporate image advertising campaign was part of an expensive lobbying and public relations program designed to counter what the company viewed as an unfair assault by regulators, business rivals, and misinformed members of the media and the general public. The issues under debate: Is Airbnb a blessing and a boon to New York and its citizens, or a cancer that is undermining the quality of life and the economic soundness of the city? And who should have the right and the power to decide?

THE REGULATORY CHALLENGE: REWORKING OLD RULES FOR A NEW WORLD

The emergence of the world of platforms is giving rise to an increasingly important social challenge: the need to design balanced internal governance systems and external regulatory regimes to ensure they operate fairly.¹ As platforms such as Airbnb, Uber, Upwork, RelayRides, and many more play a growing role in the economy and in the social and political spheres, issues about the rights of participants as well as the impact of platform businesses on other sectors and on society as a whole are becoming increasingly salient. Thus, the unprecedented growth of platforms is bringing regulatory issues to

the front of the popular consciousness in ways that have not been seen since the financial meltdown of 2008–09.

As debates about these issues rage, many observers are beginning to recognize that much of what we all “know” about regulatory policy is wrong—at least when applied to today’s rapidly evolving platform markets. There is significant tension between the social goals of promoting innovation and economic development, which argue for a relatively laissez-faire approach to regulating platforms, and the social goals of preventing harm, encouraging fair competition, and maintaining respect for the rule of law.

It’s time for policymakers, legal scholars, and business advocates to reexamine old assumptions about regulation in light of the changes being brought about by the rise of the platform. In this chapter, we’ll explore some of the key questions that leaders must grapple with in the years to come as platforms continue to transform the economy. Some of the issues we will explore include possible effects on tax policy, affordable housing, public safety, economic fairness, data privacy, labor rights, and more.

THE DARK SIDE OF THE PLATFORM REVOLUTION

We have already noted the many benefits that the explosive growth of network platforms is providing. However, we must also acknowledge that the spread of platforms will not usher in some kind of new-economy nirvana. Like every business, social, or technological innovation, the rise of platforms has the potential for harm.²

Some of the complaints about the rise of platforms reflect the disruptive impact of platform businesses on traditional industries. It’s natural that companies and workers whose profits and livelihood may be threatened by new business models will fight back by any means available, including seizing on evidence, meaningful or not, that the new models are causing economic, environmental, social, or cultural harm. Some of the attacks on platform businesses certainly fall into this category. It’s not hard to understand why large publishers and bookstore chains might hate Amazon, why record companies might hate iTunes, why taxi companies might hate Uber, and why hotel chains might hate Airbnb. Naturally, when criticism of platforms—including calls for strict regulation to limit their impact—comes from interested sources like these, it should be taken with a grain of salt.

But this doesn’t mean that there are no legitimate complaints to be raised about the impact of platform businesses. Visitors to New York who take advantage of Airbnb to enjoy affordable accommodations are fans of the service, as are the hosts who make extra money by renting out their spare rooms. But some of their neighbors are unhappy. Horror stories about orgies in Airbnb rentals, assignments with prostitutes (one of whom reportedly ended up getting stabbed), and parties with uncontrolled groups of rowdy young drunks have found their way into the tabloid press. One worried Manhattan landlord, Ken Podziba, felt driven to install surveillance cameras to prove that a tenant was renting out her place in violation of a state law forbidding short-term sublets. He succeeded in having her evicted. “Airbnb is making money while letting people do whatever they want,” Podziba exclaims. “It’s crazy.”³

As we saw in chapter 8, the impacts of Airbnb on third parties uninvolved

in the rental arrangement are what economists call *externalities*. A recurring economic problem is when the cost of negative externalities is borne not by the people or companies that created them but by “innocent bystanders” who are stuck with the problem. Externality issues are a great way for a business to antagonize its neighbors and invite intervention by regulators—and Airbnb is currently grappling with a number of them.

Lack of consistent insurance coverage has been one of the most serious externality questions around Airbnb. In December 2014, after years of complaints, Airbnb announced a new policy that would provide \$1 million of liability coverage to protect its U.S. hosts from damages caused by wayward guests. The problem: this is so-called secondary coverage, which only kicks in after the host’s personal homeowner’s policy is used up. And nearly all personal homeowner’s policies in the U.S. specifically *exclude* coverage for “commercial activity” in the home—including rentals. Airbnb appears to be hoping that the cost of damages will somehow get pushed onto personal insurance policies administered by companies that aren’t diligent about investigating claims—or that are deceived by homeowners who lie about their role as Airbnb hosts.

Naturally, this partial insurance coverage is worrisome to many Airbnb hosts. But as financial journalist Ron Lieber points out, it also creates an externality that could impact thousands of otherwise uninvolved citizens. “If Airbnb succeeds in sharing risk with personal insurance companies,” he writes, “then everyone’s premiums have to rise to cover it.”⁴

Of course, as we’ve noted, some externalities are positive—economic and other benefits that businesses provide to uninvolved third parties. Some data suggest that hotel prices fell slightly after the entry of Airbnb, likely

increasing the tourism business and ultimately benefiting local restaurants and other attractions.⁵ Other data suggest that the number of drunk driving deaths has fallen slightly after the entry of Uber.⁶ But such positive externalities are often difficult to document and quantify, while negative externalities tend to be vivid, unmistakable, and painful. Is it fair for Airbnb to slough off those external costs onto individuals who are not part of the platform, or onto the society at large?

These issues are far from theoretical. Some platform businesses have actually been shut down because of concerns about negative externalities. Consider the MonkeyParking app. Launched in San Francisco in January 2014, this system encouraged drivers to vacate parking spaces by auctioning off the empty places to other users of the system, splitting the proceeds with the driver who vacated. Many observers considered it unfair that the system encouraged the privatization and monetization of a public good—parking spaces—and thereby affected the openness and accessibility of a public transportation system on which countless individuals and businesses depend. It also had a negative impact on privately owned parking lots, whose owners had invested in their businesses to serve the same need. In response to the complaints, in June 2014, regulators stepped in to close the platform.⁷

The MonkeyParking story isn’t a black-and-white judgment call. It raises the question of whether, when, and how the social harm of privatizing a public resource outweighs the benefit of providing planned access to a scarce resource. A case can be made that a system like MonkeyParking produces environmental benefits by reducing the need for drivers to roam downtown streets in search of parking spaces, burning fossil fuels and adding to traffic congestion in the process. But if we permit MonkeyParking to auction off

public parking spaces for private profit, are we opening up to other questionable market activities? Should platform users be permitted to claim choice locations in public parks or beaches on summer weekends and auction them off to the highest bidders? What about seats in the most desirable public schools? Or private rooms in the best-run public hospitals? Do we want to live in a society where those with the most money can claim an ever larger share of the most attractive public goods? These are some of the questions about external impacts that a seemingly simple case like the MonkeyParking story raises.

Labor platforms, bulwarks of what some call the freelance or 1099 economy, raise still other issues of social impact and equity. Platforms like Upwork, TaskRabbit, and Washio are fine for people who value a flexible work schedule above all, but are much more problematic for people who find themselves with no choice except to operate as full-time employees on a freelance basis without the benefits and worker protections normally mandated by law. It's understandable that businesses want to take advantage of the agility and low overhead costs that labor platforms make possible. But in a society like the United States, where basic services such as health care are provided largely through employer programs, is it desirable to create an economic advantage to companies that offload the costs of such services onto their freelance employees—or onto government support programs that are already financially stressed?⁸

Platforms certainly create benefits for their users—if they didn't, they wouldn't be exploding in popularity. But they also create unintended side effects, including negative externalities, that society as a whole must consider and address.

THE CASE AGAINST REGULATION

Despite the problems illustrated by platform business like Monkey-Parking, there are many who would argue that the potential abuses and social dislocations caused by platforms are a small price for the tremendous innovation, new value, and economic growth they produce. Platform businesses are here to stay, and they are bringing undoubted benefits to millions of people. Why run the risk of discouraging innovation through the heavy hand of regulation?

Opponents of regulation are quick to point out the many cases in which it fails or backfires. Nobel Prize-winners Ronald Coase and George Stigler, members of the famous laissez-faire-oriented Chicago School of economics, argue that the vast majority of market failures are best addressed by market mechanisms themselves—for example, by encouraging the free growth of competitors who provide goods and services that produce greater social benefits than their rivals. In their view, the evidence of history suggests that government regulators tend to be incompetent or corrupt, which means that regulation generally fails to solve the problems it is intended to address. In specific instances where the free market fails to resolve a significant problem of market fairness or consumer protection, it can be addressed by private litigation in the courts.

One of the most common mechanisms of regulatory failure was labeled by Stigler “regulatory capture.”⁹ The basic premise is that market participants will act to influence regulation in their own interests, often making the underlying market problems worse rather than better. In his 1971 article,

Stigler illustrated the point with examples drawn from oil import quotas, the prevention of new firms entering the airline, trucking, and banking industries, and the control of access to labor markets through licensing requirements for workers such as barbers, embalmers, physicians, and pharmacists. Thanks to regulatory capture, government rules are often used to block competition and thwart innovation rather than to protect consumers and benefit society. Stigler and his followers argue that the economy and society as a whole will benefit when regulatory capture is eliminated—and that this requires the elimination of most government regulation of business. Jean-Jacques Laffont and Jean Tirole (the latter the 2014 winner of the Nobel Prize in Economics) extended Stigler’s analysis using an agency perspective, making the point that “principals,” like voters, have imperfect control over their “agents,” including elected and appointed officials. Laffont and Tirole show that it would be impossible for firms to benefit from regulatory capture if the principals involved had more complete information about and control over the behavior of their agents.¹⁰

There’s no doubt that regulatory capture does exist. Managers of government agencies charged with devising and enforcing business regulations must often turn to business leaders for advice and guidance on how to craft those regulations, which often means that the rules end up benefiting companies—or certain highly influential companies—rather than the public at large. In some powerful industries, such as financial services, executives have been known to divide their careers between Washington and the private sector, so that the same people who design regulatory regimes later advise corporations on the best ways to evade those regimes or manipulate them for profit (a practice that Laffont and Tirole specifically

highlighted).

Today, some of the regulatory battles about platform businesses reflect, in part, efforts by traditional industries to use government regulation as shields against the competitive models that platforms introduce. Thus, as commentator Conor Friedersdorf puts it, “The car service Uber is fighting in cities all over America to end the regulatory capture enjoyed by the taxicab industry.”¹¹ Airbnb is facing similar battles with regulators who are influenced by long-standing relationships with the hospitality industry.

In the eyes of some observers, the phenomenon of regulatory capture sharply undercuts the claims to legitimacy of most economic regulation by government. For example, in a post on his blog *Cafe Hayek*, libertarian economist Don Boudreaux summarizes the way Uber enables drivers to transform their personal cars from private goods into part of the economy’s capital stock, then goes on to criticize “government interventions against Uber and other sharing-economy innovations” as both “obstacles to market forces that improve consumers’ access to goods and services” and “assaults against market forces that increase the amount of wealth-producing capital that ordinary people are able to own, control, and profit from.”¹²

You may or may not agree with Boudreaux that attempts to restrict the spread of Uber constitute today’s “single most obnoxious example of government intervention.” But the existence of the phenomenon of regulatory capture is not necessarily a fatal blow to the argument in favor of regulation—or even the argument in favor of regulating platforms in particular. It’s possible to argue that, rather than eliminating regulation altogether, we need to design political, social, and economic systems that reduce the likelihood of regulatory capture—for example, through laws that

restrict the “revolving door” between business and government.

Economist Andrei Shleifer, a scholar in the areas of corporate governance and government regulation, points out that there are strong differences in the prevalence of regulatory capture across countries. When governments are relatively unchecked by their citizens, strong regulation often leads to high levels of corruption and expropriation by government officials. And, indeed, this is widely seen in authoritarian countries. However, in countries with more accountable governments, such as those seen in northern Europe, higher levels of regulation appear to be relatively free of such corruption, which reduces the level of regulatory capture. In these circumstances, Shleifer argues, regulation can be compatible with promotion of social welfare and economic growth.

Shleifer notes, moreover, that the reliance of the Chicago School on litigation as an alternative to regulation assumes and depends upon the existence of an independent and honest judiciary. This ignores the fact that judges and lawyers are just as subject to manipulation and capture as other government employees.¹³ More broadly, Shleifer’s argument is consistent with the argument made by Laffont and Tirole in favor of regulation that is specific to countries and technologies.¹⁴

In general, the historical record doesn’t support the arguments of people who favor *no* regulation of business. In fact, it’s difficult to identify any developed marketplace that has been completely free of intervention by government authorities. Regulation to prevent anti-competitive practices goes back at least as far as ancient Greece and Rome, where state authorities took swift action to mitigate grain market price fluctuations that occurred due to natural (weather) events as well as deliberate market manipulation by

merchants and shipping agents.¹⁵ In the same way, modern societies depend upon regulators to enforce rules of fair play in markets. When regulation fails, we get the scandals of insider trading, the meltdown of the mortgage securities market, or the high prices enjoyed by incumbent monopolists.

Relatively few people want to live in a world free of all regulation, and in a complex society like the one we live in today, regulation serves a number of important social functions. The airline system in the developed world is astonishingly safe, given the complexity of the technologies involved and terrorist attempts to sabotage it.¹⁶ This record is a result both of improved technology and training and of relentless post-crash investigations by government agencies like the National Transportation Safety Board, which have led to a systematic elimination of risk factors. In similar fashion, we depend upon regulation to maintain the purity of our drinking water, the safety of our transportation systems, and our ability to respond to and control infectious diseases.

For all these reasons, only a relatively small fraction of the population would endorse the extreme libertarian position of calling for a complete elimination of business regulations—which means that the question is not whether, but precisely how, platform businesses should be covered by regulatory regimes.

Of course, there is a tradeoff between the benefits and costs of regulation. A complete absence of regulation is likely to produce high social and economic costs through the persistence of problems like business fraud, unfair competition, monopolistic and oligopolistic practices, and market manipulation. On the other hand, the most extreme level of government

intervention into markets, as seen in some totalitarian countries, leads to other problems, including corruption, inefficiency, waste, and lack of innovation. Usually the existence of such tradeoffs implies that an intermediate solution is best, and indeed the world's most vibrant economies have typically employed some intermediate level of government regulation via oversight agencies, judicial review, or some combination of the two.

Economist Simeon Djankov and colleagues have classified the range of possible regulatory regimes on a spectrum from private orderings (what we call private governance), through systems that rely on court rulings administered by independent judges or regulation by state employees, to direct government ownership of assets (socialism).¹⁷ Their visual depiction of this spectrum (Figure 11.1) reflects the tradeoff between social losses because of private misdeeds and social losses because of government misbehavior.

Over the last two generations, as Andrei Shleifer has noted, most economists and political theorists have shifted from viewing government intervention in a positive light to preferring privatization.¹⁸ Today, there's a trend toward regulation that was once provided by governments now being provided by private entities acting in their own self-interest—for example, the gradual shift from nationally mandated accounting standards like the Generally Accepted Accounting Principles used in the United States toward the International Financial Reporting Standards promulgated by the International Accounting Standards Board, a private organization based in London. We believe this trend will continue and that governments must rethink what they choose to regulate and what kinds of regulation private entities can provide more efficiently. One purpose of this chapter will be to suggest the circumstances in which regulators should consider intervention

in platform markets and those in which platforms might best govern themselves.

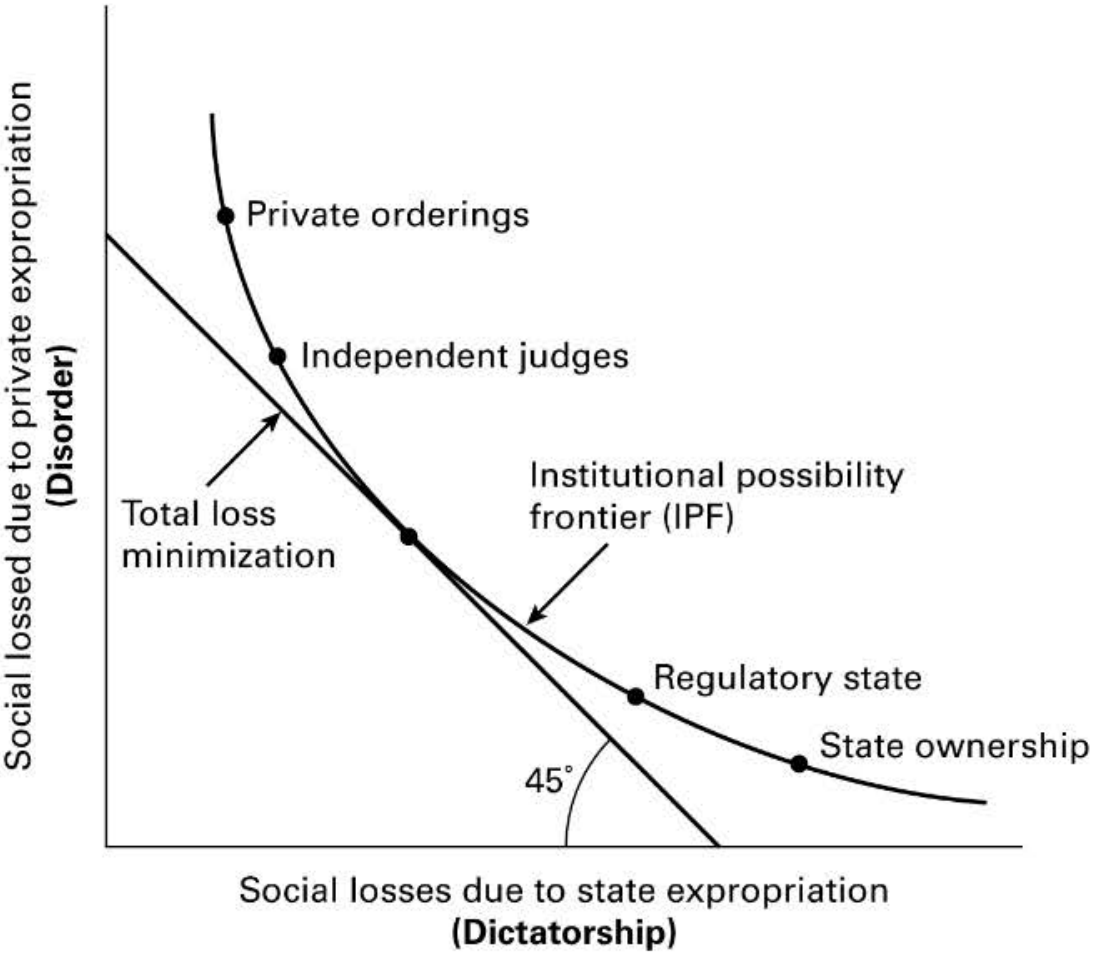


FIGURE 11.1. Djankov’s depiction of the curve of “social losses” produced by either the complete absence of regulation (on the left) or total control of business by government (on the right). Reprinted by permission.

REGULATORY ISSUES RAISED BY THE GROWTH OF PLATFORM BUSINESSES

Let's consider some of the most significant regulatory issues that have come to the fore as a result of the rise of platform businesses over the last two decades.

Platform access. As platforms become increasingly important markets for goods and services, access to platforms can be a legitimate subject for inquiry by regulatory authorities. When certain potential participants are excluded from a platform, it raises questions about who benefits from the exclusion, whether that exclusion is fair, and what its long-term impact on the overall marketplace is likely to be.

For example, the Alibaba Group handles 80 percent of e-commerce transactions in China.¹⁹ The threat of exclusion presents a serious challenge to any firm conducting business online. Access is also a concern of every startup hoping to break into the top listings, among millions, when they have no transactions history to raise their page ranks. In the computer game console market, the platform sponsors (Sony, Microsoft, and Nintendo) have been known to offer category exclusivity to certain firms such as Electronic Arts in exchange for their support of the platform. Firms can achieve the same ends when they buy producers that provide critical components or software for their platforms. For example, Microsoft acquired the game studio Bungie in order to ensure exclusive access to the popular Halo video game franchise when the Xbox was launched in 2001.

Access and exclusivity also play a role in platform compatibility. In 1997, Sun Microsystems filed suit against Microsoft for intentionally “forking” the Java programming language—that is, creating an incompatible branch in the code base—in order to limit its appeal on operating systems other than Microsoft Windows. Sun filed another suit in 2002 when Microsoft excluded Java from desktop distribution in favor of .NET, a proprietary Microsoft language.²⁰ In 2015, the mobile operating system Android has split into open and proprietary versions. Commercial and regulatory inducements to maintain compatibility can be necessary to preserve the interests of consumers.

The issue of exclusion is especially significant when network effects are strong, as business professor Carl Shapiro argues. “[S]uch exclusionary contracts and exclusive membership rules,” Shapiro notes, “can be especially pernicious in network industries, posing a danger that new and improved technologies will be unable to gain the critical mass necessary to truly threaten the current market leader.”²¹ He goes on to say: “Ultimately, this is not a story about consumer harm based on monopoly pricing, although that can be part of the problem. The graver problem is that the pace of innovation may be slowed, denying consumers the full benefits of technological progress that a dynamically competitive market would offer.” This phenomenon has been dubbed *excess inertia*, referring to the power of network effects to slow or prevent the adoption of new, perhaps better, technologies. When one or a few platforms can dominate a particular market because of the power of network effects, they may choose to resist beneficial innovations in order to protect themselves from the costs of change and other disruptive effects.

It's certainly arguable that regulators should consider whether

government intervention would be appropriate in cases where arbitrary denial of access to a particular platform seems likely to lead to excess inertia.²² However, it's not always easy for observers to judge what the true impact of a particular competitive move may be. In some instances, the apparent outcome may change dramatically when viewed over time.

For example, in a 2014 article, two of the authors of this book (Geoffrey Parker and Marshall Van Alstyne) argued that platform policies that limit competition among developers can actually benefit consumers in the long run by fostering higher rates of innovation.²³ The process works like a short-term micro-patent: a platform grants temporary category exclusivity to a particular extension developer in exchange for substantial investment in new products or services. (SAP has used this “preferred partner” strategy with developers like ADP, and Microsoft has used it with selected game developers.) Over time, the innovations created under this time-limited arrangement tend to be folded into the core platform. They then become available to all consumers for their direct consumption and also become available to the next generation of developers to foment new innovation.

For these reasons, we'd urge regulators to move with caution when considering intervention in cases that concern platform access.

Fair pricing. A practice that has traditionally drawn regulatory interest is *predatory pricing*—the situation in which a firm prices goods or services so low that it cannot possibly be making money. The low prices temporarily benefit consumers, but in the long run harm them by driving competitors out of business, which permits the remaining supplier to raise prices to monopoly levels. This, of course, is the objective of the predatory pricer in

the first place, and it explains why government regulators have sometimes stepped in to prohibit pricing practices they view as predatory in nature.

However, two of the authors of this book (Parker and Van Alstyne) have done research that calls into question the traditional interpretation of lower-than-cost prices and therefore the regulator's definition of predatory pricing. Our analysis shows that in fact firms with strong two-sided network externalities can maximize profit even when they distribute services to one side of the market at a price of zero. They achieve this result by earning attractive profits through sales of the goods or services they provide to the *other* side of the market.²⁴

Along with other authors, including Jean Tirole, this line of research in two-sided networks has overturned the conventional wisdom and required regulators to retool their predation tests to incorporate network effects.²⁵ In particular, regulators have viewed the practice of selling goods or services at or below cost as evidence of intent to drive competitors out of business with the intent of then raising prices once those competitors are gone. However, as discussed above, when firms take cross-market externalities into account, they can rationally price their goods or services at zero when selling to certain groups of customers, even in the absence of competition.

Despite these changes in competition analysis, there are still open issues of platform law to be decided. The case brought against Google's search service by the European Union in 2015, which accuses Google of favoring its own comparison shopping service over that of rivals, illustrates this point.²⁶ Interestingly, a similar complaint to the Federal Trade Commission (FTC) in the U.S. was dropped in 2013.²⁷ Another platform giant, Amazon, is facing

scrutiny over its role in the book market. The concern is that Amazon is lowering prices in order to gain market share and that, once competitors exit, prices will rise.²⁸ We are skeptical about the specific charge against Amazon—namely, that book prices will rise significantly once the company's dominance is complete—but we are somewhat more sympathetic to the idea that Amazon might act as too powerful a gatekeeper for an important cultural industry, perhaps establishing its own proprietary format for digital content, as it has tried to do with Amazon Word (AZW), the format used on the Kindle reader. Free pricing of book chapters given away in the AZW format, for example, could be used as a Trojan horse, attracting readers as part of a long-term strategy leading to increased platform control and a shift from an open to a closed proprietary standard.

Data privacy and security. Citizens have long had reason to wonder about what firms might be doing with the personal data they collect about their customers. The ability of businesses to gather finely detailed data about individual households expanded dramatically with the introduction of the consumer credit card. This financial innovation helped increase consumer spending by making it much easier to access credit. But this, of course, meant banks had a significant incentive to use data to measure the creditworthiness of customers. To provide this analysis, three major consumer credit information agencies arose: Equinox, Experian, and Transunion. In exchange for interaction-level detail from the banks, the agencies computed credit scores for consumers that banks could use to decide whether to extend credit and if so, at what rates. If you've ever taken out a car loan or a mortgage, you're familiar with the importance and impact

of your credit score.

Early data security regulation focused on the need to provide transparency around the criteria used to compute credit scores. Stories of racial and geographic discrimination abounded.²⁹

In 1974, Congress passed the Equal Credit Opportunity Act, which prohibited credit discrimination on the basis of sex and marital status. It was amended in 1976 to include race, color, religion, national origin, source of income, and age. In 1977, the FTC began to devote a significant fraction of its resources toward enforcing the act and addressing the discriminatory practices that had led to its passage.³⁰

Today, however, issues regarding the use of consumer data have grown in scale and complexity. The credit agencies have been plagued by problems such as stolen and mistaken identities that can take years for consumers to resolve, causing untold harm.³¹ The use and abuse of consumer information by the credit agencies and the lenders who rely upon them are also the subject of fierce debate. Practices like predatory lending—the deliberate targeting of consumers who can't afford credit by lenders eager to profit from exorbitant interest rates and fees for missed payments—have been blamed for contributing to economic inequality and even market instability.

It's against this backdrop that the FTC came to be the leading U.S. player in regulating the practices of data service providers.

Most consumers appear to be willing to trade access to detailed data about their spending behavior for easy access to credit. But many may not fully appreciate the fact that the same dynamics that power the credit agencies underlie the services provided by “free” information service businesses—the

data aggregators we described in chapter 7. If you've gone online to search for or simply research information about a camera, a book, or any other consumer product, you probably noticed that advertisements for the same product subsequently popped up on every website you visited. This is data-driven marketing in action, and the sale of the underlying personal information about consumers is a significant source of income for many platform businesses.

You may find those customized ads on the Internet a bit unsettling. Even more unsettling are some of the less obvious ways in which personal data are used. Many firms—both platform businesses and others—track consumers' web usage, financial interactions, magazine subscriptions, political and charitable contributions, and much more to create highly detailed individual profiles. In the aggregate, such data can be used for cross-marketing to people who share profiles, as when a recommendation engine on a shopping site tells you, "People like you who bought product A often enjoy product B, too!" The anonymity of this process renders it unobjectionable to most people. But the same underlying data can be, and is, sold to prospective employers, government agencies, health care providers, and marketers of all kinds. Individually identifiable data about sensitive topics such as sexual orientation, prescription drug use, alcoholism, and personal travel (tracked through cell phone location data) can be purchased through data broker firms such as Acxiom.³²

Consumer concern over the practices of the data broker industry has led to a number of investigations, including a major FTC inquiry that resulted in a report titled "Data Brokers: A Call for Transparency and Accountability."³³ But very little has actually changed to prevent practices that many find

objectionable.³⁴

Skeptics say that, in reality, citizen concerns about data privacy are superficial. They point out that consumers routinely share intimate personal information about themselves on social media platforms such as LinkedIn and Facebook, and that they are increasingly "instrumenting themselves" using fitness, health, and diet tools like Fitbit, Jawbone, and MyFitnessPal. Although these platforms have privacy policies that are available to consumers, they are written in dense legalese that very few users bother to read. The readiness with which consumers publicly expose information about themselves through platforms suggests that few citizens care passionately about the issue of data privacy—which makes it unlikely that either regulators or platform managers will rein in the use of personal data any time soon.

One final point with respect to privacy is the issue of data ownership. Data aggregators and other firms with access to information are, in effect, asserting an ownership interest in data that might otherwise be viewed as belonging to individuals. In a provocative act designed to shed light on the issue, a young woman named Jennifer Lyn Morone has incorporated herself in order to assert an ownership interest in the data stream that she generates.³⁵ Companies that profit from the use and sale of personal data, of course, are unlikely to find Morone's gesture either amusing or persuasive. But the issue is not going to disappear. J. P. Rangaswami, chief data officer for Deutsche Bank, predicts:

As we learn more about the value of personal and collective information, our approach to such information will mirror our natural motivations. We will learn to

develop and extend these rights. The most important change will be to do with collective (sometimes, but not always, public) information. We will learn to value it more; we will appreciate the trade-offs between personal and collective information; we will allow those learnings to inform us when it comes to mores, conventions, and legislation.³⁶

In a world where data is widely described as “the new oil,” it’s clear that the issue of data ownership will need to be resolved through some combination of regulatory action, court rulings, and industry self-regulation.³⁷ Each new scandal involving the release of sensitive information, such as the 2014 disclosure that Sony Pictures had leaked access to the viewing history of millions of users, is likely to increase the push to establish ownership rights over user data.³⁸ Such ownership rights would give victims a legal course of action after data breaches occur; the theory is that, given high enough liability, firms will take data security more seriously and act to prevent future leaks.³⁹ In some niche markets, agreements over data ownership are already being developed. For example, in November 2014, a collection of major agricultural companies and organizations, including Dow, DuPont, Monsanto, and the National Corn Growers Association, agreed on a set of principles defining the rights of farmers to own and control data about their crops.⁴⁰ Consider the implications: sensor data used to improve crop yield could just as easily be used to predict soybean futures. These secondary uses have the potential to create vast wealth in which the sources of that data would have a legitimate interest.

National control of information assets. The global reach of the

Internet has added significant complication to business regulation. Developing sensible rules concerning the role of national borders in business transactions, and then finding ways to enforce those rules consistently and fairly, is far more difficult in a world that is electronically interconnected. One example of this difficulty is the application to platform businesses of rules regarding national control of data access.

When multinational firms expand into less developed countries, they are usually required to follow so-called local content regulations, which are designed to stimulate the local economy and to ensure that a portion of the economic growth created by the new venture remains in the host country rather than being transferred to the headquarters of the multinational. For example, when corporations like Siemens and GE expand into sub-Saharan Africa, they are often required to set up local operations, in activities such as training and service. This is why Siemens operates a Siemens Power Academy in Lagos, Nigeria, to train technicians for the electrical power industry.

Some industry observers believe it is possible that the local content requirement might extend to data services—requiring, for example, that business data be stored and processed locally rather than internationally. If this principle becomes widely established, the value of the data involved may be significantly diminished. For example, if GE or Siemens power turbines around the globe were connected into a single network for data collection and study, the resulting data flow could become the basis of comparative analysis that would yield a unique “usage signature” for each machine. This would enable data analysts to make more accurate predictions of turbine

performance and create customized maintenance schedules that could save money for both the corporation and its customers. However, realizing this positive outcome requires access to tremendous amounts of information for real-time processing—access that local data content laws might thwart. It's a good example of the kind of regulatory restriction that governments should reconsider in the light of the new capabilities offered by platform ecosystems.⁴¹

Privacy laws in Europe represent another form of what might be called data nationalism. Rules concerning the flow of data have been established for the ostensible purpose of protecting citizens' privacy. The result is a hodgepodge of local data processing centers and a fragmentation of data that, if aggregated, could be used for commercial purposes. The number of billion-dollar startups in the U.S. is forty-two, but only thirteen in the EU.⁴² An inability to scale network effects could be one reason. Recent evidence suggests that this EU data privacy regime is already having a notable economic impact. For example, ad placement firms, which rely on insights from big data to optimize their decisions, are significantly less effective in their European operations than in comparably wealthy regions such as the United States that lack restrictive data management rules.⁴³

Tax policy. One of the hottest regulatory issues facing platforms is tax policy. As quickly growing platforms that do business around the country and even around the world reorganize the economy and put countless local “mom and pop” companies out of business, who benefits from the sales tax dollars generated? Should they be paid at the location of a central producer, or should they be collected at the point of consumption? The economic and

political impact of questions like these can be substantial.

As the world's second biggest online retailer (based on revenues), Amazon has been the poster child for this issue. In most countries where Amazon operates, a national sales or value-added tax is levied, which Amazon must collect from all customers. However, the crazy quilt of state and local sales taxes in the U.S. creates opportunities for Amazon to minimize its tax collection obligations and thereby keep the perceived price of its goods as low as possible. The company has battled with numerous state regulators and legislatures over sales tax rules, often refusing to collect taxes until specifically compelled to do so by the passage of new laws. In some states, Amazon claims not to maintain a “legal presence” sufficient to require payment of sales tax, despite operating large warehouses and shipping centers in those states. And in some cases, Amazon has played one state off against another—for example, apparently rewarding Indiana for passing a law that exempted the company from collecting sales tax by locating no fewer than five of its regional warehouses in the state. Today, Amazon collects sales taxes in twenty-three U.S. states, including several of the largest, while holding out against tax collection requirements elsewhere.⁴⁴

The same issue exists in regard to other online platforms, such as labor platform Upwork, which reduces local tax collections by putting local staffing agencies out of business. It would seem that the international reach of online platforms renders traditional local and state sales tax regimes obsolete, and that a national sales tax law would be a natural and logical solution. However, as of the mid-2010s, it seems highly unlikely that the U.S. Congress, with its strong anti-tax bias, will pass such a law.

A next-best solution would be a bill making it easier for states to impose sales tax on goods purchased online from out-of-state sources, and such a bill has in fact been introduced in Congress several times since 2010. An early version, called the Main Street Fairness Act, failed to advance beyond the committee stage, thanks in part to heavy lobbying against the bill by representatives of Amazon.

A newer version called the Marketplace Fairness Act was passed in the Senate in May 2013, though it has not yet been brought to a vote in the House. In a fascinating twist, the Marketplace Fairness Act has been publicly *supported* by Amazon (as well as by retail giant Walmart). The likely reason for the reversal: since Amazon now collects sales tax on most of the goods it sells, the company stands to gain from a simplified sales tax system that will apply equally to all Internet merchants—including the many smaller rivals of Amazon who currently skate by collecting little or no tax on most of their sales. It's a classic illustration of how regulatory debates that evoke majestic concepts such as equity, freedom, and the sanctity of the marketplace often turn, in the end, on nitty-gritty issues of dollars and cents and the political clout that various players bring to the legislative table.

Labor regulation. Those who operate labor platforms usually choose to describe their systems as intermediaries that serve solely to match labor with demand for services. In this view, the people who sign up for work through firms such as Uber, TaskRabbit, and Mechanical Turk are truly independent contractors, and the platform bears little legal (or moral) responsibility to the parties on either side of the interaction once the match has been made.

However, from the perspective of regulators who are charged with

safeguarding the welfare of working men and women, this position is dubious. In the traditional world of offline business, a number of firms that classify full-time, permanent employees as contract labor for legal and regulatory purposes have been drawing unfavorable attention for the practice. For example, in August 2014, FedEx lost a federal court case involving 2,300 full-time workers in California who were classified as contractors rather than employees. The practice, which the court ruled was illegal, reduced FedEx's responsibility for benefits, overtime payments, Social Security and Medicare contributions, and even reimbursement for work expenses such as uniforms. (FedEx has said it plans to appeal the ruling.)⁴⁵

Labor platforms will need to monitor the evolution of regulation in this area very carefully. While government agencies and judges vary in their attitudes and in their readiness to challenge widespread business practices, many look askance at employment models that seem to be designed solely to shield companies from responsibility for the well-being of their workers.

Perhaps equally significant, the reputation of online labor platforms has already taken a serious hit in the unofficial “court of public opinion”—as reflected, for example, in more than a million Google results, many from respectable mainstream media outlets, in response to the query “Internet sweatshop.”⁴⁶ In the long run, public disapproval of business behavior can have a meaningful impact on the value of a company's brand—which means that the court of public opinion operates, at times, as an unofficial regulatory body that business leaders are wise to heed.

Similarly, there are limits to the extent to which labor platforms will be able to evade responsibility for their practices in hiring, screening, training,

and supervising workers—even when those workers are technically classified as independent contractors. Uber, for example, has experienced significant criticism for alleged sexual assaults committed by its drivers on passengers.⁴⁷ At a time when Uber is engaged in a fierce battle over regulation with the traditional taxi industry, it can ill afford the suspicion that its labor practices are shoddy.

On a very different front, the emergence of online labor platforms is creating new challenges for regulators tasked with monitoring and measuring the national and local labor markets. Because of multihoming, freelancers can switch between multiple platforms over the course of a day—for example, drivers can accept jobs for both Uber and Lyft. This makes it all the more complex for government agencies to accurately capture labor and unemployment data, which in turn play an important role in economic and political policy debates. If employment platforms continue to grow, this will be an increasingly important issue.

Potential manipulation of consumers and markets. When platforms grow big enough, they have the potential to cease being mere participants in markets—serving to efficiently match existing supply with existing demand—and actually begin manipulating individual users and even entire markets through their great size and reach.

There are disturbing indications that this is already beginning to happen. Retail platform Amazon controls such a large share of the online book market that even giant publishers feel pressured to accept business terms they'd otherwise consider unacceptable. During a seven-month dispute with Amazon over price-setting policy, the French-based Hachette Book Group—

one of the world's largest publishers—found online sales of its products being delayed and preorder buttons for some of its titles being removed. Since preorders play an important role in determining whether or not a book achieves bestseller status, these steps by Amazon impacted the long-term success of a number of Hachette publications. The two sides finally came to terms in November 2014, having apparently reached some kind of compromise and with neither side claiming outright victory.⁴⁸

Facebook users and privacy experts were distressed in June 2014, when it was revealed that, two years previously, the newsfeeds of almost 700,000 members had been deliberately manipulated as part of a psychological experiment. The researchers, including Cornell professor Jeffrey Hancock as well as some Facebook employees, altered the news flows to include an abnormally low or an abnormally high number of either positive or negative posts. According to the study results, the status messages posted by the Facebook members in response showed that “emotional states can be transferred to others via emotional contagion, leading people to experience the same emotions without their awareness.”⁴⁹

The stakes get higher as influence moves to politics. In one study of 61 million Facebook users, news feeds with positive social pressure caused roughly 2 percent more people to vote or at least declare that they had voted relative to people who did not receive such messages. In fact, Facebook social messaging increased turnout directly by about 60,000 people and indirectly by about 280,000 more people via social contagion.⁵⁰ While there is no evidence that election outcomes changed, one can imagine close races where a 2 percent margin affects who wins.

It's an interesting finding—one that Facebook advertisers and others

seeking to influence the attitudes and behaviors of large numbers of people might find valuable. But these studies were conducted without the knowledge or consent of their subjects. And not all the studies received prior approval by any institutional review board, which is normally required before experimentation on human subjects is conducted. Outside experts responded by challenging the ethics and possibly even the legality of Facebook's actions. Amidst the ensuing furor, Mike Schroepfer, Facebook's chief technology officer, announced that the company would henceforth conduct an "enhanced review process" before performing research dealing with sensitive emotional issues.⁵¹

In a third case, Uber was embroiled in controversy in July 2015, when a team funded by FUSE Labs, a research organization sponsored by Microsoft, reported on the existence of so-called "phantom cabs" on the Uber passenger app—cars that appear to be close to a passenger pickup location but which in fact do not exist. An Uber spokesperson explained the phantoms as a mere "visual effect" that riders should ignore, but some drivers and passengers suspect they may be a deliberate ploy to trick riders into thinking Uber cabs are closer than they really are. Other reported visual anomalies on the Uber app create misleading or confusing impressions of high-demand areas that forecast higher "surge" pricing.

The FUSE researchers say that both drivers and passengers are learning to game the system, trying to avoid being misled by Uber's inaccurate visual data. They conclude: "Uber's access to real-time information about where passengers and drivers are has helped make it one of the most efficient and useful apps produced by Silicon Valley in recent years. But if you open the app assuming you'll get the same insight, think again: drivers and passengers

are only getting part of the picture."⁵²

Cases like these illustrate the wide variety of ways that highly popular platforms can use their market power and their access to vast amounts of data to mislead people and manipulate their behavior without their knowledge or consent. The temptation for platform managers to engage in such practices for potential economic gain is likely to be huge. But defining this kind of ethically questionable behavior, developing clear and reasonable rules to discourage it, and then enforcing those rules without excessive intrusiveness and bureaucracy will be a huge challenge for regulators.

TIME FOR REGULATION 2.0?

Some observers say that the advent of the information age, in which vast amounts of previously inaccessible data are now available for evaluation, analysis, and use in smart decision-making, should drive a wholesale rethinking of traditional approaches to regulation. Nick Grossman, an entrepreneur, investor, and former MIT Media Lab Scholar, calls for a transition from today's Regulation 1.0, which emphasizes prescriptive rules, certification processes, and gatekeeping, to a new system he calls Regulation 2.0, based on open innovation tempered by data-driven transparency and accountability.⁵³ Both kinds of regulatory regime share the goal of creating trust and fostering fairness, security, and safety, but the means employed are very different.

In Grossman's view, regulation based on restricted access makes sense in a world of scarce information. Traditionally, it was difficult or impossible for a consumer to gather accurate information about the quality or safety of a

particular taxi driver or hotel. That's why most governments have taken steps to screen and certify taxi drivers, require insurance coverage for drivers, and monitor the safety and cleanliness of hotel accommodations.

But in a world of abundant information, regulation based on data-driven accountability makes more sense. Firms like Uber and Airbnb can be granted freedom to operate in exchange for access to their data. Because it is possible to know exactly who did what to whom and when, consumers and regulators can hold people and platforms accountable for their behaviors after the fact. Uber customers can use driver ratings to decide whether or not to accept a particular ride; Airbnb customers can use host ratings to pick a safe and comfortable place for a night's stay; and both organizations can be sanctioned or even shut down by regulators if their activities violate public expectations of safety and fair dealing.

Under Grossman's Regulation 2.0 scheme, government regulatory agencies would operate quite differently from the way they do today. Rather than establishing rules of market access, their primary job would be to establish and enforce requirements for after-the-fact transparency. Grossman imagines a city government responding to the arrival of Uber by passing an ordinance that states: "Anyone offering for-hire vehicle services may opt out of existing regulations as long as they implement mobile dispatch, e-hailing, and e-payments, 360-degree peer-review of drivers and passengers, and provide an open data API for public auditing of system performance with regards to equity, access, performance, and safety."⁵⁴

It certainly makes sense for policy-makers to seek ways to take advantage of the vast new flows of data created by online business—and in particular by the rise of platforms—in developing new systems for monitoring and

regulating economic activity. And in some arenas, enhanced transparency, perhaps under government mandate, can powerfully supplement or even replace traditional forms of regulation, reducing the costs and inertia associated with government intervention and encouraging innovation.⁵⁵ For example, mandated disclosures of food nutrition data, auto safety ratings, and the energy efficiency of appliances have helped millions of consumers to make wiser choices and encouraged companies to improve the quality of their products.⁵⁶

Grossman's emphasis on the power of transparency to enforce high community standards of behavior is particularly relevant in an age driven by information. An interesting analogy can be drawn with the ideas promulgated by Richard Stallman, the programmer-activist who is a leader of the "free software" movement. Stallman points out that one of the key virtues of free (or open source) software is that anyone can inspect the code and see what it does. Of course, only experts are likely to do this. But those who take the opportunity will be in a position to offer an informed judgment about the virtues and vices of the program, and, when necessary, to alert the general public to the problems they detect. If software code allows a company to spy on customers, defraud them, or misappropriate their data, then making the code freely accessible to all will quickly expose the problem and likely force its correction.⁵⁷

In this sense, free software resembles the free speech guaranteed to Americans by the Bill of Rights—in the hands of engaged citizens, both can serve as crucial weapons in the battle against private or public malfeasance. And the same can be said about the platform data that Grossman's new regulatory system would rely upon. As Supreme Court Justice Louis

famously said, “Sunshine is said to be the best disinfectant; electric light the most efficient policeman.”

Of course, it’s unlikely, especially in the short term, that a wholesale replacement of traditional regulation with a new, information-based system would produce results that most citizens would find acceptable. Would most families be satisfied to have government inspections of food processing plants eliminated, so long as statistics about deaths from salmonella and trichinosis associated with particular companies were widely available? In matters of life and death, traditional systems of standard-setting and certification make it easier for people to consume goods and services without anxiety, and it’s hard to imagine that most consumers would want to completely eliminate those systems.

Furthermore, an effective Regulation 2.0 regime would require significant talent upgrades on the part of government agencies as well as complex revisions to existing statutory codes. As suggested by the cases of apparent customer and market manipulation we described earlier in this chapter, platform businesses can’t necessarily be trusted to behave with consistent transparency and integrity unless independent outsiders are monitoring their actions. These outsiders could be teams of tech-savvy experts employed by government agencies; they could be employees of rival businesses who take advantage of open data access to study the behavior of their competitors and publicize instances of wrongdoing. In either case, Regulation 2.0 could still end up being fairly intrusive and costly.

Grossman cites the work of economist Carlota Perez, who has described how “great surges” in technology have led to “profound changes in people, organizations and skills in a sort of habit-breaking hurricane.” Perez goes on

to say that these surges also demand changes in regulatory regimes—and Grossman’s contention is that the advent of the information age represents the latest such surge.⁵⁸

There’s much truth in the notion that the information age—including the rise of the platform—is a paradigm-altering shift that will profoundly impact every corner of society, including government regulation of business. But, as Grossman notes, Perez describes the great surges as cycles of change that take around fifty years to play out. That’s about right—and this suggests that it will take time to determine in exactly what ways the traditional regulatory system can safely be discarded in favor of a system like Regulation 2.0. In many cases, we may conclude that maintaining at least a portion of the current permission-based regulatory apparatus while augmenting its effectiveness using systems of permissionless, data-driven accountability will yield the best results.

OUR ADVICE FOR REGULATORS

We began this chapter by describing the basic economic tradeoff between private governance and government regulation. Corporate governance acts to mitigate negative externalities that affect the private interests of the firm. Platforms are adept at regulating market failures on-platform but less able to regulate them off-platform. Experience suggests that firms are usually quick to react to changing technology and market conditions, but they generally do not act to maximize social welfare unless forced to do so by the power of public opinion or by regulatory constraints.

Government regulation, on the other hand, is supposed to be focused on

safeguarding the interests of the general public and those of private industry. It can wield tools of enforcement such as search warrants, the power of civil forfeiture, and the authority of law. Unfortunately, regulators are subject to capture, especially in countries with weak democracy and government oversight. Thus, neither private governance nor government regulation can be counted on to serve as a foolproof guardian of the public interest.

For policymakers who are taking on the challenging task of adapting traditional regulatory systems to the new conditions of the age of platforms, we recommend two sets of frameworks. The first, provided by economists Heli Koski and Tobias Kretschmer, suggests that industries with strong network effects can generate market inefficiencies and that the goal of public policy should be to minimize those. The market inefficiencies of particular concern are abuse of dominant position and the failure to ensure that new and better technologies are adopted as soon as they become available.⁵⁹

The second framework, developed by David S. Evans, proposes a three-step process to test for the desirability of government regulatory action. The first step is to examine whether the platform has a functioning internal governance system in place. The second step is to see whether the governance system is mostly being used to reduce negative externalities that would harm the platform (such as criminal behavior by users) or to reduce competition or take advantage of a dominant market position. If, on balance, the firm is using its governance system to deter negative externalities, then no further action is necessary. However, if the governance system appears to encourage anticompetitive practices, then a third and final step is required. This step involves asking whether the anticompetitive behavior outweighs

the positive benefits of the governance system. If so, then a violation has occurred, and a regulatory response is required. If not, then no further action is needed.⁶⁰

Proponents of low regulation are likely to urge restraint in applying government pressure to platform businesses, especially during the startup phase. After all, they might reason, the harm done to the marketplace or to the general public by a startup company is likely to be relatively small, especially when compared with the potential positive effects to be derived from innovation, new business model development, and economic growth. The time to apply the rules more stringently will come later, once the start up has grown to the point where the costs and benefits of regulation are both reasonable.

Early in its history, YouTube had an informal though unacknowledged policy of allowing copyrighted material to be posted on its site. As YouTube grew, concern over this lax enforcement of intellectual property rights increased, putting pressure on the company to establish a stricter compliance standard. Over time, mechanisms have been worked out to compensate rights holders, and today there are many instances of musicians earning significant revenues from their YouTube channels.

However, this approach does not satisfy everyone. Harvard professor Benjamin Edelman observes:

If we let tech companies launch first and ask questions later, we invite misbehavior ... Perhaps some sectors suffer unnecessary or outdated regulation; if so, let's remove the regulations through proper democratic processes. If we let a few firms ignore the rules, we effectively penalize those that comply with the law, while granting windfalls to free-wheeling competitors. That's surely not a business

model consumers are looking for.⁶¹

We close with some general principles of regulatory guidance:

Where possible, we would hope that regulators will move to make adjustments to law to more quickly adapt to technological change. Old regulatory practices, such as the predatory pricing tests developed for non-network industries, simply do not work for new technologies and business models. Regulation must incorporate the recent advances in economic theory that show that firms can still be maximizing their profits even when they choose to distribute certain products and services at zero price.

Regulators should also act to reduce the opportunities for arbitrage. Given that the number of New York City taxi medallions has not changed since 1937, it should surprise no one that an alternate market would develop to leap the regulatory hurdle. In this sense, Uber is a response to regulatory-driven market failure, much like the gypsy cabs that have long operated under the regulatory radar.

Another area where regulators can add value to new technologies is where consumers depend upon accurate information in order for markets to function. Gas stations have long had their pump accuracy checked, restaurants have had health inspectors, and buildings have had safety inspections. Such audits have provided the consumer confidence for those markets to function. Comparable systems for auditing ratings and service quality might help the new platform-based markets develop and thrive. Access to platform data represents a real opportunity to limit market failures both on and off platform.

Finally, we would encourage regulators to have a light touch in order to encourage innovation. Change often provokes anxiety, and there's an understandable impulse to slow the pace of technological and economic innovation in order to fend off unforeseeable consequences that may be harmful. But history suggests that, in most cases, allowing change to flourish leads mainly to positive results in the long run.

One of the most notable regulatory battles related to technological change took place in the early 1980s, when the major movie studios fought to prevent ordinary citizens from using the then-new video recording technology to create copies of movies and TV shows for their personal use. In the landmark 1984 case *Sony Corp. of America v. Universal City Studios, Inc.*, the Supreme Court ruled that such copying constituted fair use and therefore did not violate copyright law. From an economic standpoint, the Sony decision proved to be highly beneficial. To the surprise of the movie moguls, the studios that once opposed video recorders made more money after the new technology was allowed to emerge, through the creation of an entirely new secondary market for movie rentals that did not previously exist. In a similar fashion, new platform markets are likely to create unexpected new opportunities for growth and profit, even for many incumbent businesses that may be fearful of change. For this reason, regulator-induced industry sclerosis must be strenuously avoided, despite the pressures government officials may feel from anxious business leaders eager to protect their familiar turf.

TAKEAWAYS FROM CHAPTER ELEVEN

- ❑ Opponents of regulation point to phenomena like regulatory capture to argue that government intervention in business is usually ineffectual. But history suggests that some level of societal regulation of business is healthy and beneficial both to the economy and to society as a whole.
- ❑ There are a number of regulatory issues that are unique to platform businesses or that require fresh thinking in the light of the economic changes that platforms are causing. These include access to platforms, compatibility, fair pricing, data privacy and security, national control of information assets, tax policy, and labor regulation.
- ❑ The flood of new data made available by today's information age technologies suggests the possibility of new regulatory approaches based on after-the-fact transparency and accountability rather than restrictions on market access. But such new approaches will need to be designed thoughtfully and carefully to fully protect the public.
- ❑ Economic frameworks for industries with network effects suggest that dominance alone is not necessarily cause for government intervention. Rather, failure to manage externalities, abuse of dominance, manipulating populations, and delaying innovation can indicate when intervention in platform markets is necessary and appropriate.