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Antitrust Policy and Regulation

We have always known that heedless self-interest was bad morals;
we now know that it is bad economics.

—Franklin Delano Roosevelt

In the courtroom everyone waits for the Microsoft star witness, an economist who is arguing that Microsoft does not have a monopoly. On the stand he testifies, “The market is too dynamic, too much in flux for a monopoly to exist.”

“But how about the fact that Microsoft intentionally tied its Web browser to its Windows operating system in order to harm Netscape’s ability to compete?” the government lawyer asks.

“Those were technical decisions,” the economist answers, “necessary to make the Web browser operate efficiently.”

“Yeah, right,” replies the government lawyer.

The above is a paraphrase of what was said in a federal court in an antitrust case the government brought against Microsoft. It captures a very real aspect of all theoretical discussions of market structure and policy. Once theory is translated into policy, market structure and behavior play an important role in how the economy functions. One way in which theory is translated into policy is through antitrust policy and regulation. In this chapter we consider both.

Antitrust Policy: Judgment by Performance or Structure?

Antitrust policy is the government’s policy toward the competitive process. It’s the government’s rulebook for carrying out its role as referee. In volleyball, for instance, the rulebook would answer such questions as: When should a foul be called? When has a person caught and thrown rather than hit the ball over the net? In business a referee is needed for such questions as: When can two companies merge? What competitive practices are legal? When is a company too big? To what extent is it fair for two companies to coordinate their pricing policies? When is a market sufficiently competitive or too monopolistic?

AFTER READING THIS CHAPTER, YOU SHOULD BE ABLE TO:

- Explain the difference between the structure and the performance methods of judging competition.
- Give a brief history of U.S. antitrust policy.
- State the resolution of the IBM, AT&T, and Microsoft antitrust cases.
- Differentiate among horizontal, vertical, and conglomerate mergers.
- List five reasons why unrelated firms would want to merge.
- Compare U.S. antitrust policy with antitrust policy of other countries.
- List three alternatives to antitrust policy that government can use to affect the competitive process.

Judgment by performance is the view that competitiveness of a market should be judged by the behavior of firms in that market.

Judgment by structure is the view that competitiveness of a market should be judged by the structure of that market.

The United States has seen wide swings in economists' prescriptions concerning such questions, depending on which of the two views of competition has held sway. The two competing views are

1. **Judgment by performance:** *We should judge the competitiveness of markets by the performance (behavior) of firms in that market.*
2. **Judgment by structure:** *We should judge the competitiveness of markets by the structure of the industry.*

To show how the U.S. government has applied these two views of competition in promoting workable and effective competition, this chapter considers government's application of antitrust laws to regulate business. It then considers how recent structural changes in the economy are altering the government's role in refereeing the market.

History of U.S. Antitrust Laws

Although U.S. ideology has always been strongly in favor of laissez-faire and government noninvolvement in business, there has simultaneously been a populist (pro-people) sensibility that fears bigness and monopoly. These fears of bigness and monopoly burst forth in the late 1800s as many firms were merging or organizing together to form trusts or cartels. As stated in the chapter on monopolistic competition, a *cartel*—or, as I'll use the term in this chapter, a *trust*—is a combination of firms in which the firms haven't actually merged but nonetheless act essentially as a single entity. A trust sets common prices and governs the output of individual member firms. A trust can, and often does, act like a monopolist.

In the 1870s and 1880s, trusts were forming in a number of industries, including railroads, steel, tobacco, and oil. Some of these trusts' actions are typified by John D. Rockefeller's Standard Oil. Standard Oil demanded that railroads pay it kickbacks on freight rates. These payments allowed Standard Oil to set lower prices for its products than could other companies, which had to pay the railroads full price on freight. Standard Oil thus could sell at lower prices than its competitors.

If prices had remained low, this would have had a positive effect on consumers and a negative effect on Standard Oil's competitors. But prices didn't remain low. By 1882, Standard Oil had driven many of its competitors out of business, and the writing was on the wall for those competitors that remained. At that time, Standard Oil created a trust and "invited" its few surviving competitors to join. Then Standard Oil Trust used the monopoly power it had gained to close down refineries, raise prices, and limit the production of oil. The price of oil rose from a competitive level to a monopolistic level, and the consumer, as well as Standard Oil's competitors, ended up suffering.



Public outrage at the formation and activities of trusts such as Standard Oil led to the passage of the Sherman Act, the Clayton Act, and the Federal Trade Commission Act.

The Sherman Antitrust Act

Public outrage against trusts like Standard Oil's was high. The organizers of the trusts were widely known as *robber barons* because of their exploitation of natural resources and their other unethical behavior. The trusts were seen as making enormous profits, preventing competition, and in general bullying everyone in sight. In response the U.S. Congress passed the **Sherman Antitrust Act** of 1890—a law designed to regulate the competitive process.

The Sherman Act contained two main sections:

Section 1: Every contract, combination in the form of trust or otherwise, or conspiracy, in restraint of trade or commerce among the several States, or with foreign nations, is hereby declared to be illegal.

Section 2: Every person who shall monopolize, or attempt to monopolize, or combine or conspire with any other person or persons, to monopolize any part of the trade or commerce among the several States, or with foreign nations, shall be deemed guilty of a misdemeanor, and, on conviction thereof, shall be punished by a fine not exceeding five thousand dollars, or by imprisonment not exceeding one year, or by both said punishments, at the discretion of the court.

Q.1 What were the two provisions of the Sherman Antitrust Act?

The Sherman Act was broad and sweeping, but vague.

The Sherman Act was meant to be as sweeping and broad as its language sounds. After all, it was passed in response to a public outcry against trusts. But if you look at it carefully, in some respects it is vague and weak. For example, offenses under Section 2 were initially only misdemeanors, not felonies.¹ It's unclear what constitutes "restraint of trade." Moreover, although the act prohibits monopolization, it does not explicitly prohibit monopolies. In short, with the Sherman Act, Congress passed the buck to the courts, letting them decide U.S. antitrust policy.²

The following story summarizes the courts' role in antitrust policy. Three umpires are describing their job. The youngest of the three says, "I call them as I see them." The middle-aged umpire says, "No, that's not what an umpire does. An umpire calls them the way they are." The senior umpire says, "You're both wrong. They're nothing until I call them." And that's how it is with the courts and monopoly. Whether a firm is behaving monopolistically isn't known until the court makes its decision.

As Congress was passing the Sherman Act, economists too were debating the implications of trusts and whether it was in the public interest to restrict them. Part of the debate concerned whether the mergers reflected technological changes in production and expanding transportation systems that made increased economies of scale more important (in which case restricting trusts might not be in the public interest since doing so might prevent firms from taking advantage of economies of scale), or whether trusts simply represented attempts at monopolization to restrict output and generate monopoly profits (in which case restricting trusts would more likely be in the public interest since doing so would reduce monopoly).

Economists reflecting the performance viewpoint argued that competition was strong and would ultimately limit monopolies.

A second part of the debate concerned how fast economic forces would operate and how fragile competition was. Some economists argued that competition was strong and that it would limit the profit trusts and monopolies made and force them to charge the competitive price (in which case restricting trusts might not be in the public interest). These economists were reflecting the performance viewpoint—that competition should be relied on to break down the monopolies. They argued that bigness doesn't imply the absence of market competition and that the government's role should merely be to make sure that no significant barriers to entry are created.

Other economists, reflecting the structure viewpoint, argued that competition was fragile and required a large number of small firms. They argued that trusts and monopolies (even if they don't charge monopolistic prices) are bad, that the trusts should be broken up by government, and that laws should not allow new monopolies or trusts to be formed. However, the debate was for the courts, not economists, to settle.

Economists reflecting the structure viewpoint argued that trusts should be broken up by government.

The Standard Oil and American Tobacco Cases: Judging Market Competitiveness by Performance

In 1911, the U.S. Supreme Court established its interpretation of the Sherman Act by handing down its opinions in cases involving Standard Oil and the American Tobacco

www Web Note 15.1
The Trusts

¹Under federal law, a misdemeanor is any misconduct punishable by only a fine or by a jail sentence of a year or less. A felony requires a sentence of more than a year.

²Subsequent amendments to the Sherman Act have strengthened it. For example, offenses under Section 2 are now felonies, not misdemeanors.

Standard Oil and the American Tobacco Company were judged guilty, not because of their structure, but because of their performance.



Q₂ What was the resolution of the Standard Oil case?

Company. The Court determined that both companies were structural monopolies; each company controlled 90 percent of its market. However, the Court decided that the monopolistic structure of the markets did not violate the Sherman Antitrust Act. A company's violation of the act was determined not by the structure of the industry but by the particular firm's performance—that is, by whether or not the firm engaged in “unfair business practices.” This judgment by performance, not judgment by structure, is often called the *abuse theory* because a firm is legally considered a monopoly only if it commits monopolistic abuses.

In these two cases the distinction was academic. Both Standard Oil and American Tobacco were judged guilty (very guilty) of unfair business practices and were broken up. But the academic distinction played an important role in determining the industrial structure of the United States. It allowed structural monopolies to exist but prohibited them from using certain monopolistic practices, such as demanding kickbacks.

In 1920, this structure/performance distinction was important in a case involving U.S. Steel. Here the Supreme Court ruled that, while U.S. Steel was a structural monopoly, it was not a monopoly in performance. That is, the firm had not used unfair business practices to become a monopolist and thus was not in violation of antitrust law. Unlike Standard Oil, U.S. Steel was not required to break up into smaller companies.

The Clayton Act and the Federal Trade Commission Act

In an attempt to give more guidance to the courts and to provide for more vigorous enforcement of the antitrust provisions, in 1914 Congress passed the Clayton Antitrust Act and the Federal Trade Commission Act.

The **Clayton Antitrust Act** is a law that made four specific monopolistic practices illegal when their effect was to lessen competition:

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1. Price discrimination.
2. Tie-in contracts.
3. Interlocking directorships.
4. Purchase of a competitor's stock.

1. Price discrimination, that is, selling identical goods to different customers at different prices.
2. Tie-in contracts, in which the buyer must agree to deal exclusively with one seller and not to purchase goods from competing sellers.
3. Interlocking directorships, in which memberships of boards of directors of two or more firms are almost identical.
4. Buying stock in a competitor's company when the purpose of buying that stock is to reduce competition.

In establishing the Federal Trade Commission (FTC) in 1914, Congress gave it the power to regulate competition and police markets. The **Federal Trade Commission Act** is a law that made it illegal for firms to use “unfair methods of competition” and to engage in “unfair or deceptive acts or practices,” whether or not those actions had any impact on competition. Other than that broad mandate, Congress gave the FTC little direction as to what rules to use to regulate trade and police markets. As a result, for more than 20 years the commission was rather ineffective. In 1938, however, it was given the job of preventing false and deceptive advertising, which remains one of its primary roles.

The ALCOA Case: Judging Market Competitiveness by Structure



Q₃ What was the resolution of the ALCOA case?

Judgment by performance was the primary criterion governing U.S. antitrust policy until 1945. In 1945 the U.S. courts changed their interpretation of the law with the Aluminum Company of America (ALCOA) case. In the ALCOA case, the company was found guilty of violating the antitrust statutes even though the court did not rule that ALCOA had been guilty of unfair practices. What ALCOA had done was to use its

knowledge of the market to expand its capacity before any competitors had a chance to enter the market. In addition, it had kept its prices low to prevent potential entry by competitors, an activity known as *predatory pricing*. It showed no signs of exploiting its monopoly power to charge high prices or to force competing firms out of business. Thus, on performance standards, it was not violating the law. But in the ALCOA case, the structure of the market, not the company's performance, was used to determine whether ALCOA was in violation of antitrust law.

Web Note 15.2
Predatory Pricing

Judging Markets by Structure and Performance: The Reality

Judgment by structure seems unfair on a gut level. After all, in economics the purpose of competition is to motivate firms to produce better goods than their competitors are producing, and to do so at lower cost. If a firm is competing so successfully that all the other firms leave the industry, the successful firm will be a monopolist, and on the basis of judgment by structure will be guilty of antitrust violations. Under the judgment-by-structure criterion, a firm is breaking the law if it does what it's supposed to be doing: producing the best product it can at the lowest possible cost.

Supporters of the judgment-by-structure criterion recognize this problem but nonetheless favor the structure criterion. An important reason for this is practicality.

An important reason supporting the structure criterion is practicality.

Contextual Judgments and the Capabilities of the Courts Judgment by performance requires that each action of a firm be analyzed on a case-by-case basis. Doing that is enormously time-consuming and expensive. In some interpretations, actions of a firm might be considered appropriate competitive behavior; in other interpretations, the same actions might be considered inappropriate. For example, say that an automobile company requires that in order for its warranty to hold, owners of its warranted vehicles must use only the company's parts and service centers. Is this requirement of the automobile company intended to create a monopoly position for its parts and service center divisions or to ensure proper maintenance? The answer depends on the context of the action.

But judging each case contextually is beyond the courts' capabilities. There are so many firms and so many actions that the courts can't judge all industries on their performance. They must devise a way to limit the issues they look at. In order to apply the performance criterion reasonably, the Supreme Court must set out certain guidelines to tell firms in what situations the Court will take a closer look at their performance. Because the available information concerns structure, those guidelines inevitably refer to market structure, even though it is firms' performance that will ultimately be judged. So even though judging by structure may have problems, it is necessary.

It's very much like the procedure college admissions offices use in deciding which applicants to accept. They judge applicants on their "total performance," not just on their quantitative scores on standardized tests. However, they often set a certain quantitative score to reduce applications to a manageable number. Applicants below the cutoff are automatically rejected; applicants above it are considered one by one.

Another argument in favor of judging competitiveness by structure is that structure can be a predictor of future performance. Advocates of this criterion argue that a monopolist may be pricing low now, but it is, after all, a monopolist and won't price low in the future. The low price will eliminate competition now, and, once the competition is gone, the firm will not be able to resist the temptation to use its monopoly power.

Determining the Relevant Market and Industry Supporters of the performance criterion admit that this standard has problems, but they point out that the structure criterion also has problems. As you saw in the chapter on monopolistic competition, it's difficult to determine the relevant market (local, national, or international)

Choosing the relevant market when evaluating competitiveness is difficult to do.

Wal-Mart, State Laws, and Competition

APPLYING the Tools

It isn't only the federal government that has laws regulating competition. States have a variety of laws that govern competitive practices. One such state law is Arkansas's Unfair Practices Act, which prohibits selling, or advertising for sale, items below cost "for the purpose of injuring competitors and destroying competition." In the early 1990s, three Arkansas pharmacies sued Wal-Mart for violating this law by selling its goods at "too low" a price. The background of the case is the following.

Wal-Mart had been expanding aggressively throughout the United States reaching a total of about 3,000 stores by the mid 1990s. It does not deny that it, like many other stores, sells some goods below cost. But it argues that when it sells below cost, it does not do so to "destroy competition" or "injure competitors," but rather to maintain low prices for consumers. It claims that its pricing policies promote, not destroy, competition.

In principle, most economists agree with Wal-Mart; new competition, by its very nature, hurts existing businesses—



that's the way the competitive process works. Those who don't sell for the lowest price lose, and those who do gain. But most economists also recognize that Wal-Mart's brand of competition can affect the social fabric of small-town economies. A new Wal-Mart store can undermine the town centers and replace them with commercial sprawl on the outskirts of these towns. Whether these externalities are a reason to limit Wal-Mart's aggressive pricing policies is a debatable question.

Wal-Mart initially lost its suit in Arkansas; however, in 1995 the Arkansas Supreme Court overturned the lower court decision and held that Wal-Mart's pricing was not part of a strategy to price below cost over a prolonged period. While Wal-Mart won this suit, the threat of other suits discouraged the company from following quite as aggressive a pricing policy as it otherwise would have.

and the relevant industry (three-digit or five-digit NAICS code) necessary to identify the structural competitiveness of any industry.

Such questions have been the center of many antitrust court cases. For example, in the ALCOA case, the company argued that metals such as copper and steel were interchangeable with aluminum, and that therefore the relevant industry to consider was the metals industry. If the Court had chosen metals, not aluminum, as the relevant industry, ALCOA wouldn't have been found to have a monopoly. The Court decided, however, that aluminum had sufficiently unique properties to constitute its own market. Since it determined that ALCOA had 90 percent of the aluminum market, ALCOA was declared a monopoly and was broken up.

The arguments in the Du Pont case (1956) again centered on the definition of *industry*. The Supreme Court found that Du Pont was innocent of monopolizing the production of cellophane even though Du Pont was the only producer of cellophane. The Court reasoned that the relevant industry was not the cellophane industry but rather the flexible wrap industry, which also included aluminum foil and wax paper. Du Pont did not have a monopoly of the flexible wrap industry and thus, the Court said, was not in violation of the antitrust laws.

More recently, in 1993, the Department of Justice opposed a merger between Gillette and Parker Pens, arguing that the combined firm would control about 40 percent of the premium-fountain-pen market. The Court, however, allowed the merger, arguing that the relevant market was much larger—the market for premium writing instruments, which also included mechanical pencils, ballpoint pens, or rollerballs. The

Q-4 What was the resolution of the Du Pont case?

premium-writing-instruments market had many more competitors than the premium-fountain-pen market.

Similar ambiguities exist with the decision about the relevant geographic market. In the Pabst Brewing case (1966), the definition of the market played a key role. Pabst wanted to merge with the Blatz Brewing Company. On a national scale, both companies were relatively small, accounting together for about 4.5 percent of beer sales in the United States as a whole. Pabst argued that the United States was the relevant market. The Court, however, decided that Wisconsin, where Pabst had its headquarters, was the relevant market, and since the two firms held a 24 percent share of that market, the merger was not allowed.

What should one make of debates regarding relevant markets? The bottom line is that both structure and performance criteria have ambiguities, and in the real world there are no definitive criteria for judging whether a firm has violated the antitrust statutes. A firm isn't at fault or in the clear until the courts make the call.

Both structure and performance criteria have ambiguities, and in the real world there are no definitive criteria for judging whether a firm has violated the antitrust statutes.

Recent Antitrust Enforcement

In recent years, few mergers have been challenged by the government. In 2003, for example, the Department of Justice challenged only 21 of the more than 8,200 mergers that took place among U.S. companies. Most of those challenged were settled, abandoned, or restructured. Only one went to court. Despite the fact that few recent mergers have been challenged, antitrust law still works mainly through its deterrent effect. Many potential mergers are never even proposed because firms know they would not be allowed.

Few major antitrust cases have been brought, in part because a century of experience has taught business what the law allows, and in part because the government has been lenient in its interpretation of the antitrust laws. That leniency has three interrelated causes. The first is a change in the American ideology. Whereas in the 1950s and 1960s the prevailing ideology saw big business as "bad," by the 1980s big business was seen as a combination of good and bad. In this new ideological framework, the political pressure to push antitrust enforcement waned. Second, as the United States became more integrated into the global economy, big business faced significant international competition and hence competition created by U.S. market structure became less important. Third, as technologies became more complicated, the issues in antitrust enforcement also became more complicated for the courts to handle. By the time the legal system had resolved a case, the technology would have changed so much that the issues in that case were no longer relevant.

Since the 1980s the United States has been more lenient in antitrust cases because of a change in ideology, the globalization of the U.S. economy, and the increasing complexity of technology.

Three Modern Antitrust Cases

The modern era of antitrust policy has been marked by important cases in the computer and telecommunications markets. One such case was against IBM.

The IBM Case

In 1967 the U.S. Department of Justice sued IBM for violating the antitrust laws. The department argued that the company had a 72 percent share of the general-purpose electronic digital computing industry, and that it had acquired that market share because of unfair business practices such as bundling of hardware, software, and maintenance services at a single price (that is, requiring customers to buy all three together). If you wanted IBM equipment (hardware), you also had to take IBM service and software whether you wanted them or not. When you bought an IBM machine, you bought everything, so

Nefarious Business Practices

APPLYING the Tools



In a secretly recorded comment during a price-fixing meeting, the former president of Archer Daniels Midland (ADM), a major supplier of food and grain, stated, “Our competitors are our friends and our customers are our enemies.”

The U.S. antitrust laws concern far more than mergers and market structure; they also place legal restrictions on certain practices of businesses such as price-fixing. By law, firms are not allowed to *explicitly* collude in order to fix prices above the competitive level. A key aspect of the law is the explicit nature of the collusion that is disallowed. Airlines, gas stations, and firms in many other industries have prices that generally move in tandem—when one firm changes its price, others seem to follow. Such practices would suggest that these firms are implicitly colluding, but they are not violating the law unless there is explicit collusion.

To prove explicit collusion is difficult—there must be a smoking gun, and there is seldom sufficient evidence of explicit collusion to prosecute businesses. There are exceptions, however. In 1996, ADM was caught red-handed

when one of its former officials gave prosecutors tapes of meetings in which price-fixing occurred. Meeting secretly around the world, in countries like Mexico, France, Canada, and Japan, ADM executives tried to set prices of lysine, a feed additive, and citric acid. One of ADM’s officials, working undercover for the FBI, secretly recorded these meetings. Faced with the taped evidence against them, ADM agreed to pay \$100 million in fines—the largest criminal antitrust fine in history up to that year. Since 1996 four other companies have been fined even greater sums, with Roche Holding paying a fine of \$500 million.

| Company | Fine (in millions) |
|--------------------|--------------------|
| Roche Holding | \$500 |
| BASF | 225 |
| SGL Carbon | 135 |
| Ucar International | 110 |
| ADM | 100 |

In technology industries, the market is continually changing.



Q-5 What was the resolution of the IBM case?

other companies had little chance to compete. Moreover, the department argued that IBM constantly redesigned its computers, making it impossible for other companies to keep up and compete fairly on the sale of any IBM mainframe-compatible item.

IBM argued that the relevant market was broader, that it included all types of computers such as military computers, programmable calculators, and other information-processing products. It further claimed that its so-called unfair practices were simply a reflection of efficient computer technology. Fast-moving technological developments required it to continually redesign its products merely to provide its customers with the latest, best equipment. And, it said, the only way to provide the best level of service to its customers was to include its maintenance services in the price of its products. The case dragged on for years until finally, in 1982, the government withdrew its case.

The reason it did so was that the market had changed. Many of the government’s objections had become moot; mainframe computers were being replaced with personal computers, a market in which Apple and DEC had become serious competitors, and the globalization of the computer industry made IBM’s dominance in the United States far less important.

IBM may have won the battle in the antitrust case against it, but in doing so it may have lost the war. Here’s why.

About the same time as the case was at its height, IBM was negotiating with an upstart company about an operating system for a small part of its market—the personal computer (PC) market, which was just developing. Bill Gates, the president of the young company, offered to sell its disk operating system (DOS) to IBM for \$75,000.

IBM refused to buy it; to have bought DOS would have given IBM greater control over the PC market, and would have made a court-ordered breakup of IBM more likely. Instead, IBM left Bill Gates to license DOS to IBM and everyone else, while IBM concentrated on mainframe computers and the production of PCs.

By the early 1990s, the cost of that decision was clear. The mainframe market was dying, and IBM was hemorrhaging losses. Meanwhile, Bill Gates had become a multi-billionaire, and his company—Microsoft—had become a controlling force in the PC market. Now the tables were turned and in 1994 it was Microsoft that was being pursued by the U.S. government for violating antitrust laws.

The losses at IBM ended in the mid-1990s and its competitive position improved. Thus, ultimately it weathered the antitrust case, but its history was forever changed.

The IBM case was dropped by the United States, but the prosecution likely led to IBM's problems in the 1990s. It won but it also lost.

The AT&T Case

The other major antitrust case of the 1980s, the AT&T case, demonstrates another aspect of U.S. antitrust policy and shows how technological change plays an important role in competition and questions of industrial market structure.

AT&T as a Regulated Monopoly Up until 1982, AT&T was what was called a *regulated monopoly*. It had the exclusive right to provide telephone service in the United States. AT&T controlled 90 percent of the telecommunications market: long-distance and local telephone service, and the production of telephones themselves as well as other communications equipment.

Why was it given that right? Because it was felt that economies of scale and network externalities made supplying telephone service a **natural monopoly** (*an industry in which significant economies of scale make the existence of more than one firm inefficient*). Telephone service required every house to be connected with lines, which had to be buried underground or strung overhead on poles. It made little sense to have more than one company stringing competing lines. Moreover, the government decided that universal telephone service was socially desirable, and AT&T was required to provide universal service. Unregulated companies likely would have practiced *cream skimming* (providing service to low-cost areas and avoiding high-cost areas).

A natural monopoly is an industry in which significant economies of scale make the existence of more than one firm inefficient.

In return for its monopoly, AT&T was subjected to regulatory control by the Federal Communications Commission and state utility commissions. This government regulation was designed to limit the company's profit to a fair level and prevent it from abusing its monopoly.

Under AT&T's monopoly, phone service in the United States was the best and cheapest in the world, although some believed it could and should have been even cheaper. Some economists argued that AT&T's guarantee of a "fair" return on its investment gave it a strong incentive to act as a lazy monopolist and to invest heavily, thereby increasing costs. If a company knows it can pass its costs on to customers (and add a profit margin as well), it has little incentive to hold down costs. But even if service was more expensive than it needed to be, on the whole most agreed that the system worked well.

Technological Change and Competition In the 1970s technological changes fundamentally altered the nature of the long-distance telephone industry. The development of satellite transmission and fiber optics made physical line connections no longer the only option, so long-distance telephone service was no longer a natural monopoly. In fact, significant competition began to develop, and AT&T's new competitors claimed that they weren't being allowed reasonable access to the AT&T-controlled

local telephone network. AT&T charged competing firms high fees for access to all its local lines—fees that competitors argued were unfair.

The issue was complicated by the fact that the regulatory commissions had set local charges low and long-distance rates high (implicitly subsidizing local service with AT&T's long-distance profits). As long as AT&T controlled both local and long-distance calling, its revenues were unaffected by this rule. But when competitors began to undercharge AT&T on long-distance service, AT&T grew increasingly concerned. AT&T's high access charges were an attempt to see that the competitors used some of their own profits to help subsidize local rates.

As a result of these claims and counterclaims, the Department of Justice introduced an antitrust suit against AT&T in 1978, alleging that potential competitors were not being allowed reasonable access to AT&T's local telephone network. The case had merit, but so did AT&T's defense: How could a firm provide high-cost local service at a low price with no way to pay for it? As is now usual for any contested antitrust case, the case went on and on, and no conclusion was in sight.



Q-6 What was the resolution of the AT&T case?

Resolution of the AT&T Case In January 1982, AT&T and the Department of Justice announced that they had settled the case and that AT&T had agreed to be broken up. Specifically, AT&T agreed that by January 1, 1984, it would divest itself of 22 local operating companies, which accounted for more than 75 percent of AT&T's assets. These companies quickly merged into seven local operating companies that became known as the *Baby Bells*. AT&T kept its long-distance telephone service, its manufacturing division, and its research facilities. In return, AT&T was subject to far less regulation. After the settlement, AT&T could enter any unregulated business it desired, such as data transmission and computers. The Baby Bells, alternatively, were restricted to the local telephone market.

The result of this settlement was an enormous upheaval in the telephone industry. Local rates for phone service went up twofold or even threefold, while long-distance rates fell substantially. Major competitors emerged, and competition for long-distance business became fierce. (Now more than 800 firms offer long-distance service.)

Developments since the AT&T Case The breakup of AT&T was not the end of the changes. The seven Baby Bells continued merging with one another, and by 2005 only four remained: SBC Communications, Verizon, Bell South, and Qwest. In 1995, AT&T had divided itself into three companies: AT&T, Lucent Technologies, and National Cash Register. Only AT&T remained in the market for communication services, expanding its offerings into wireless communications, digital cable, cable, and long distance. In 2004, however, it began to withdraw from the residential local and long-distance phone markets, and in 2005 one of the former Baby Bells acquired AT&T.

Technological innovation continues to change the nature of the telecommunications industry. Advances in wireless technologies provide competition for both local and long-distance carriers, while the Internet is becoming a larger and larger market. Simultaneously, new high-speed fiber-optic networks are turning telephone lines into a potential competitor for regulated cable TV monopolies. Data, voice, and video can be transmitted by copper wire (phone lines), cable, and wireless (satellite).

As technologies changes the market divisions established by the FCC no longer made sense, and in 1996 Congress passed the Telecommunications Act, which deregulated the telecommunications industry and allowed long-distance carriers, local phone companies, and cable television companies to enter one another's markets. Cable, long-distance, local, cellular phone, and Internet were combined and seen as an "information flow" market. In exchange for being able to compete in the market for long-distance services, the Baby Bells were required to offer access to their local networks to their competitors for a fee.

The AT&T case was settled by AT&T agreeing to be split up into regional companies handling local service, and AT&T itself competing in the long-distance market.

The Baby Bells fought competition in the local phone market by setting difficult technical requirements for use of their lines and by taking advantage of every loophole in the 1996 act they could find. For instance, they fought pressure to open up local networks for high-speed Internet access, arguing that doing so meant sharing lines, which was not required by the 1996 act. Competing companies such as AT&T claimed that the Baby Bells' access fees were too high, precisely the charge that had been levied earlier against AT&T. The delaying tactics worked; in the early 2000s, the four Baby Bells still controlled 70 percent of the local telephone market. As they attempted to maintain control of the local market, they simultaneously expanded into long distance. SBC and Verizon, for example, controlled 18 percent of the long-distance market. This move by local phone companies into long-distance markets has been expanding. And in 2004 the government ceased to require local phone companies to provide long-distance companies access to local lines at a discount, prompting AT&T to withdraw from the residential local and long-distance markets, a withdrawal that signalled its ultimate demise.

The competition is not only between long-distance and local service providers. Competition has also come from wireless communication providers and international telecommunications companies and from the Internet. For example, wireless communications companies are attempting to be the sole providers of telephone service for households. By the early 2000s, they had made some inroads; 6 percent of Americans relied entirely on wireless services. Some analysts predict that within 4 years nearly 30 percent of Americans will rely solely on cell phones. Similarly, international companies have entered the U.S. market just as U.S. companies have entered world markets. Perhaps the strongest competition is coming from Voice over Internet Protocol. With this new technology, companies translate phone calls into Internet messages, send them over the Internet for free, and then translate them back into voice messages. Such competition has reduced long-distance call prices enormously, and will likely continue to do so in the future.

The competition in telecommunications, as in most industries, takes place on both the regulatory front and the business front. On the regulatory front companies try to interpret any regulatory ruling in a manner that is most advantageous to them, and to force competitors to bring legal proceedings to achieve a different ruling. By doing so, they often win even when they lose because the delay of entry allows them to establish their position in the market and make it difficult for competitors to enter even when they are allowed to do so. With the ongoing technological developments, government antitrust policy regarding telecommunications firms is likely to stay in the news into the indefinite future.

Given the technological developments, government antitrust policy regarding telecommunications is likely to stay in the news.

The Microsoft Case

One of the most important antitrust cases brought in the 1990s was the Microsoft case. This is an extremely interesting case to consider both because of its similarities to the IBM case and because of the issues it raises about competition, the competitive process, and government's role in that competitive process.

Microsoft makes computer software. From the company's small start some 30 years ago, sales of Microsoft software have grown to account for about 50 percent of the world's software market. Its PC operating system, Windows, accounts for an even larger share—more than 90 percent—of the world's operating system software market.

Since all software must be compatible with an operating system, the widespread use of Windows gives Microsoft enormous power—power that competitors claim it has used to gain competitive advantage for its other divisions. Competitors' calls for action, and reports of monopolistically abusive acts by Microsoft, led the U.S. Department of Justice in 1998 to charge Microsoft with violating antitrust laws.

The government suit against Microsoft charged the company with being a monopoly and using that monopoly power in a predatory way. Specifically, it charged Microsoft with:

1. Possessing monopoly power in the market for personal computer operating systems.
2. Tying other Microsoft software products to its Windows operating system.
3. Entering into agreements that keep computer manufacturers that install Windows from offering competing software.

Microsoft had dominated the market for PC operating systems for about a decade. The U.S. Department of Justice argued that this long-standing monopoly position was the result of unfair business practices. Microsoft argued that Windows sold so well because it was a superior product. Microsoft further argued that, because it faced competition from technological change, it was not a monopolist.

Is Microsoft a Monopolist? The computer software industry is a market with barriers to entry that originate from two sources: network externalities and economies of scale. Network externalities exist because as the number of applications supported by a single platform increases, the value of the platform also increases. Economies of scale exist because the cost of developing a new platform and new software is significant, while the cost of producing it is minimal. It is a potential candidate for monopoly.

Whether one sees Microsoft as a monopolist depends in part on whether one views it in a static or dynamic framework.



Is Microsoft a monopoly in the market for operating systems? Looking only at the market within a static framework, Microsoft, given its stable 90 percent share, almost definitely has a monopoly. Looking at the market from a dynamic perspective, the issue is much more complicated. Competing operating systems exist; Jaguar (developed by Apple) and Linux are both competitors to Windows.

The Linux operating system is a particularly strong potential competitor because it is an “open-source” operating system. All programmers can get the code and modify it, allowing them to tailor it for their software and streamline the structure of their programs. Because its code is freely available, Linux reduces the costs of software development and leads to more efficient programs.

Another potential competitive force is the merging of software and hardware. As the power of computers increases according to Moore’s law, it is becoming more and more feasible to design specific chips to do specific jobs, incorporating into a single chip aspects that were previously separated into hardware and software. Within 10 years the entire PC structure—a machine to handle a multitude of tasks—could become obsolete, and instead the market may consist of \$10 or \$15 machines that will perform specific tasks more efficiently than can a multipurpose machine like the PC. Already, PDAs (personal digital assistants) and smart phones run software without Windows. Each of these changes could eliminate Microsoft’s monopoly advantage. In this dynamic view of the market, Microsoft’s monopoly is at best temporary, and will survive only if it outcompetes the other technologies. For example, some estimate that within a few years Windows on PCs will account for only about 60 percent of the market for devices that can run applications.

Is Microsoft a Predatory Monopolist? The U.S. Department of Justice argued that Microsoft used its monopoly in the operating systems market to gain a larger share of the software market and engaged in unfair practices against its competitors to maintain the barriers to entry in the operating systems market. Let’s first look at its actions to gain market share in the software market.

Competing software companies alleged that companies like Novell (now Corel), which had the leading word-processing software, WordPerfect, were put at a significant disadvantage because Microsoft combined its software with the Windows operating

system. Not surprisingly, Microsoft's Word has become the dominant word-processing system. By directing the development of new software to favor Windows, Microsoft strengthened the barrier to entry created by network externalities. Microsoft also penalized computer manufacturers that installed Windows if they installed competing software. IBM, for example, was denied Windows 95 when it decided to pre-install its PCs with Lotus, a direct competitor to Microsoft's Excel.

Microsoft was also alleged to have engaged in unfair practices in how it addressed the threat of competition in the operating system market. Direct competitive threats came mainly from two firms: Netscape and Sun Microsystems. Netscape and Sun were developing programs that operated across multiple platforms and were developing potential rival operating systems.

Netscape designed and marketed a very popular Web browser called Netscape Navigator. Navigator posed a threat to Microsoft not only because it could serve as a platform for other software applications and circumvent the need for Windows but also because Navigator could work on many operating systems, increasing the ability of software to work on systems other than Windows. In response to that threat, Microsoft attempted to get Netscape to agree to stop developing Navigator as a competing platform in exchange for a "special relationship" with Microsoft. Netscape wouldn't agree. In response, Microsoft withheld the source code Netscape needed to provide its browser on the Windows platform for three months. This gave Microsoft sufficient time to offer its own Web browser, Internet Explorer, with Windows. Microsoft then bundled its browser with Windows (essentially offering it at no cost) and made it virtually impossible for consumers to remove the Internet Explorer icon from the PC screen. Installing Windows actually disabled competing Internet browsers. Microsoft also prohibited computer manufacturers such as Compaq from offering Netscape as an alternative browser when they sold PCs with Windows.

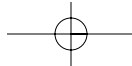
Microsoft used its power in one market to give it advantages in other markets.

The government argued that this competition was unfair and predatory. Microsoft argued that Internet Explorer was a Windows improvement; it was part of Windows. In a matter of a few years Netscape Navigator, which had been more popular than Internet Explorer and had seen its sales climbing rapidly, was nearly replaced by the Microsoft browser.

Another potential competitor was Sun Microsystems, which was developing Java, a programming language designed to create software applications on a variety of platforms, not just Windows. Sun Microsystems had entered into an agreement with Microsoft that allowed Microsoft to distribute the Java code under explicit instructions not to change it. But Microsoft created a version of Java that kept it tied to Windows and changed the platform-neutral characteristics of Java. Microsoft also instructed other companies not to cooperate with Sun. These actions stunted the development of a program that would allow software to run across multiple platforms, which would have reduced the network externality barriers to trade enjoyed by Microsoft.

Resolution of the Microsoft Case So is Microsoft a monopoly? And has it been involved in anticompetitive practices? The answer the court gave was yes. In 2000 a judge concluded that Microsoft violated Section 2 of the Sherman Act by attempting to maintain its monopoly power by anticompetitive means. He also ruled that Microsoft violated Section 1 of the Sherman Act by unlawfully tying its Web browser to its operating system. In a strongly worded decision he stated that "Microsoft mounted a deliberate assault upon entrepreneurial efforts that, left to rise or fall on their own merits, could well have enabled the introduction of competition into the market." As a remedy the government proposed breaking up Microsoft into two companies. Microsoft quickly appealed, and in mid-2001 the appeals court ruled that, while Microsoft was indeed a monopoly, a breakup was not necessary—instead, the case should be resolved by

www Web Note 15.3
More on Microsoft



mediation. A few months later the federal government, nine states, and Microsoft agreed to a settlement. Microsoft agreed not to engage in contracts that prohibited PC makers from using competing products or in practices that favored PC makers that offered only Microsoft products. It also agreed to release technical information about Windows improvements to software developers. Microsoft maintained its right to keep e-mail systems and software programs such as media players bundled with Windows. Nine other states (co-plaintiffs) objected to the settlement because they believed the restrictions on Microsoft were too mild.

The nine states continued suing Microsoft, contending that software developers in applications such as media players could compete only if Microsoft made its operating system modular and provided the relevant code to competitors so they could integrate their software into the Windows operating system as seamlessly as Microsoft products could be integrated. Both sides brought in experts on whether this was easy to do or not.

In November 2002 the Court decided against the dissenting states. Thus, the agreement that Microsoft had entered into with the federal government stood. However, the judge stated that she would be following Microsoft's actions carefully to see that it abided by the agreement. So the end result of the Microsoft case was that even though Microsoft had been declared a monopoly, it was not broken up. Instead it agreed to a set of rules of competition that required it to provide technical information to competitors and to allow computer manufacturers to install software from Microsoft competitors.

Most observers believe that these limitations do not place a serious constraint on Microsoft's domination of the software industry since, for a number of its competitors, that technical information will be provided too late. In the four years that had passed since the beginning of the case, Microsoft had already integrated its Windows operating system with Microsoft media players, and had developed a head start in integrating a number of other new technologies into its Windows operating system. So even if it lives up to the spirit of the agreement, it will retain a lead for years to come. And if it doesn't live up to its agreement, since any legal action against Microsoft will take additional years to litigate, the same process can be expected to continue and Microsoft will have likely established its position in even newer technologies before any limitations can be imposed on it by the government.

Assessment of U.S. Antitrust Policy

Economic scholars' overall assessment of antitrust policy is mixed. In certain cases, such as the IBM case, most agree that antitrust prosecution went too far. But most believe that other decisions (as in the 1911 Standard Oil and American Tobacco cases) set a healthy precedent by encouraging a more competitive U.S. business environment. Almost all agree that antitrust enforcement has not reduced the size of firms below the minimally efficient level, the level at which a firm can take full advantage of economies of scale. But they are mixed in their judgments as to whether the enforcement was needed. Performance advocates generally believe that it was not, while structural advocates generally believe that it was. They are also mixed in their judgment about whether any type of antitrust action is feasible in a technologically dynamic industry such as computers or telecommunications.

Economists' judgment on antitrust is mixed.

Mergers, Acquisitions, and Takeovers

Other than the Microsoft case, major U.S. antitrust activity was minimal in the early 2000s. But industrial structure has changed significantly. The nature of those changes was treated in the second chapter on production and cost analysis, where I discussed

how firms are increasingly looking for alternative ways of structuring themselves so that they can achieve economies of scope and economies of scale that go along with specialization. To do this, firms are simultaneously merging and breaking up. Firms are allowed to break up as much as they want; when they merge, however, they must see that any merger falls within the antitrust guidelines. In order to put recent merger activity into perspective, let's consider the various subcategories and types of mergers that are possible.

Acquisitions and Takeovers

Merger is a general term meaning the act of combining two firms. The picture it conveys is of two firms combining to form one firm. That picture isn't always appropriate, however. For example, often the firm buying another company is essentially what's called a *shell corporation*, which exists primarily to buy up other firms. A combination that is technically a merger but has distinguishing characteristics all its own is the **takeover**—the purchase of one firm by a shell firm that then takes direct control of all the purchased firm's operations. The term *takeover* is used to emphasize that little true merging is taking place. Takeovers change the control over the firm but do not affect market concentration.

Another kind of merger is an **acquisition**—a transaction in which a company buys another company and the purchaser has the right of direct control over the resulting operation (but does not always exercise that right). It is a merger, but it is not a merger of equals, and the acquiring firm does not necessarily take over direct control of the acquired firm's operations. In a merger of equals, neither firm takes over the other, and it's not clear who'll be in charge after the merger.

Takeovers and acquisitions are said to be *friendly* or *hostile*. In a friendly takeover, one corporation is willing to be acquired by the other. A **hostile takeover** is a merger in which the firm being taken over doesn't want to be taken over. How can that happen?

Remember the discussion of corporations from Chapter 3. Corporations are owned by stockholders, but are managed by a different group of individuals. The two groups' interests do not necessarily coincide. When it is said that a corporation doesn't want to be taken over, that means that the corporation's managers don't want the company to be taken over. In a hostile takeover, the management of each corporation presents its side to the shareholders of both corporations. The shareholders of the corporation that is the takeover target ultimately decide whether or not to sell their shares. If enough shareholders sell, the takeover succeeds.

In a hostile takeover, the shareholders ultimately decide whether to sell their shares.

Mergers

Mergers are also classified by the types of businesses that are merging.

Horizontal Mergers Most U.S. antitrust policy has concerned **horizontal mergers**—the combining of two companies in the same industry. The creation of Standard Oil is an example of a horizontal merger. The 2004 merger between financial services companies Wachovia and SouthTrust is another. Since the passage of the Celler-Kefauver Act of 1950, almost all mergers of companies with substantial market shares in the same industry have been prohibited, even though enforcement was loosened in the 1980s. For example, in 2003 the FTC blocked a proposed merger between Nestlé and Dreyers because the combined firm would have controlled 60 percent of the super-premium ice-cream market with only one other competing company, Unilever, which sells Ben & Jerry's.

Horizontal mergers are companies in the same industry merging together.

Exactly what is considered substantial market share has changed over time. The general guideline government used in the 1970s and early 1980s was that, in highly

concentrated industries, the government would challenge all mergers involving the following combinations of market share:

| Acquiring Firm | Acquired Firm |
|----------------|---------------|
| 4% | 4% or more |
| 10% | 2% or more |
| 15% | 1% or more |

For less-concentrated industries, the guidelines used slightly different percentages. In 1982, the Department of Justice changed the guidelines and began looking at all mergers in which the Herfindahl index, after the merger, would be above 1,000. Special highly restrictive rules regarding mergers existed for industries with Herfindahl indexes above 1,800. Since then the rules have evolved and have become more flexible; for example, in 1997 the government issued new rules that allow some mergers if the companies can show that the merger will lower price, or will improve a product or service, even if the merger doesn't meet the guidelines.

Vertical mergers are combinations of two companies, one of which supplied inputs to the other's production.

Q-7 If Ben & Jerry's, a maker of ice cream, bought a dairy farm, what type of merger would it be?

Web Note 15.4
Vertical Power

Conglomerate mergers are combinations of unrelated businesses. Five reasons why unrelated firms merge are:

1. To achieve economies of scope.
2. To get a good buy.
3. To diversify.
4. To ward off a takeover bid.
5. To strengthen their political-economic influence.

Vertical Mergers A vertical merger is a combination of two companies that are involved in different phases of producing a product, one company being a buyer of products the other company supplies. For example, a computer company that buys an electronic chip company is a vertical merger. Similarly, if a clothes manufacturer buys a retail boutique, that's a vertical merger. If either of the merged firms is able to limit access of other buyers or sellers to the market, such a merger is in violation of the Clayton Act.

A famous vertical merger case is the Du Pont/General Motors case (1961), in which Du Pont was required to sell its 23 percent share of General Motors because Du Pont was a major supplier to the automobile industry. The Supreme Court felt Du Pont's ownership share of GM was restricting competition. Similarly in the Brown Shoe/Kinney Shoe case (1962), Brown Shoe, primarily a wholesaler, was forbidden to buy Kinney Shoe, which was a chain of shoe retailers.

In most of the 1980s, the U.S. government challenged any vertical merger in which the supplying firm had a 10 percent or more market share and the buyer company purchased 6 percent or more of the market. This rule was loosened some as the 1980s progressed, but specific new guidelines were not developed. Although today few vertical mergers are challenged, in 1999 a planned merger between the largest U.S. retail bookseller, Barnes & Noble, and the largest U.S. wholesale bookseller, Ingram, was dropped after the FTC raised concerns that the merger would allow Barnes & Noble to raise the costs faced by rival retailers by denying access to Ingram's books on competitive terms.

Conglomerate Mergers A third type of merger is a conglomerate merger. Conglomerate mergers involve the merging of relatively unrelated businesses. Conglomerate mergers are generally approved by the U.S. antitrust laws under the assumption that they do not significantly restrict competition. Thus, when Tyco acquired nine firms in 2001 in the health care, finance, personal care, and security industries, no antitrust action was taken to prevent the mergers because the firms were unrelated.

Why would unrelated firms want to merge? Or why would one firm want to be bought out by another? There are five general reasons:

1. To achieve economies of scope. Although the businesses are unrelated, some overlap is almost inevitable, so economies of scope are likely. For example, one firm's technical or marketing expertise may be helpful to the other firm, or

the conglomerate's increased size may give it better bargaining power with its suppliers.

2. *To get a good buy.* Firms are always on the lookout for good buys. If a firm believes that another firm's stock is significantly undervalued, it can buy that stock at its low price and then sell it at a profit later when the stock is no longer undervalued.
3. *To diversify.* Many industries have a cyclical nature. In some parts of the business cycle they do poorly; in other parts of the business cycle they do just fine. Buying an unrelated company allows a firm to diversify and thereby to even out the cyclical fluctuation in its profits.
4. *To ward off a takeover bid.* Firms are always susceptible to being bought out by someone else. Sometimes they prevent an unwanted buyout by merging with another firm in order to become so large that they're indigestible.
5. *To strengthen their political-economic influence.* The bigger you are, the more influence you have. Individuals who run companies like to have and use influence. Merging can increase their net influence considerably.

Q8 When the long-distance phone company AT&T merged with the cellular phone company McCaw to create AT&T Wireless Services, what type of merger was it?

Recent Merger Activity and Deacquisitions

Figure 15-1 presents the number of mergers in the United States each year since 1892. As you can see, mergers rose significantly in the late 1990s and into the early 2000s. The primary reasons for the increase in the number of mergers are globalization, deregulation, and technological change. Globalization leads to mergers because firms can gain instant foreign distribution networks and knowledge of local markets from mergers. They also can lower costs by restructuring production to low-cost areas. Deregulation of the telecommunications, electricity, and financial industries has encouraged mergers that take advantage of economies of scale and scope. Bank mergers and phone company mergers are examples.

The acceleration of technological change in recent years is another contributor to merger activity. Firms are looking for ways to develop new technologies or take advantage of new technologies, and merging with another company is one way to acquire a new technology. The merger of America Online and Time Warner is an example of an Internet (technology) company combining with a "content" company.

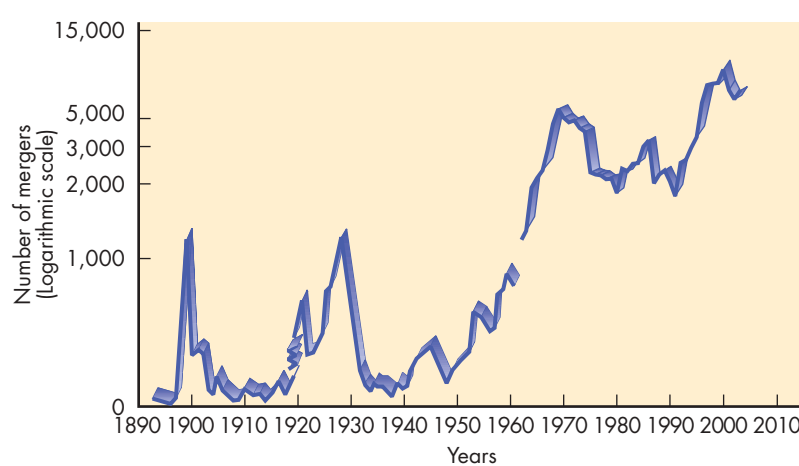


FIGURE 15-1 Mergers in the United States since 1892

The number of mergers in the United States has fluctuated substantially in the last 100 years. Source of data changed in 1962, accounting for the break in the series.

Source: Federal Trade Commission, national press, Mergerstat.com, and author extrapolations.

At the same time that these mergers are taking place, firms are also engaging in **deacquisitions**—one company's sale of either parts of another company it has bought or parts of itself. Sometimes regulators require such deacquisitions as a condition of approving a merger. Deacquisition also occurs as firms focus on those areas where they have comparative advantage and where growth is highest, and sell off aspects of their firms that are not part of their core business. Automobile firms are breaking off their component manufacturing operations. In 2004 AT&T sold its wireless unit to Cingular. Ten years earlier AT&T had purchased McCaw to jumpstart its wireless business. The motto of the 2000s is that firms have to continually reinvent themselves.

As I mentioned at the beginning of this section, voluntarily breaking up companies is becoming much more common as firms try to find their niche in the global marketplace. Companies are continually spinning off portions of their business where they do not believe they have a comparative advantage, and buying businesses where they think they do have a comparative advantage. This process is likely to continue, making the U.S. market structure a continually changing landscape.

The U.S. market structure is a continually changing landscape.

Assessment of Mergers and Acquisitions

I've introduced a lot of terms in this section and, ideally, started you thinking about the issues involved in deciding on a merger and acquisition policy. This chapter does not arrive at definite conclusions, and in this it reflects the economics profession, which has no one position on what policy the United States should follow toward mergers.

But the economics profession's failure to come to an undivided view on mergers isn't necessarily a failing of economists. Mergers have both costs and benefits, and reasonable people will assess them differently.

International Competition and Antitrust Policy in Other Countries

As I discussed in the last chapter, the nature of competition is changing in the United States. Ten or twenty years ago, when people talked about competition, they meant competition among U.S. firms. Now, however, they often mean international competition.

Because of this internationalization of competition, the political climate in the United States is changing. More and more, U.S. antitrust policymakers see the international market as the relevant market. The policy focus of government is shifting from "Is U.S. industry internally competitive so that it does not take advantage of the consumer?" to "Is U.S. industry internationally competitive so that it can compete effectively in the world economy?"

European Antitrust Policy

Perhaps the biggest change on the antitrust front is the emergence of a strong European antitrust policy. Before the European Union (EU) was established, most of the countries that are now members had relatively weak antitrust laws. There were a number of reasons for this; given their relatively small size each country needed large domestic firms to achieve economies of scale; they saw the international market as the relevant market; they were less populist than the United States; and they saw government and business as partners, not antagonists. The establishment of the EU changed the situation somewhat as the **European Commission (EC)**, the EU's antitrust agency, superceded the member-countries' relatively lenient antitrust laws.

One of the reasons to establish a common market was to allow corporations to become larger and take advantage of economies of scale. So, throughout the 1990s, the



Are the EC's antitrust policies more or less lenient toward non-European firms than toward European firms?

Accounting, Fraud, and Government Regulation

APPLYING the Tools

In the early 2000s, serious accounting irregularities came to light in firms such as Enron and WorldCom. These firms, and many others, had used various accounting procedures—some legal, some not—to make their profits appear higher than they actually were. When the irregularities were revealed, these companies' stock values fell precipitously. In the case of Enron and WorldCom, the decline took the companies into bankruptcy.

Why would firms lie about profits? An important reason is that higher profits lead to higher stock prices—and top managers' pay (which includes stock options) depends on the price of the stock. *Options* are rights to buy a stock at a set price regardless of what happens to the price of the stock. If the stock price rises above the option price, those who exercise their options pocket the difference. Enough options and a high enough price can amount to tens or hundreds of millions of dollars. The high reported profits drive share prices high and, assuming the managers sell the stock before the accounting irregularity is discov-

ered, they make a fortune even as the company is left in ruins.

In response to stories like these, the U.S. government increased regulation of company accounting rules, created a new board to oversee those rules, and required CEOs to sign off on the accuracy of the accounting figures provided to investors.

Will the new laws help? Perhaps somewhat, but problems remain. For example, despite most economists' suggestion that firms report stock options on the books as a cost, which would lessen the incentive of companies to give stock options to managers, the new government regulation does not require that. So there will remain an incentive on the part of managers to overstate profits. However, the New York Stock Exchange, a private company that oversees trading of many stocks, now requires including stock options as costs for companies listed on the exchange, so we will likely see this change taking place at many large companies.

EC was very lenient in allowing mergers and, from 1991 to 1998, the EC disallowed only 10 mergers. In 2002, the EC actively promoted mergers when the European Court ruled in favor of the EC's fight against "golden shares"—shares held by government with special voting rights. Specifically, these golden shares allowed governments that held these golden shares to block any mergers they wanted to. The courts ruled that mergers could be disallowed only for reasons of national security.

In the early 2000s, however, the EC started to be less lenient toward non-European firms. For example, in the early 2000s General Electric attempted to merge with Honeywell. The merger was approved by U.S. authorities, and since both were U.S.-based companies, it seemed as if the merger would go through. The EC, however, blocked the merger because the combined revenues were more than \$4.2 billion, of which about \$212 million was from Europe, which meant they fell under EU as well as U.S. jurisdiction.

Besides the GE case, the EC also brought separate cases against two major American companies, Microsoft and Coca-Cola, leading some observers to claim the EU was using antitrust policy as a weapon against U.S. companies. In the Microsoft case, the Commission ruled that Microsoft was a monopoly and imposed remedies on Microsoft that were much stronger than the remedies imposed in the U.S. antitrust decision against Microsoft. Specifically, the Commission limited Microsoft's bundling of new technologies, such as media players, with its Windows operating system. It argued that Microsoft was using its monopoly position in the operating systems market to gain an unfair advantage in these new technologies. The ruling is being appealed, and if it

holds, it could significantly affect Microsoft's business plan, not only in Europe but also in the United States since it is difficult to make separate operating systems for Europe and the United States.

Globalization and Antitrust in the Future

Given the ongoing globalization of markets, we can expect more and more jurisdictional legal battles in antitrust. As China and India develop stronger antitrust laws, and as their economies continue to develop and expand, their antitrust policies will become more important globally. There will likely be significant charges that the EU or the U.S. antitrust decisions are favoring their domestic companies and hindering foreign-based companies. Enormous political pressures will likely be brought to bear on these decisions as countries' different legal systems and history work toward an acceptable integration. In today's global economy, antitrust issues are, by nature, global, but a country's antitrust laws are not. This reality will continue to cause problems in antitrust, and in other areas of regulating business, in the coming decades.

Regulation, Government Ownership, and Industrial Policies

Antitrust policy is not the only way in which governments affect the competitive process. Other ways include (1) regulating the activities of firms, (2) government ownership—taking charge of the firms and operating them directly, and (3) industrial policy—influencing firms with laws and taxes. While I consider these issues in other parts of the book, here I want to briefly discuss some of the central elements of these three means of affecting the competitive process.

Regulation

Regulation involves the setting of the rules that firms must follow if they are to conduct business. There are two types of regulation: price regulation and social regulation. *Price regulation* is regulation directed at industries that have natural monopoly elements. In order to allow them to take advantage of the economies of scale, firms are given an exclusive right to conduct business but are subject to pricing controls. Examples of regulatory agencies include the Federal Energy Regulatory Commission (FERC), which regulates gas and oil pipelines and other energy-related areas; the Federal Communications Commission (FCC), which regulates cable television, telephones, television, and other communications areas; and the Securities and Exchange Commission (SEC), which regulates financial markets. *Social regulation* is concerned with the conditions under which goods and services are produced, the safety of those goods, and the side effects of production on society. Examples of social regulatory bodies include the Food and Drug Administration (FDA), the Environmental Protection Agency (EPA), and the Equal Employment Opportunity Commission (EEOC).

Price Regulation Price regulation is usually imposed in those industries where there seems to be a natural monopoly, as discussed in the chapter on monopoly. In such cases, a single producer is most efficient because two firms could not take advantage of the economies of scale. But if the firm is to have the monopoly, it will be able to charge high prices to consumers and transfer the consumer surplus into its profit. Thus, when government grants such monopolies, it must also regulate their prices. Usually this has taken the form of requiring the firm to charge its average total cost plus a profit margin.

That sounds reasonable in theory, but the practice has problems. The first is that the regulated firm does not have an incentive to hold down costs. Cost increases lead

The government can also affect the competitive process by (1) regulation, (2) government ownership, and (3) industrial policy.

Two types of regulation are price regulation and social regulation.

Price-regulated firms often do not have an incentive to hold down costs.

directly to price increases. X-inefficiency will exist. Regulatory boards have tried to counteract the tendency of rising costs by permitting firms to pass on only “legitimate” costs, but generally the people on the regulatory boards do not have the accounting expertise to review costs and determine whether they are legitimate or not, especially when the companies have a strong incentive to make all costs look legitimate.

The problem is worsened by the fact that the boards are often made up of individuals from the industry that is being regulated. This gives the commission necessary expertise, but it also creates a potentially unhealthy connection between the regulatory commission and the firms being regulated. Some economists have argued that the connection is so close that the regulatory board simply reflects the regulated firms’ interests, and that the board protects firms from competition arising from technological change.

Another problem raised by critics is that, once established, regulation may tend to extend far beyond natural monopolies and be introduced into industries where competition could work. Still another problem is that regulation continues even after technological change has created competitive market conditions. The trucking and airline industries are examples. Often the regulatory boards simply function as a way of allowing an industry to operate as a legal cartel, holding prices up rather than keeping them down.

The above criticisms have led to significant deregulation over the last 20 years. Trucking, airlines, and aspects of phone service and electric power generation have all been deregulated. In general, most economists’ assessments of the results of this deregulation have been positive and some economists have estimated that deregulation saves consumers approximately \$50 billion annually.

Problems with price regulation have led to deregulation in recent years.

Social Regulation³ Whereas most economists are skeptical of pricing regulation, they are far more divided on social regulation. Social regulation differs from pricing regulation in that

1. Social regulation applies to most firms and is not designed specifically for a natural monopoly. For example, when the Occupational Safety and Health Administration (OSHA) issues a requirement that all workers have a periodic break from work, it applies to all firms in the United States that fall under OSHA’s control.
2. Social regulation affects large aspects of business: working conditions, the quality of the products, and the production processes firms are allowed to use.

Whereas pricing regulation has declined in the last 20 years, social regulation has increased substantially. Economists debate whether this is good or bad. Critics of social regulation point out that regulation has high administrative and compliance costs and that those costs hurt consumers more than the regulation benefits them. They believe that this occurs because the social regulation laws are too often poorly written and ambiguous, and put into law without knowing what is reasonable and feasible. The result is higher prices, far less technical progress, and fewer new entrants as the regulatory burdens become unbearable for small firms.

Advocates of social regulation agree with some of the above but argue that the benefits of social regulation are worth the costs, and that the objections are simply a call for better regulation. They argue that social regulation has made manufacturing much safer in the United States, improved the quality of life and the environment enormously, introduced far more justice into the economy, and reduced discrimination.

Judging between these two views is difficult because measurement of both the costs and benefits is difficult if not impossible. In such cases, the economic cost/benefit framework cannot provide a definitive answer.

³Social regulation is discussed more fully in the chapter on microeconomic policy.

Government-owned firms tend not to have an incentive to hold costs down.



Q-10 Why have European countries recently privatized many government-owned firms in the telecommunications, electricity, and airline industries?

An industrial policy is a formal policy that government takes toward business.

Web Note 15.5
Military–Industrial Policy

Government Ownership

Instead of regulation, an alternative way of dealing with the problems of natural monopolies is for the government itself to own the firms. European countries have used this approach much more often than has the United States. Instead of regulating the telephone (or other natural monopoly) industry, governments took it over and ran it with state employees. Since the 1980s most countries have been selling off government-owned businesses to private owners. Why? They have found that government-owned firms did not have an incentive to hold costs down or to introduce new technology. Workers in government-owned firms, who were guaranteed jobs, used political threats to hold their wages high. Since the government firms faced little competition, they could raise prices and pass on the higher costs to consumers. The result was that European prices for telephone service, airline travel, and electricity were much higher than in the United States. Economic integration in Europe has been accompanied by privatization of many of the formerly government-owned industries, and a fall in prices in many of these industries.

Industrial Policies

In the 1980s and 1990s, a rallying cry for many politicians was that the U.S. economy needed an industrial policy. An **industrial policy** is a *formal policy that government takes toward business*. These politicians wanted the United States to follow a policy like Japan's, where a branch of government—the Ministry of International Trade and Industry (MITI)—played an active role in guiding business decisions. Economists generally opposed such a policy, and when the Japanese economy faltered in the 1990s, the calls went away.

In thinking about government's relation with business, it is important to remember that, in actual fact, the United States has always had, and always will have, a type of industrial policy. That policy is embodied in its tax code, its laws, its regulatory structure, and in the positions the government takes in international negotiations about tariffs and trade. An example is the U.S. government's strong support of international copyrights and patents, which prevent foreign firms from making “knockoffs” without paying a royalty to the U.S. firm. The policy is, however, an implicit policy of working with business, not an explicit policy of directing business.

Many close connections between government and business have developed. For example, the military works closely with its suppliers, and the relationship between them has been called a *military–industrial complex*. This combination of business and government plays important roles in making decisions about what is produced. For example, when Congress seemed about to cut production of the B-2 Stealth bomber, Northrup, the plane's manufacturer, took out full-page newspaper ads, pointing out that parts of the B-2 were produced in 48 states and that thousands of jobs would be lost if the government canceled the contract. Congress gave in, as it has done on many other defense items that are widely regarded as nonessential to national security. Many other business–government alliances exist in the United States, and there are similar government–drug complexes, government–higher-education complexes, and government–high-tech complexes. In a democracy where politicians are dependent on business for funding their campaigns, such complexes are inevitable.

Conclusion

We've come to the end of our discussion of market structure and government policy toward the competitive process. What conclusion should we come to? That's a tough question because the problem has so many dimensions. What we can say is that market structure is important, and generally more competition is preferred to less competition.

We can also say that, based on experience, government-created and protected monopolies have not been the optimal solution, especially when industries are experiencing technological change. But how government should deal with monopolies that develop as part of the competitive process is less clear. Competition has both dynamic elements and market structure elements, and often monopolies that develop as part of the competitive process are temporary—and they will be overwhelmed by other monopolies. Thus the debate about government entering into the market to protect competition has no single answer, which makes cases like the Microsoft antitrust case difficult to resolve.

Summary

- Antitrust policy is the government's policy toward the competitive process.
- Judgment by performance means judging the competitiveness of markets by the behavior of firms in that market. Judgment by structure means judging the competitiveness of markets by how many firms operate in the industry and their market shares.
- There is a debate on whether markets should be judged on the basis of structure or on the basis of performance.
- Important antitrust laws include the Sherman Antitrust Act, the Clayton Antitrust Act, and the Federal Trade Commission Act.
- The antitrust suit against IBM filed in 1967 was withdrawn in 1982 because the computer market had changed, making the charges against IBM moot.
- The antitrust suit against AT&T ended in a settlement that required AT&T to be broken up. AT&T both divided itself and merged with other companies.
- In 2000 the courts found that Microsoft had a monopoly that was protected by barriers to entry and that Microsoft engaged in practices to maintain that monopoly power. Microsoft agreed to stop some practices.
- Three types of mergers are horizontal, vertical, and conglomerate.
- A horizontal merger is the combination of two companies in the same industry, a vertical merger is the combination of two companies in different industries, and a conglomerate merger is the combination of two companies in relatively unrelated industries.
- Five reasons that two unrelated firms would want to merge are economies of scope, a good buy, diversification, warding off of a takeover bid, and strengthening of political-economic influence.
- The increasing internationalization of the U.S. market has changed U.S. antitrust policy from looking at just domestic competition to considering international competition.
- Antitrust issues are, by nature, global, but a country's antitrust laws are not.
- Three ways other than antitrust policy that government affects the competitive process are regulation, government ownership, and industrial policy.

Key Terms

acquisition (355)
antitrust policy (341)
Clayton Antitrust Act (344)
conglomerate merger (356)

deacquisition (358)
European Commission (EC) (358)
Federal Trade Commission Act (344)
horizontal merger (355)

hostile takeover (355)
industrial policy (362)
judgment by performance (342)
judgment by structure (342)

merger (355)
natural monopoly (349)
Sherman Antitrust Act (342)
takeover (355)
vertical merger (356)

Questions for Thought and Review

1. What is the difference between judgment by performance and judgment by structure?
2. Distinguish the basis of judgment for the Standard Oil and the ALCOA cases.
3. How would the U.S. economy likely differ today if Standard Oil had not been broken up?
4. How did the Clayton Antitrust Act clarify the Sherman Antitrust Act?
5. Colleges require that students take certain courses at that college in order to get a degree. Is that an example of a tie-in contract that limits consumers' choices? If so, should it be against the law?
6. Colleges give financial aid to certain students. Is this price discrimination? If so, should it be against the law?
7. Should interlocking directorships be against the law? Why or why not?
8. If you were an economist for a firm that wanted to merge, would you argue that the three-digit or five-digit NAICS industry is the relevant market? Why?
9. If you were an economist for Mattel, manufacturer of the doll Barbie, which was making an unsolicited bid to take over Hasbro, manufacturer of the doll G.I. Joe, would you argue that the relevant market is dolls, preschool toys, or all toys including video games? Why? Would your answer change if you were working for Hasbro?
10. Has telephone service improved since AT&T was broken up? What does this imply about antitrust laws?
11. How did the antitrust suit against IBM affect IBM's future business?
12. In what market did Microsoft have a monopoly in the late 1990s and early 2000s? What technological advances threatened that monopoly?
13. Under the 1997 Department of Justice guidelines, would a merger be allowed between the number three firm in an industry and a firm with 2 percent of the market? The number four firm in the industry has 11 percent of the market.
14. Should the United States have a policy against conglomerate mergers? Why or why not?
15. How has the globalization of the U.S. economy changed U.S. antitrust policy?
16. What two methods does government have for dealing with natural monopolies? What problems are associated with each?
17. How would you design an industrial policy to avoid the problems inherent in industrial policies?

Problems and Exercises

1. You're working at the Department of Justice. Ms. Ecofame has just brought in a new index, the Ecofame index, which she argues is preferable to the Herfindahl index. The Ecofame index is calculated by cubing the market share of the top 10 firms in the industry.
 - a. Calculate an Ecofame guideline that would correspond to the 1997 Department of Justice guidelines.
 - b. State the advantages and disadvantages of the Ecofame index as compared to the Herfindahl index.
2. Using a monopolistic competition model, a cartel model of oligopoly, and a contestable market model of oligopoly, discuss and demonstrate graphically, where possible, the effect of antitrust policy.
3. In 1993 Mattel proposed acquiring Fisher-Price for \$1.2 billion. In the toy industry, Mattel is a major player with 11 percent of the market. Fisher-Price has 4 percent. The other two large firms are Tyco, with a 5 percent share, and Hasbro, with a 15 percent share. In the infant/preschool toy market, Mattel has an 8 percent share and Fisher-Price has a 27 percent share, the largest. The other two large firms are Hasbro, with a 25 percent share, and Rubbermaid, with a 12 percent share.
 - a. What are the approximate Herfindahl and four-firm concentration ratios for these firms in each industry?
 - b. If you were Mattel's economist, which industry definition would you suggest using in court if you were challenged by the government?
 - c. Give an argument why the merger might decrease competition.
 - d. Give an argument why the merger might increase competition.
4. In 1992 American Airlines offered a 50-percent-off sale and cut fares. In 1993 Continental Airlines and Northwest Airlines sued American Airlines over this action.
 - a. What was the likely basis of the suit?
 - b. How does the knowledge that Continental and Northwest were in serious financial trouble play a role in the suit?
5. Demonstrate graphically how regulating the price of a monopolist can both increase quantity and decrease price.
 - a. Why did the regulation have the effect it did?
 - b. How relevant to the real world do you believe this result is in the "contestable markets" view of the competitive process?
 - c. How relevant to the real world do you believe this result is in the "cartel" view of the competitive process?

Questions from Alternative Perspectives

- A monopolist prices its products above marginal cost, but it also may face pressure to keep prices low.
 - If there is open entry into the market, should there be any monopoly?
 - Should government use high or low prices as an indication of monopoly power?
 - If it uses high or low prices to determine whether a firm is a monopoly, how does it decide what are high and low prices? (Austrian)
- The chapter begins with a quotation from Franklin Delano Roosevelt stating that “We all know that heedless self-interest was bad morals; we now know that it is bad economics.”
 - In what way is “heedless self-interest” bad morals?
 - In what way is “heedless self-interest” bad economics? (Religious)
- In the past two chapters you have learned much about market power: how it is used, the efficiency implications, and how society has responded. Yet this power remains, albeit minimally checked from time to time. The economist Thorstein Veblen would not be surprised by this. He would argue that firms use market power because they can. How do monopolists use “power” to manipulate outcomes? (Institutionalist)
- Alexis de Tocqueville once stated that “The Americans have applied to the sexes the great principle of political economy which governs the manufacturers of our age, by carefully dividing the duties of men from those of women, in order that the great work of society may be the better carried on . . .”
 - Do you agree with his statement?
 - What problems might his argument have? (Feminist)
- A *Business Week* magazine study of mergers and acquisitions between 1990 and 1995 found that 83 percent of these deals achieved, at best, marginal returns, and 50 percent recorded a loss.
 - If such mergers are not especially profitable, why do they occur?
 - U.S. antitrust policy has changed dramatically since the 1960s when the government regularly blocked mergers among companies in the same industry. Today, the federal government is much less active; it allows almost all mergers. Is this new approach justified, or has government just given in to the powers that be?
 - What antitrust policies would work best in today’s U.S. economy? (Radical)

Web Questions

- Go to the Federal Trade Commission’s Web site at www.ftc.gov/bc/docs/horizmer.htm to read the 1992 *Horizontal Merger Guidelines* and answer the following questions:
 - At what HHI levels is the FTC likely to challenge a merger?
 - What other conditions does the FTC consider in challenging a merger?
- Go to www.antitrustinstitute.org and answer the following questions:
 - List two headlines dealing with mergers.
 - What are the antitrust issues discussed in the article?
 - Is it a horizontal or vertical merger? Explain your answer.

Answers to Margin Questions

- The Sherman Antitrust Act contained two main sections. The first stated that every contract, combination, or conspiracy in restraint of trade was illegal. The second stated that every person who shall monopolize or attempt to monopolize shall be deemed guilty of a misdemeanor. These provisions, while sounding strong, were so broad that they were almost unenforceable, and the interpretation was left to the courts. (343)
- In the Standard Oil case, the Court determined that Standard Oil controlled 90 percent of the market. It said that this monopolistic structure of the market did not necessarily violate the Sherman Antitrust Act. However, the Court also decided that Standard Oil had engaged in systematic abuse and unfair business practices, and therefore was guilty of antitrust violations and must be broken up. (344)
- In the ALCOA case, the Supreme Court changed the interpretation of the law. Here it found ALCOA was not guilty of any unfair practices. It agreed that ALCOA had used its knowledge of the market to expand capacity before any competitors had a chance to enter, and had kept its price low to prevent entry. Thus, on performance

standards, it was not violating the law. But the Court decided the structure of the market, not the company's performance, was the appropriate standard by which to judge cases, and, therefore, ALCOA was in violation of the antitrust law. (344)

4. In the 1956 Du Pont case, the Supreme Court found that Du Pont was innocent of monopolizing the production of cellophane, even though it was the only producer. The Court's reasoning was that the relevant market was the entire flexible wrap industry, not just cellophane. Since Du Pont did not dominate the flexible wrap industry, it was not in violation of antitrust law. (346)
5. In the late 1960s, the Department of Justice filed suit against IBM for violating the antitrust laws. It alleged that IBM had a monopoly of the general-purpose electronic digital computing industry and that it had acquired its market share because of unfair business practices. The case dragged on for 13 years but never went to court. In 1982, the government withdrew its lawsuit. The antitrust case, however, had significant effects on IBM. It is likely that the experience caused IBM to shy away from the then-small personal computer market. This decision by IBM very likely was the beginning of the serious problems that IBM faced in the 1990s. (348)
6. In 1978, the Department of Justice sued AT&T, alleging that its potential competitors were not being allowed reasonable access to AT&T's local telephone network. The case was resolved in January 1982, when AT&T

agreed to let itself be broken up. Specifically, AT&T divested itself of 22 operating companies and focused thereafter only on long-distance telephone service, manufacturing, and research and development. This settlement left AT&T free to enter into any unregulated business it desired, and in the 1990s AT&T expanded with fiber-optic networks. Ironically, these expansions placed it in direct competition with the still-regulated Baby Bells, which had inherited AT&T's monopoly rights. (350)

7. If Ben & Jerry's bought a dairy farm, it would be a vertical merger because Ben & Jerry's would be buying one of its suppliers. (356)
8. AT&T's merger with McCaw was a mixture of a horizontal merger and a conglomerate merger. It is a horizontal merger to the degree that one interprets the industry broadly as a "communications industry." It is a conglomerate merger if one interprets the industry narrowly and distinguishes the wireless communications industry from the wire communications industry. (357)
9. The EC is less lenient toward non-European firms. (358)
10. European countries have been privatizing firms in telecommunications, electricity, and airline industries because the government-owned firms were inefficient, resulting in higher costs for consumers and less innovation. (362)