


The Antitrust Paradigm

Restoring a Competitive Economy

JONATHAN B. BAKER

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Market Power in an Era of Antitrust

STEP INTO A STORE'S beer aisle, and the choices may seem overwhelming. Yet the owners of Budweiser and Miller control many popular brands and sell nearly three-fourths of the beer purchased in the United States.¹ In part because of their industry dominance, these firms have been able to set prices above competitive levels, exercising market power.² A large number of craft brewers have entered in recent years, making the industry look dynamic and competitive. But expansion is expensive, so craft brewers remain too small to undermine the market power of large firms.³

Similar stories play out across other industries. Large firms exercise market power unilaterally and collectively. They obtain, entrench, and extend market power through coordination, exclusion, merger, and other means. Firms exercising market power raise prices, slow the rate of innovation and quality improvements, and cut what they pay their workers and suppliers.

These expressions of market power occur in an economy where competition is supposed to be protected by strong and extensive antitrust institutions. In later chapters I look closely at how this strange circumstance came about. First, let us consider the current state of competition in the United States and the reasons why we should conclude that market power is on the rise. All the while, we must keep in mind that, while market power is good for the firms possessing it, its social impact is detrimental. Market power makes money for a few, at the expense of the social good.

A MARKET POWER PAROXYSM IN AN ERA OF ANTITRUST

An Era of Antitrust

The United States is institutionally committed to antitrust. Our business norms support competition and view anticompetitive conduct as generally bad for the economy and the nation. Courts have implemented those norms by developing a rich body of judicial precedents construing the antitrust laws. The two federal enforcement agencies, the Justice Department's Antitrust Division and the Federal Trade Commission (FTC), each have large professional staffs. Since the 1940s, their budgets have generally increased, consistent with the growth of the economy.⁴ The major exception, a retrenchment during the 1980s, was followed by a restoration during the next decade. Further, regulatory agencies with authority over the communications, transportation, energy, and financial sectors often seek to foster competition and rely on antitrust principles and authorities when doing so.

This substantial antitrust capability does not lie dormant; enforcement can be vigorous. For instance, the lysine cartel litigation of the 1990s extracted a \$100 million criminal fine from Archers-Daniels-Midland. Senior executives served prison time.⁵ The government's monopolization case against Microsoft was the most prominent antitrust dispute in recent decades.⁶ Some observers credit the government's high-profile case against Microsoft with protecting the emerging Internet from monopoly power,⁷ creating space for Amazon, eBay, Google, Yahoo, and others to flourish.⁸ The government's successful effort to block AT&T's acquisition of T-Mobile,⁹ which protected competition in mobile wireless communications,¹⁰ is yet another important recent example.

These were all federal cases, but antitrust enforcement happens at the state level as well, where officials implement both federal and state competition statutes. Consumers and firms victimized by anticompetitive conduct also can bring suit privately, benefiting from the expertise of an active plaintiff's antitrust bar. Although the number of private cases declined steeply during the 1980s, it has been growing since.¹¹

Antitrust norms, especially the objection to collusive conduct, are consistently endorsed and upheld by enforcers and courts, regardless of political affiliation.¹² These norms have spread throughout the world, particularly since the 1990s, with the aid of a growing global antitrust community. Annual attendance at the spring meeting of the American Bar Association's Sec-

tion of Antitrust Law—the premier gathering in the field—now exceeds 3,000, a threefold increase over the low ebb in the late 1980s. Several new academic journals dedicated to antitrust law, economics, and policy were launched in the last decade.

Antitrust enforcement has undoubtedly discouraged a great deal of anticompetitive conduct by businesses.¹³ By contrast, when enforcement is lax, the substantial and long-lasting exercise of market power follows.¹⁴ The most telling example was the period of ineffectual federal antitrust enforcement during the late nineteenth and early twentieth century. In 1895 the Supreme Court carved a loophole into the Sherman Act, then only five years old, triggering a huge wave of industrial consolidation. Rival manufacturers across numerous industries combined into dominant firms that exercised monopoly power.¹⁵ Studies demonstrate successful, if imperfect, coordination in the steel, bromine, railroad, and petroleum-refining industries, as well as harmful exclusionary behavior by Standard Oil and American Tobacco.¹⁶

Something similar happened during the Great Depression, when Congress effectively suspended the antitrust laws. The National Industrial Recovery Act, which was in force from mid-1933 to mid-1935, allowed industries to develop "Codes of Fair Competition." In practice, these codes freed business from antitrust prohibitions.¹⁷ A number of industries, including steel and brewing, engaged in collusive conduct. Firms fixed prices by setting minimums, prohibiting sales below average cost, prohibiting capacity expansion, or outlawing secret and selective price cutting.¹⁸ Coordination persisted long after the statute was declared unconstitutional.¹⁹

Substantial and Widening Market Power

In spite of the scope and depth of antitrust norms, precedents, and institutions, there are many reasons to think that sellers now exercise substantial market power and that the exercise of market power has been widening for decades—extending to more markets, increasing in importance within markets, or both.²⁰

As sellers, firms exercise market power in output markets by raising prices or altering other terms of trade adversely to buyers (their customers), relative to what would prevail in a competitive market.²¹ Seller market power is called monopoly power.²² Monopoly power may be exercised on a range of competitive dimensions—most obviously by raising prices, but also, for

example, by reducing quality or convenience, modifying product features, and altering the geographic locations and product niches served.

The definition of buyer market power is analogous. Firms exercise market power in their input markets when they lower prices or alter terms of trade adversely to sellers relative to what would prevail with competition. Buyer market power is called monopsony power. While seller market power has been more extensively studied, many of the reasons for concern about its exercise also apply to buyers. I discuss the problem of monopsony more extensively in Chapter 9.²³

Below, I offer nine reasons to believe that market power is on the rise in the United States and that it is a problem for the national economy. None are decisive individually, but their potential infirmities are not the same. So collectively, they make a compelling case.

Insufficient Deterrence of Anticompetitive Coordinated Conduct

The Department of Justice uncovers criminal price-fixing and market-division cartels at a steady rate, year after year.²⁴ On the one hand, this demonstrates successful enforcement. On the other, it shows that cartels continue forming in spite of substantial enforcement effort. Which is it? Evidence suggests that penalties for collusion, including treble damage awards to victims, are systematically low.²⁵ At the same time, there is little evidence suggesting that enforcement systematically chills procompetitive conduct or induces excessive expenditures on antitrust compliance. Hence, we should conclude that the stable rate of cartel prosecutions indicates insufficient deterrence.²⁶ Enforcement actions are happening, which is all to the good, but their impact is too little to discourage as much collusion as we should deter.

Cartels should be subject to greater scrutiny because they are indefensible from a competitive standpoint. They have little or no procompetitive justification. A recent survey concludes that the total overcharge to U.S. buyers from seventy-five cartels sanctioned between 1990 and 2010 was \$182 billion, for an annual overcharge of \$8.7 billion.²⁷ Because cartels last 8.1 years on average,²⁸ these figures imply that if the sample is representative, cartels are formed at a stable rate, and the annual probability of cartel detection is stable, then 28.9 cartels are active at any one time; the average cartel overcharges U.S. buyers by about \$300 million annually; 3.6 cartels are detected each year; and the \$8.7 billion annual overcharge will continue as existing cartels are sanctioned and new cartels are formed.²⁹

Even more troubling, cartels prosecuted by the Justice Department are probably only the tip of a large market-power iceberg arising from coordinated conduct among oligopolists. It is probably substantially easier to deter express price fixing and market division, which are subject to criminal prosecution, than it is to deter tacit collusion that leads to higher prices. Hence it is reasonable to infer from the steady stream of cartel prosecutions that the exercise of market power arising from anticompetitive coordinated conduct is common in oligopoly markets generally. One case in point: a recent study finds that coordination between the brewing behemoths MillerCoors (now owned by Molson Coors Brewing Co.) and Anheuser-Busch InBev SA/NV raised beer prices by at least 6 percent after Miller and Coors joined forces in 2008.³⁰

Insufficient Deterrence of Anticompetitive Mergers

A recent study of mergers carried out between rival manufacturing firms between 1998 and 2006 finds that those deals systematically increased price-cost margins at acquired plants without reducing costs. This suggests that the lost competition from horizontal mergers—the acquisition of one firm by another in the same market—generally resulted in higher prices.³¹ That conclusion is supported by another recent study of horizontal mergers involving nearby plants producing ready-to-mix concrete, which finds that the harm from higher prices was not offset by higher productivity at acquired plants.³² Other studies show that those horizontal mergers that were deemed close calls by the two federal antitrust-enforcement agencies turned out to harm competition on average.³³

Acquiring firms systematically exaggerate the efficiencies from their deals,³⁴ which may explain why many harmful mergers between rivals are proposed. For example, a book-length analysis finds that media moguls “relentlessly undertake inherently foolish deals or overpay for ones that might have made sense at a different price.”³⁵ This tendency also suggests that the enforcement agencies are, on average, giving too much credit to merging firms’ procompetitive justifications.

Insufficient Deterrence of Anticompetitive Exclusion

Antitrust rules today insufficiently deter exclusionary practices that harm competition by raising rivals’ costs or limiting rivals’ access to customers.

These practices include destroying rivals' distribution facilities, fraudulently acquiring patents, redesigning upstream products to create incompatibilities with those of downstream rivals, engaging in sham litigation or manipulation of regulatory schemes, refusing to sell key inputs to downstream rivals or to distribute rivals' products, contracting with key sellers and distributors of inputs to prevent them from dealing with rivals, refusing to deal with firms that supply rivals or distribute rivals' products, acquiring suppliers or distributors to foreclose rivals' access to inputs, tying complementary products together while rivals' products are unintegrated, contracting with suppliers to obtain the benefits of any discounts they offer rivals (which prevents competitors from gaining a competitive advantage), and responding aggressively to entry in one market in order to deter entry in other markets.³⁶

Many exclusionary practices are implemented through vertical agreements, also known as vertical restraints. (Agreements between rivals are horizontal, while those between firms and their suppliers, distributors, or customers are vertical.³⁷) Indeed, most antitrust cases alleging anticompetitive exclusion are framed as challenges to vertical agreements or as monopolization, which is often achieved through vertical conduct. Thus antitrust rules governing vertical practices and monopolization reflect judicial attitudes toward exclusion.

In the late 1970s through the early 1990s, the Supreme Court targeted exclusionary-conduct rules for relaxation. Court decisions loosened the rule governing nonprice vertical restraints, raised barriers to plaintiffs seeking to prove predatory pricing, made it harder to challenge resale price maintenance, and made it more difficult for rivals to bring antitrust suits.³⁸ Taking these cues, lower courts modified the rule governing exclusive dealing.³⁹ Most of these changes remain in force today. Whether or not the prior rules were too strict, decisions from the late 1970s onward likely went too far toward relaxation,⁴⁰ at times conferring de facto legality on exclusionary conduct.⁴¹

The conclusion that exclusionary practices are insufficiently deterred is supported by evidence showing that prices were higher and output lower in U.S. states that allow resale price maintenance.⁴² In states where this vertical practice is allowable subject to rule-of-reason review, which evaluates the actual or likely competitive effects of given instances of the challenged conduct, consumers were worse off relative to those in states where resale price maintenance is banned outright.⁴³ Some interpret prior systematic empirical studies of vertical practices as counseling against enforcement, but, as I detail in Chapter 5, this interpretation is flawed. It is based in part on

studies of nonoligopoly markets, which are not where antitrust enforcement is concentrated. And importantly, these studies do not account for the possibility that anticompetitive uses of vertical agreements were deterred by past antitrust rules. Unlike the prior analyses, the resale price maintenance study convincingly rules out the deterrence explanation. In addition, the conclusion that exclusionary practices are insufficiently deterred is consistent with evidence showing that more than one-quarter of international cartels have used vertical restraints to support collusion: the restraints helped the cartelists discourage cheating or entry while keeping their collusive horizontal agreement secret.⁴⁴

Market Power Is Durable

Market power is a concern because it is durable, not just because it is common. The average cartel terminated by antitrust enforcement lasts more than eight years before disruption.⁴⁵ A number have survived longer than forty years.⁴⁶ Similarly, monopolies and near-monopolies often persist for decades. Well-known twentieth century examples include General Motors, IBM, Eastman Kodak, RCA, U.S. Steel, and Xerox. Dominant firms and colluding firms frequently maintain their positions by erecting entry barriers to exclude new rivals. Collectively, this evidence shows that firms can sustain anticompetitive conduct—overcoming the incentives of cartel members to cheat and the incentives of entrants and other rivals to compete away monopoly profits—for long periods of time.

Increased Equity Ownership of Rival Firms by Diversified Financial Investors

Large institutional investors such as BlackRock, Fidelity, State Street, and Vanguard now collectively own roughly two-thirds of shares in publicly traded U.S. firms, up from about one-third in 1980.⁴⁷ If the top three financial investors were a single entity, they would be the largest shareholder in nearly 90 percent of firms in the S&P 500 and in more than 40 percent of all publicly traded firms, which account for nearly 80 percent of stock-market capitalization.⁴⁸ As a result, it is now typical for rival firms to have common financial-investor ownership. This may be bad for competition.

Recent studies of the airline and banking industries suggest that when rival firms have the same large shareholders, they may refrain from aggressive competition, leading to higher prices.⁴⁹ These studies are carefully

conducted, and their results suggest a pervasive and serious problem. That conclusion must be considered tentative, though,⁵⁰ because the economic literature has not established the magnitude and scope of the problem in the economy as a whole. We also lack clarity on which of several plausible mechanisms leads firms with common ownership to raise product prices in the industries studied. And the studies do not account for the potentially countervailing impact of financial-investor ownership of complementary products. Still, this evidence, combined with the growth and widespread nature of common ownership of rival firms, raises the troubling possibility that financial investors are creating a pervasive source of market power.

The Rise of Dominant Information Technology Platforms

Many information technology (IT) firms that have taken off in the past few decades—such as Amazon, Apple, Bloomberg, Facebook, Alphabet (Google's parent company), Microsoft, and Oracle—have likely achieved their positions,⁵¹ at least in part, through combinations of network effects, intellectual-property protections, endogenous sunk costs, and the absence of divided technical leadership. (Under divided technical leadership, different firms take the lead in supplying and improving key complementary platform components.) These features probably insulate many platforms from competition in some of their major markets, allowing them to exercise market power against buyers and suppliers.

Network effects may discourage entry when incumbent firms benefit from higher customer switching costs or other sources of customer captivity. The need to invent around rivals' intellectual property protections may also discourage entry. When incumbents have made substantial sunk expenditures, the market may not support additional firms at a viable scale, and the absence of divided technical leadership tends to slow technological progress by limiting the incentive of a firm that controls key platform components to allow those components to work with complements developed by other firms.⁵² In the face of these difficulties, entrants may succeed by targeting newly developed niches, and some may seek to build on that success by adding capabilities similar to those of incumbents. But, even then, incumbent advantages may enable long-term exercise of market power regardless of whether incumbents also engage in exclusionary conduct or preemptive acquisitions of nascent rivals.

Mordecai Kurz documents that surplus wealth—the difference between firms' financial-market values and the value of their capital assets—has grown hugely economy-wide since the 1970s, probably owing to the growth of market power among firms investing heavily in information technology.⁵³ Among the seven firms that account for the most surplus wealth are Apple, Alphabet, Amazon, Facebook, and Microsoft. The other two are large telecom suppliers: AT&T and Verizon.⁵⁴

An important study by Jan De Loecker and Jan Eeckhout of all publicly traded companies also speaks to the connection between IT investments and growing market power. The authors created the most sophisticated empirical industrial-organization analysis of market power across the U.S. economy to date. And the findings are striking: the average price-cost margin in the U.S. economy increased substantially after 1990.⁵⁵ In the preceding four decades, the mean markup of price over average variable cost (interpreted as a measure of marginal cost and weighted by sales) was usually between 1.2 and 1.3. Except during a decline amid the 2008 recession, the average markup has risen sharply since 1990, reaching 1.67 in 2014. De Loecker and Eeckhout infer a firm's markup trend from the ratio of its output elasticity of supply to the fraction of the firm's sales revenues accounted for by variable costs of production.⁵⁶ They find that the mean output elasticity held largely constant over their half-century long sample period, so their inference that markups rose sharply derives primarily from a steep decline in ratio of cost of goods sold to sales revenues.⁵⁷

The study's broad conclusion that average margins have increased since 1990 is persuasive. But there are three reasons to question the precision with which the increase in margins is measured.⁵⁸ First, the industry definitions are highly aggregated from an antitrust point of view.⁵⁹ Hence, the production function estimates do not account for differences across firms, particularly across firms within industries, including in the way that information technology investments affect how firms produce.⁶⁰ Second, other researchers using different methods find smaller average markup increases.⁶¹ Third, the study may overstate markups if low-margin firms systematically exited the sample of publicly traded companies, as through acquisitions by private equity buyers.⁶²

The most plausible interpretation of De Loecker and Eeckhout's results is that market power has increased among firms that have made substantial fixed investments in IT.⁶³ Throughout the economy, firms have made such investments. For example, a wholesaler may invest heavily in IT to support

its logistics and make ancillary investments to use that technology effectively. It might tag and track products to better manage orders, use customer-demand information to reduce inventories, integrate its IT system with those of its customers to facilitate ordering, install picking and packing equipment in warehouses, and reconfigure its warehouse space to facilitate the efficient use of that new equipment.

The inference that margins rose sharply is tied particularly to the growth of firms that control large IT and Internet platforms. Such firms tend to have relatively low cost of goods sold relative to revenues. Many of their platforms were created since 1990, so their fraction of the sales-weighted average markup has grown over time. But average margins rose in other industries too, suggesting that IT investments are associated with higher margins beyond the IT sector.⁶⁴

Large IT and Internet platforms have delivered substantial consumer benefits. They have lowered search costs, made communication with friends easier, and improved shopper access to niche products. Their conduct does not necessarily violate the antitrust laws, even when they exercise market power. And the firms controlling these platforms are not insulated from all rivalry. They compete with each other in some product areas, including cloud-computing services, intelligent assistants, and smartphone platforms.

Yet consumers and the U.S. economy as a whole would likely benefit even more if these platforms faced greater competition. In general, for reasons discussed below, greater competition would be expected to increase the rate of innovation, increase the rate at which firms lower quality-adjusted prices, and reduce the potential for harm from anticompetitive exclusionary conduct in markets dominated by large IT and Internet platforms.

Oligopolies Are Common and Concentration Is Increasing in Many Industries

Many industries are oligopolies, in which a small number of firms account for most sales. For instance, airlines and hospitals have become substantially more concentrated in recent decades. In 2005, the United States had nine major airlines, including regional and low-cost carriers; today, after multiple mergers, there are four. A number of studies show that hospital consolidation has led to higher prices.⁶⁵ Casual empiricism suggests concentration is also increasing in other industries important to consumers.⁶⁶

Concentration may have risen generally in U.S. manufacturing,⁶⁷ though the increases are modest and many industries in which concentration is rising

remain relatively unconcentrated. But evidence about trends in concentration in the economy as a whole is less reliable than the evidence tied to specific industries. Studies of economy-wide concentration often use product definitions and nationwide aggregates that do not necessarily correspond to antitrust markets. If geographic markets are regional or local, and many firms do not sell nationwide, the concentration figures relevant for evaluating market power could be substantially higher or lower than the nationwide figures reported.⁶⁸ Other evidence involving broad national aggregates is also consistent with rising concentration,⁶⁹ but it may actually reflect that large firms increasingly compete with the same large rivals across multiple product lines or regions. Either interpretation would raise competitive concerns: as with increased concentration, growing multimarket contact could facilitate coordination among rivals.

Coordinated conduct is a serious threat in oligopolies for several reasons. First, oligopolists, acting in their individual interest, may have incentive not to compete aggressively. Repeated interaction may help firms reach consensus on the terms of a coordinated arrangement and discourage firms from cheating by exacerbating the punishment that coordinating rivals can inflict. Even if firms do not secure higher-than-competitive prices by identifying consensus terms and committing to punish rival cheating, they may achieve a similar anticompetitive outcome through parallel-accommodating conduct not pursuant to a prior understanding. For example, even without repeated interaction, competition may be dampened when firms find it costly or time-consuming to change their output levels under quantity competition or price competition when production capacity is fixed.⁷⁰

Second, businesses are taught to exploit gaps in antitrust rules to deter entry and engage in coordinated conduct without running afoul of those rules.⁷¹

Third, empirical economics literature finds that greater market concentration is associated with an increased risk of anticompetitive conduct. This literature relates within-industry concentration to prices—not to profits, the concern of an older and more controversial literature.⁷² This risk may arise in oligopoly markets regardless of whether concentration is the product of anticompetitive exclusion, scale economies, shifts in demand, or other factors.

Concentration and the associated threat of market power is not limited to product markets. While product market concentration is associated with the exercise of monopoly power, concentration among firms hiring workers is

associated with the exercise of monopsony power, whether unilaterally or through coordination. Labor markets may be concentrated regardless of whether firms sell in concentrated product markets.⁷³ Recent evidence suggests that many workers are hired in concentrated labor markets and that labor market concentration in manufacturing may be increasing.⁷⁴ This evidence raises the possibility that firms exercise monopsony power in many labor markets, depressing wages.⁷⁵

Increased Governmental Restraints on Competition

Another source of market power is increasing governmental restraint on competition. Such restraints include more extensive occupational licensing,⁷⁶ the widening scope of what may be patented, and excessive granting of patents owing to inadequate review of patent applications.⁷⁷ To similar effect, the competitive harm from “pay-for-delay” settlements—high drug prices arising from the settlement of patent disputes under an industry-specific regulatory framework that delays the entry of generic pharmaceuticals—has increased over time.⁷⁸ This trend was halted in 2013, when the Supreme Court made it easier to bring antitrust challenges against pay-for-delay settlements.⁷⁹ But the impact has already been felt and will continue to be, albeit to lesser degree.

Lobbying and other political rent-seeking activity by firms to limit competition and boost supracompetitive profits—a possible precursor to governmental restraints—may also be on the rise.⁸⁰ One example is the use by drug companies of citizen petitions before the U.S. Food and Drug Administration, in an effort to delay entry by rivals. The number of petitions has “essentially doubled” since 2003.⁸¹

The Decline in Economic Dynamism

Widening market power is a leading explanation for two troubling economy-wide trends over recent decades: the secular slowdown in business investment⁸² and the rising profit share of U.S. gross domestic product.⁸³ Widening market power also plausibly contributes to the slowed rate at which firms and plants expand when they become more productive,⁸⁴ the four-decade long decline in the rate of startups,⁸⁵ and the growing gap in accounting profitability between the most and least profitable firms.⁸⁶

These trends are connected to market power because productive firms have less incentive to expand, invest, and innovate when insulated from competition. They can instead maintain their edge by discouraging rivals' expansion, entry, investment, and innovation.⁸⁷ Unsurprisingly, economic growth increasingly comes from improvements to existing products by incumbent firms rather than the displacement of existing products by better ones or the creation of new product varieties.⁸⁸

Market Power versus Alternative Explanations

Could these nine factors, interpreted here as suggesting substantial and widening market power, instead have a benign interpretation? The most plausible alternative points to a combination of growing scale economies and rewards to the first firms to adopt new information technologies. But these are unlikely to account fully for the market power evidence.

It is true that technological change has likely increased the importance of scale economies in various sectors of the economy. The efficient size of firms has plausibly grown over time in many industries as a result of the high fixed costs of investments in IT,⁸⁹ network effects, and an increased scope of geographic markets attributable to improvements in communications and transportation technologies, superior logistics, and reductions in barriers to international trade.

In addition, the first firms to invest in new information technologies may indeed earn substantial rents.⁹⁰ For instance, it took decades for factories to switch from water and steam power to electric power, and, during that transition, firms within the same industry differed in the extent to which they could profitably take advantage of the new technology.⁹¹ Some were locked in to prior technologies by the age of their existing equipment, factory-floor layout, building design, and their success in learning how to use older technologies efficiently. As a result, there were first movers and laggards, and the former were in a position to offer better products or the same ones more cheaply, creating profit opportunities. More recently, IT investments have not taken place simultaneously across industries or the firms within them, creating new profit opportunities.⁹² If IT investments do not confer market power, these rents should be temporary. In a dynamically competitive market, they would dissipate as other firms in the same market follow suit, technologically.⁹³

As firms experiment with business strategies involving substantial sunk expenditures, that may increase demand—in this case, through IT investments⁹⁴—so scale economies may grow, even in competitive markets.⁹⁵ In markets where scale economies are substantial and marginal cost does not increase with output, margins will be high. Under such circumstances, it will be necessary for competing firms to price in excess of their marginal cost in order to cover fixed costs.⁹⁶ Where unable to do so, they exit, increasing concentration even in competitive markets.

We probably are not actually observing only growing scale economies and temporary returns to early adoption within otherwise competitive sectors. Such an interpretation supposes that robust competition among large IT platforms, the constant threat of upstarts, the geographic expansion of firms, and the easy availability of financial capital to entrants have combined to limit the exercise of market power throughout the economy. Yet this benign interpretation cannot be reconciled with six of the nine categories of evidence of substantial and widening market power. Anticompetitive coordination, mergers, and exclusion have not been deterred; market power is durable; the marked increase in equity ownership of rival firms by financial investors has softened competition; and government restraints on competition are on the rise.

Nor is the benign interpretation persuasive with respect to the three other factors. Are we to attribute the rise of dominant IT platforms entirely to scale economies and first mover advantages? Doing so fails to recognize those platforms' ability to protect their position by excluding rivals. Is growing concentration entirely benign? Saying so requires ignoring empirical evidence showing that firms in industries such as brewing, airlines, and hospitals exercise market power. We would also have to discount the possibility that fixed expenditures on IT and other inputs, which can increase scale economies and concentration, have also deterred entry and softened competition.⁹⁷ Scale economies and rewards to firms successfully adopting new technologies likely contributed to the growth of dominant IT platforms and industry concentration—and to the formation of market structures in which firms exercise market power.

Some evidence for the final factor, the loss of economic dynamism, is consistent with growing scale economies and returns to the early adoption of new technologies in competitive markets as well as with increasing market power. This includes the rising profit share of GDP and the growing gap in accounting profitability between the most and least profitable firms. But

other aspects of declining dynamism cannot be reconciled with the benign interpretation.

The issue is that the benign interpretation assumes that profits rise because markets are increasingly dynamic, with higher rates of entry, investment, and business failure. Scale economies yield higher profits because entrants have a greater risk of failure when fewer firms can succeed, and the profits to early adopters in IT are temporary, competed away by new or expanding rivals making their own investments. But evidence shows the reverse: a slowing rate of new entry, declining rate of expansion when firms and plants grow more productive, and secular slowdown in business investment.⁹⁸ Moreover, the combination of high stock-market valuations and low interest rates on corporate bonds in recent years suggests that the financial markets view corporate profit streams as less risky than in the past. Yet if markets were increasingly dynamic, as the benign interpretation supposes, those streams would be viewed as riskier. Thus, taking all the evidence into account, growing market power is a better explanation of current economy-wide trends than the alternatives of scale economies and early adopter rents.⁹⁹

Growing market power is also consistent with the appearance of competition. Even firms that exercise substantial market power typically compete for some business.¹⁰⁰ For example, when basic cable-television rates were partially deregulated, cable providers increased rates substantially, most likely to the point where competition from satellite providers constrained further increases.¹⁰¹ Notwithstanding the appearance of competition among cable and satellite providers, cable providers likely exercised market power. To similar effect, the observation that large IT and Internet firms compete in some lines of business—intelligent assistants, cloud-computing services, video programming, development of self-driving cars, search engines—does not preclude their exercise of market power in other sectors or even some of these lines of business.

The nine categories of evidence presented above show that market power has probably been growing for decades. But many of the reasons to think so became apparent only during the past few years.¹⁰² For the most part, it is recent economic literature that shows insufficient deterrence of anticompetitive horizontal mergers and exclusionary conduct, competitive problems from common financial-investor ownership, rising concentration in major sectors of the economy, and declining economic dynamism. The paradox of substantial market power alongside robust antitrust may not have been evident in the past, but it can no longer be ignored.

WHAT'S WRONG WITH MARKET POWER

Some of the adverse effects of substantial and widening market power appear primarily in the markets affected directly. Others may extend to the economy as a whole in the form of slowed productivity and economic growth, as well as increased inequality.

Harms within Affected Markets

For the most part, antitrust analysis adopts what economists refer to as a partial-equilibrium framework, looking at competitive harms solely within the markets potentially affected by the exercise of market power. From that perspective, the exercise of market power by sellers is harmful in several ways. It transfers wealth from buyers to sellers and creates an allocative efficiency loss. Market power also can lead to wasteful rent seeking along with lessening the rate of innovation and slowing productivity improvements.

Wealth Transfer and Allocative Efficiency Loss

The exercise of market power in output markets leads to wealth transfer from buyers to sellers.¹⁰³ when prices rise, buyers are overcharged, and sellers earn supracompetitive profits. Market power also creates an allocative efficiency, or deadweight, loss, because some transactions that would occur in a competitive market are foregone. Though buyers value the product or service more than it costs sellers to make or provide it, no transaction is made. Hence the economy sacrifices wealth—gains from trade—that would have been created had buyers and sellers been able to transact.

The harms from wealth transfer and allocative efficiency loss are most easily described in a market for a homogenous product sold at a single price—perhaps grains, crude oil, raw metals, or industrial gases. But similar harms arise when products or services are differentiated, sold at diverse prices, or when competition is primarily in quality, convenience, or features rather than price, as with branded consumer products, professional services, and transportation. Victimized buyers may experience reductions in service quality and convenience as exploitative: firms competing for business may work to persuade potential buyers, but when it is not easy for a buyer to take its business elsewhere, customer service may suffer.

The exercise of market power by buyers (in input markets, including labor markets) leads to harms analogous to those arising from seller market power.¹⁰⁴

When buyers exercise market power, suppliers (sellers) are paid too little, so wealth is transferred to buyers. In addition, allocative efficiency losses can arise because resources (inputs) may not be employed in the markets where they are most valued. If the hospitals in a city collude to depress the wages paid to nurses below competitive levels—as has been alleged across the United States¹⁰⁵—then nurses will be underpaid, fewer will be hired than otherwise would be, some nurses will leave the profession, and others will invest less in improving their skills. Reduced input purchases may restrict downstream production, generating additional allocative efficiency losses. In this example, patient care may suffer.

Wasteful Rent Seeking

An efficiency loss to society from wasteful rent seeking arises when firms compete for the opportunity to profit from exercising market power.¹⁰⁶ That may happen when sellers spend resources lobbying to secure or protect anticompetitive privileges afforded by law. For example, such a privilege might be conferred through certificate-of-need laws, which can enable hospitals to serve a community free of competition. Patents offer another vehicle.

There are also nongovernmental means of rent seeking. For instance, sellers may spend resources to erect barriers to entry. Such expenditures are wasteful: they go to securing a firm against competition, not to developing better, cheaper, or more convenient products and services.

Slowed Innovation and Productivity Improvements

The exercise of market power may have adverse dynamic consequences for productivity and innovation.¹⁰⁷ First, the exercise of market power slows the rate at which firms improve products and production processes and the rate at which they lower costs. The loss of competition reduces firms' incentives to expand markets and take business from their rivals, which they might do by cutting costs and prices, improving quality and features, developing new and better products and production processes, or enhancing the value they offer customers by providing increased variety and better services.

The loss of competition also inhibits productivity-enhancing selection—the tendency of the best products and most efficient producers to win out as products, technologies,¹⁰⁸ business models, plants, and firms unable to price competitively or attract enough customers are forced from the marketplace. Not surprisingly, the modern economic and business literatures consistently

and convincingly demonstrate that enhanced competition leads to greater productivity and that the exercise of market power reduces it.¹⁰⁹

Second, because firms have an incentive to innovate to escape competitive pressures, firms protected from entry and exercising durable market power tend to innovate less. This incentive is important notwithstanding a theoretical qualification emphasized by the Schumpeterian side of a long-standing controversy about the relationship between competition and innovation.¹¹⁰ That side points out that the exercise of market power could enhance innovation incentives if a firm's preexisting market power reduces the likelihood that its rivals will quickly copy its new products or processes. On this account, a firm lacking market power would not innovate for fear that rivals mimicking its advances would compete so aggressively as to prevent the firm from earning a profit sufficient to justify its investments in research and development (R&D). Some economists suggest that this danger is greater for product innovation than production-process innovation because new products can be more easily copied.

However, this theoretical qualification is unlikely to be important in most markets where antitrust issues arise, because firms making major R&D investments usually have many reasons other than preexisting market power for expecting to appropriate sufficient returns, even with some imitation. The reasons may include protections afforded by intellectual property rights, rapid market growth, scale economies, network effects, the sale of complementary products, and customer-switching costs.

Moreover, even if the prospect of greater post-innovation competition means a dominant firm would expect to earn less by innovating, the firm may still be led to keep investing in R&D for fear of losing out to its rivals, many of which have a strong incentive to pursue new products and production processes in order to steal business from the dominant firm.¹¹¹ At one time empirical economists thought that a degree of market power might foster innovation; after all, cross-industry studies found an "inverted-U" relationship between innovation and market concentration. But those studies were not reliable because they did not successfully control for differences in technological opportunity across industries.¹¹²

Given the unpersuasiveness of arguments for the innovation benefits of market power and the strong arguments for the innovation benefits of competition, we should feel safe concluding that greater competition generally enhances the prospects for innovation,¹¹³ while the exercise of market power tends to slow innovation and productivity improvements.

Buyers, too, can exercise market power in ways that undermine supplier investments in innovation and improved production processes, creating dynamic harms. For example, if cable providers are able to depress the prices they pay for video programming through the exercise of market power in purchasing content, content providers may invest less in developing new programming.

Some might push back on the ground that lost competition is not necessarily a bad thing. True, competition can be wasteful. Competing firms typically make duplicative fixed expenditures. R&D competition often leads to duplication of effort. Excessive entry can occur when incumbents respond to entry by reducing output,¹¹⁴ when financial markets are subject to "advantageous" selection,¹¹⁵ and when firms can externalize social costs such as air pollution. If industry output would exceed the efficient level in a competitive market for any of these reasons, then it is possible that the output reduction associated with the exercise of market power would mitigate the efficiency loss to some extent. But there is no reason to expect a perfect offset. Aggregate welfare may end up lower than it would absent the exercise of market power, and even if aggregate welfare increases, consumer welfare may still be reduced.

These qualifications do not shake the overall conclusion. Taken as a whole, the economics literature strongly supports the view that market competition is beneficial and market power is harmful within affected markets, accounting for both static and dynamic effects.

Economy-Wide Harms

Looking beyond the individual markets affected by market power, the exercise of market power is harmful to the U.S. economy as a whole. Although competition operates market-by-market and industry-by-industry, the scope of market power can affect the overall economy. The harms are not limited to the participants in the particular markets in which competition has declined. The exercise of market power may also result in slowed economic growth and increasing economic inequality.¹¹⁶

Slowed Economic Growth

The McKinsey Global Institute has undertaken revealing cross-national and cross-industry studies. They demonstrate that differences in competition in

product markets across nations are likely as important in explaining variation in productivity and economic performance as are cross-national differences in macroeconomic policies. Differences in competition are probably more important to productivity and economic performance than are cross-national differences in labor and capital markets.¹¹⁷ National economies do better when competition is both “intense” and “fair,” which means that it is not distorted by governmental subsidies to less productive firms.¹¹⁸ Harvard Business School’s Michael Porter, a leading expert on business strategy, reached a similar conclusion from a large cross-national study. Porter found that “vigorous domestic rivalry” in an industry helps make that national industry “gain and sustain competitive advantage internationally.”¹¹⁹ In addition, economists seeking to understand why some nations have grown wealthy consistently find that impediments to competition hinder innovation, growth, and prosperity.¹²⁰

Firms with market power can also slow economic growth by using the political system to protect and enhance their economic advantages, in ways that may not benefit the national economy. This happens when firms and industries secure long-lasting political power through their size and lobbying influence, as discussed more fully in Chapter 3. Their economic and political power then reinforce each other in a vicious circle. Market power gives firms the resources to create and exploit political power, which they use to protect or extend their economic advantages. They then invest some of the resulting rents in maintaining and extending their political power.¹²¹ Conceivably, they could use that political power to induce productive change, but they have a strong incentive to prioritize their own gains, whatever the wider effects.

Increased Inequality

The exercise of market power likely contributes to economy-wide inequality because the returns from market power go disproportionately to the wealthy.¹²² Increases in producer surplus from the exercise of market power—that is, wealth transfers—accrue primarily to firms’ shareholders and top executives, who are wealthier on average than the median consumer. In a recent year, the top 1 percent of the population categorized by wealth held half of the stock and mutual fund assets, and the top 10 percent held more than 90 percent of those assets. (That figure remains high—80 percent—after accounting for indirect ownership through retirement plans and similar accounts.¹²³) In the past, unionized workers may have been able to appropriate

some of the profits from the exercise of market power, but with the decline of private-sector unionization, that ability is of limited practical importance. Rather, the exercise of monopsony power in labor markets could further contribute to increased inequality.¹²⁴

A Serious Problem

The harms from market power in affected markets can be substantial. In some antitrust cases, the overcharge to buyers or profits lost by excluded sellers amount to hundreds of millions of dollars—before trebling. These figures do not account for allocative efficiency losses, wasteful rent-seeking expenditures, or harms from slowed productivity improvements or innovation.

The adverse consequences of market power for the economy as a whole are less easily identified and measured. But the economy-wide harms from market power—slowed productivity and economic growth and increased inequality—are at least comparable in magnitude to the costs of business-cycle downturns and conceivably much larger.

Substantial and widening market power creates a serious public policy problem not adequately deterred by our extensive antitrust institutions.¹²⁵ This surprising conjunction of widening market power with well-developed judicial norms against anticompetitive conduct and well-established antitrust enforcement institutions challenges us to identify ways that courts, antitrust enforcers, and policy makers can better deter anticompetitive conduct. Later chapters take up that challenge. A range of other public policies—including efforts to improve new and small firms’ access to finance, support competition through public procurement, tailor the scope of intellectual property rights to competition concerns, and rethink regulatory frameworks that entrench large incumbent firms at the expense of fringe rivals and entrants—might help to foster competition and undermine growing market power. I do not discount these, but I also do not focus on them. While others pursue these worthy goals, mine is to counter and discourage market power with antitrust enforcement.