

CHAPTER 7 SELECTED COLLUSIVE CONDUCT ISSUES

CHAPTER 7 SELECTED COLLUSIVE CONDUCT ISSUES	1
I. COLLUSIVE AGREEMENTS NOT DRIVEN BY PROFIT MOTIVATIONS.....	1
II. INVITATIONS TO COLLUDE.....	4
III. PRACTICES THAT FACILITATE PRICE COORDINATION OR EXPRESS COLLUSION.....	7
A. Revenue-Sharing by Competitors	7
B. Collusive Resale Price Maintenance	8
C. Spot Market Price Manipulation	9
D. Collusive Effects of MFNs: Ethyl (1984) and GE/Westinghouse (1977)	10
E. “Meeting Competition” and “Best Price” Promises	12
F. Buyer-Side Collusion and Joint Purchasing Agreements: Alston and Other Cases	12
G. Labor No-Poach Agreements as Collusive Conduct to Achieve Monopsony Power	17
IV. PATENT LICENSING	19
A. Two-Way Cross-Licensing Payments	19
B. Patent Pools	21

List of Figures

Figure 7.1 Illustration of effect of a firm raising its own costs and profits.....	3
Figure 7.2 Illustration of classical monopsony versus countervailing power	15

This chapter builds on the previous analysis by analyzing the economics of various types conduct that can raise anticompetitive coordination and collusion concerns. The examples show how conduct that may appear procompetitive—and may be procompetitive in a competitive market—have anticompetitive effects when implemented in oligopoly markets.

I. Collusive Agreements Not Driven by Profit Motivations

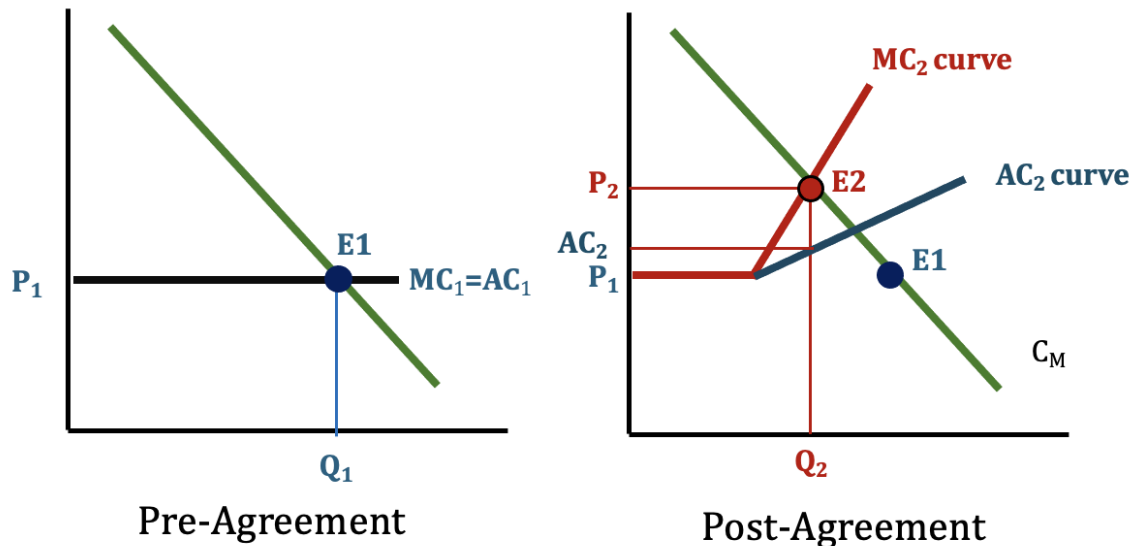
The fact that a firm is organized as a nonprofit entity does not mean that it lacks an incentive to maximize profits. Such a firm may spend those potential profits on high salaries or other benefits for employees, fancy galas for board members, the pursuit of its nonprofit mission, or the accumulation of large reserves that enable it to exercise political or social power. The prospect of obtaining these benefits can incentivize such firms to engage in anticompetitive collusive and exclusionary conduct.

A more interesting case involves firms that are not profit maximizers but rather have nonfinancial motives for their market behavior. These firms, or their managers, may also have the ability and incentive to make anticompetitive agreements or engage in anticompetitive unilateral conduct that harms consumers or other counterparties. Ironically, the firms’ conduct may lead to higher profits in the end, although it need not do so. If profits do rise, that fact may create additional economic and legal complications.

To see why, consider this hypothetical example. Facing pressure from environmental activists and shareholders concerned with water purity and the environment, all major paper mills agree to use a new less polluting technology for all capacity expansions and new mills. Suppose that the marginal production cost for this technology is significantly higher than it was for the traditional technology. Now facing higher marginal costs, the firms raise their prices. Paper output falls, and consumers in the paper market are harmed. Because the higher marginal costs are borne only for some units of output (i.e., the most expensive marginal output), the firms' average cost increases are substantially less than their marginal cost increases. And because market prices tend to be driven by marginal costs (i.e., the cost of the most expensive marginal units of output), prices rise by more than average costs, leading profits to increase. Thus, even though the firms apparently were not motivated by profit, their profits may increase from the agreement.

Figure 7.1 illustrates this analysis under the simplifying assumption that the paper mills are perfect competitors, so the market price is equal to marginal cost. Before the agreement, the firms have constant marginal costs equal to MC_1 , which also equals their average costs (AC_1). Competition drives the price P_1 to a level equal to MC_1 , so firms earn zero profits. As a result of the agreement, the marginal costs of higher output levels increases, as shown by MC_2 curve. However, because only a fraction of output is affected by the higher marginal costs, average cost rises by less, as shown by the AC_2 curve. At the new competitive equilibrium, the market price increases to P_2 and output declines to Q_2 . Paper consumers are harmed, and the firms earn higher profits. The competitive market price rises to P_2 (equal to marginal cost at that output level Q_2), but average cost rises by less, to AC_2 . As per unit profit equals the difference between price and average cost, profits are positive, despite the lower output.¹

¹ For application of this economic model to regulation, see Michael T. Maloney and Robert E McCormick, *A Positive Theory of Environmental Quality Regulation*, 25 J. LAW ECON. 99 (1982).

Figure 7.1 Illustration of effect of a firm raising its own costs and profits

This hypothetical example of these allegedly prosocial firms raises some potentially knotty legal and policy questions. Because paper output falls and paper consumers are injured as a result of the collusion among the companies, Daniel Francis argues that the agreement should be deemed anticompetitive.² In his view, antitrust should focus solely on effects, not purpose. The fact that the firms had (or claimed to have) prosocial motives is irrelevant, as is the fact that the agreement led to higher profits in the end; the reduced output, higher prices, and consumer harm are all that matter.

The economic effects analysis is potentially more complicated. If some consumers prefer the combination of higher prices and lower water pollution achieved by the agreement, their welfare may be increased on balance. These within-market welfare benefits might be shown by survey evidence or inferred from the choices these consumers make with respect to other products. There are also welfare benefits for environmentalist consumers who do not purchase paper. And the lower levels of pollution might reduce the costs and prices of other products, such as drinking water or freshwater fish, as well as the healthcare costs of people that live along the affected river.

A strict antitrust analysis would not count these benefits, because they occur in a different market and multi-market balancing is normally prohibited. Traditional antitrust analysis also does not consider the altruistic or malevolent preferences of people over the consumption activities of others.

The agreement by the firms might be saved in a traditional antitrust legal analysis if the within-market consumer welfare of the paper consumers themselves increases. However, this justification raises an important issue. If consumers would prefer to purchase higher-price/lower-pollution paper products, then it is not clear why the agreement is necessary; individual firms would be motivated to adopt the new technology. This argument is similar to the criticism of the agreement in *National*

² Daniel Francis, *Post-Profits Antitrust*, 135 YALE L.J. 194 (2025).

*Society of Professional Engineers*³ that architects and developers could have chosen to forgo competitive bidding if it led to lower-quality or unsafe buildings.

If collective action is more efficient than decisions by individual firms—if, for example, there are economies of scale in the development of the technology or pollution is reduced only if multiple mills on the same river all adopt the technology—it may be necessary to have the agreement mandated and monitored by the government. Joining together to petition the government is protected conduct under the *Noerr-Pennington*⁴ doctrine, and the state action doctrine may apply if the relevant policy is clearly articulated and actively supervised by a state government.⁵ Alternatively, if there is an overwhelming efficiency benefit from joint action and the welfare of the paper consumers would rise, *BMI*⁶ might provide protection.

Readers interested in Section 1's agreement requirement doctrine might want to consider the following variant. Suppose that the paper company executives are not motivated by environmental concerns but that all of the companies are forced to adopt the new technology by a group of climate activists each of whom bought one share in each of the companies and then forced stockholder votes that successfully demanded that the companies adopt the new technology. Would the agreement among the climate activists violate Section 1, or might it be protected under *Claiborne*⁷? As common shareholders of all the firms, could a court infer an agreement among the firms? Would the answer turn on whether or not the profits of the paper companies increased?

II. Invitations to Collude

Suppose two duopolists make public or private statements that indicate their willingness to fix prices. Those statements might become probative evidence in two types of antitrust cases.

First, along with evidence that firms subsequently raised prices, a Section 1 price-fixing case might use these statements as plus factors that support the claim allegation that price increases were the result of an agreement rather than mere conscious parallelism. This approach was taken in the failed class action case involving new baggage fees set by Delta and AirTran discussed below.⁸

Second, instead of alleging an anticompetitive agreement, the statements themselves might be attacked as Section 2 attempted monopolization violation. This approach can also reach failed attempts. In the now-seminal Section 2 “invitation to collude” case, *American Airlines and Braniff*⁹

³ *National Society of Professional Engineers v. United States*, 435 U.S. 679 (1978).

⁴ *E. R.R. Presidents Conf. v. Noerr Motor Freight, Inc.*, 365 U.S. 127 (1961); *United Mine Workers of Am. v. Pennington*, 381 U.S. 657 (1965).

⁵ See, e.g., *Parker v. Brown*, 317 U.S. 341 (1943); *Cal. Retail Liquor Dealers Association v. Midcal Aluminum, Inc.*, 445 U.S. 97 (1980).

⁶ *Broadcast Music, Inc. v. CBS, Inc.*, 441 U.S. 1 (1979).

⁷ *NAACP v. Claiborne Hardware Co.*, 458 U.S. 886 (1982).

⁸ *Siegel v. Delta Air Lines, Inc.*, 714 F. App'x 986, 986 (11th Cir. 2018) (affirming the district court's summary judgment for Delta on business-reason grounds); in re Delta/AirTran Baggage Fee Antitrust Litigation, 245 F. Supp. 3d 1343, 1343–55 (N.D. Ga. 2017).

⁹ *United States v. American Airlines, Inc.*, 743 F.2d 1114, 1119 (5th Cir. 1984).

were stuck at a low price equilibrium on flights in and out of the Dallas–Fort Worth hub. American Airlines was dominant, and prices were sufficiently low that Braniff was wondering whether American might be engaged in illegal predatory pricing. One day the CEO of American Airlines phoned the CEO of Delta and complained about the damage each was suffering from their intense competition. “Raise your goddamn fares 20 percent,” he said, “I’ll raise mine the next morning.” If Braniff raised its price the next day and American matched, evidence of that communication clearly would have constituted sufficient evidence of a per se illegal agreement.

But Braniff did not accept the invitation to raise its prices. There was no agreement. However, Braniff had taped the call and gave it to the Justice Department,¹⁰ which brought a Section 2 attempt to monopolize case against American. In denying summary judgment to American, the court characterized American’s invitation as “uniquely unequivocal” and “uniquely consequential.” It could not have been more unequivocal. It was highly consequential, because American and Braniff were duopolists at that airport hub, and other airlines faced barriers to entry.

This case raises the question of the standard for an invitation to be *sufficiently unequivocal* and *sufficiently consequential*. This standard of proof would also be relevant for both a Section 2 attempt to monopolize claim and a Section 1 claim that the invitations support a finding of agreement.

The Delta/AirTran class action case¹¹ illustrates the high evidentiary requirements courts have applied when invitations to collude were used as evidence of a price-fixing agreement. In response to a question by a stock analyst at its quarterly earnings call, AirTran said that it would “strongly consider” charging baggage fees but that it preferred to follow the lead of its “largest competitor in Atlanta,” Delta. Two weeks later, Delta announced that it would institute the baggage fees in a month. The next day AirTran said that it would announce its new baggage fees the following week. It then set a fee that was identical to Delta’s and made it effective on the same date.

In this case, the class action alleged that this chronology was sufficient evidence for finding a per se illegal price-fixing agreement. On first impression, it might seem that despite the “strongly consider” qualifying language, the invitation was sufficiently unequivocal and that despite the lagged response by Delta, the invitation might be found to be sufficiently consequential.

Yet in a decision subsequently affirmed by the 11th Circuit, the district court granted summary judgment to the airlines, for two reasons.¹² First, the court found that the AirTran statements at the analyst meeting could not be treated as an illegal invitation to collude because investors value this information. Second, the AirTran statement may not have been the driving force Delta’s price increase. The court found that Delta had valid business reasons for implementing the fee (namely, increasing revenue during a downturn). In addition, other competitors were already moving toward baggage fees at the time, implying that Delta’s actions were not prompted solely by AirTran’s earlier announcement. Thus, although the court did not use the language from *American Airlines*, its decision

¹⁰ 743 F.2d at 1119.

¹¹ *In re Delta/AirTran Baggage Fee Antitrust Litigation*, 245 F. Supp. 3d 1343, 1343–55 (N.D. Ga. 2017).

¹² *In re Delta/AirTran Baggage Fee Antitrust Litigation*, 245 F. Supp. 3d 1343 (N.D. Ga. 2017), *aff’d sub nom. Siegel v. Delta Air Lines, Inc.*, 714 F. App’x 986 (11th Cir. 2018) (affirming the district court’s summary judgment for Delta on business-reason grounds).

amounted to a finding that the AirTran's alleged invitation was insufficiently unequivocal and insufficiently consequential to establish an agreement.

Suppose the complaint instead had alleged an invitation to collude as an attempt to monopolize under Section 2 instead of a per se illegal price-fixing agreement under Section 1. In the context of an invitation to collude case, there are good reasons to view this evidentiary bar as too high. The view that Delta had a valid business reason of wanting to raise revenue is questionable. A wish to increase revenue is an all-purpose rationale available to every would-be cartel member. The desire for more revenue also fails to explain the timing, which does not seem coincidental. Decision theory suggests that this broad justification should have been rejected. The fact that other airlines were doing the same thing does not mean that AirTran's invitation was inconsequential. AirTran's announcement would have raised Delta's subjective probability that the new fee would not cause Delta to lose business to AirTran.

Now suppose that the case instead involved a similar public statement by the CEO in response to a question at the quarterly earnings call about the price war between American and Braniff. The defense might argue that the CEO was not being serious and that Braniff would have known that. Or it might argue that the CEO was attempting to induce Braniff to raise price but that American never intended to match but rather to advertise its lower fare in order to attract more business. If Braniff wanted to maintain a friendly industry social structure, it might have testified that it knew American was not serious or that it would not have raised its price regardless of what American said. Or it might have testified that it always knew that American would match a price increase but that its own strategy was to maintain low prices.

Decision theory analysis would not support the approach of having antitrust law privilege failed invitations to collude. Such public "negotiations" can lead to anticompetitive competitive effects. Privileging them would clearly lead to underdeterrence concerns. If price fixing is the "supreme evil" of antitrust—and a criminal offense—it makes sense to bring actions against failed attempts to fix prices if they had a dangerously likelihood of success.

How should adequate deterrence be achieved? One possible way would be to bring invitation to collude cases criminally, although doing so has the disadvantage of increasing the government's standard of proof. In 2022, the Department of Justice obtained a guilty plea in a criminal case alleging attempted price fixing by a highway contractor in Montana. As in *American Airlines*, the facts were unequivocal. The defendant phoned a competitor with a detailed invitation to collude, which the competitor recorded and turned over to the Justice Department.¹³

Another way is to reduce the evidentiary requirements for showing that the invitation was sufficiently unequivocal and sufficiently consequential—by, for example, relying on Section 5 of the FTC Act, which has a lower burden of proof. The FTC has brought invitation to collude cases as violations of Section 5. One notable case, *Stone Container*,¹⁴ involved communications of Stone's

¹³ *U.S. v. Nathan Nephi Zito*; the Justice Department, Press Release, Executive Pleads Guilty to Criminal Attempted Monopolization, available at <https://www.justice.gov/archives/opa/pr/executive-pleads-guilty-criminal-attempted-monopolization>.

¹⁴ *In re Stone Container Corp.*, 125 F.T.C. 853 (1998).

intentions to reduce output, draw down industry inventory levels, and invite competitors to raise prices. Stone also purchased product from rivals with the apparent goal of reducing excess inventories, despite the fact that it apparently could have produced the containers itself at a lower cost.¹⁵

Given the FTC's limited remedial power, it is not clear that its approach will significantly deter such invitations. Another possibility would be to allow consumers in the market to have standing and receive punitive damages.

III. Practices that Facilitate Price Coordination or Express Collusion

Invitations to collude involve competitively worrisome conduct that does not involve an agreement. Other conduct may involve agreements that might affect but does not literally fix prices.

A. Revenue-Sharing by Competitors

A revenue-sharing agreement among competitors can be an effective way to achieve monopoly pricing without the need to agree to specific prices.¹⁶ If firm Alpha agrees to share a portion of its revenue with a competitor (Beta), Beta's incentive to divert customers from Alpha will be reduced, because the reduction in Alpha's revenue will reduce the revenue obtained by Beta. If Beta simultaneously obtains a share of Alpha's revenue, Beta's competitive incentives will also be reduced. Both unidirectional and reciprocal revenue-sharing will lead to less competition and higher prices.¹⁷

The *Palmer v. BRG*¹⁸ market division case discussed earlier involved unidirectional revenue-sharing as a side payment for HBJ withdrawing from the Georgia bar review market. BRG paid HBJ a per student fee of \$100 plus 40 percent of the its revenue per student above \$350. In other situations, the revenue-sharing may be evaluated under the rule of reason and be permitted. In situations where competing firms each have patents that they license to each other, revenue-sharing occurs if the patent royalties are structured as a share of revenue, as discussed below.

Revenue-sharing may be justified where firms sell products that may be viewed as complements as well as substitutes. For example, there was no literal revenue-sharing in *Board of Regents*,¹⁹ but revenue was effectively shared as a result of the appearance limitations. The rationale was that this

¹⁵ Two other cases were *Valassis Communications* and *U-Haul*. *Valassis* involved announcements of future pricing plans on an earnings call. It provided details of a price floor and plans to monitor competitors' earnings calls for "concrete evidence" of reciprocity regarding the new pricing plan. *U-Haul* involved public communications about price that also urged competitors to increase their prices. Federal Trade Commission, *In the Matter of U-Haul International, Inc and AMERCO*, No. 081 0157 (July 2010).

¹⁶ Revenue-sharing agreements with potential competitors can reduce their incentives to enter, an issue raised in *U.S. v Google*, as discussed in Chapter 9.

¹⁷ Revenue-sharing acts like a passive partial ownership interest in the rival firm, an issue discussed in the chapter on horizontal mergers. See also Daniel O'Brien & Steven C. Salop, *Competitive Effects of Partial Ownership: Financial Interest and Corporate Control*. 67 ANTITRUST L. J. 559 (2000).

¹⁸ *Palmer v. BRG of Georgia, Inc.* 498 U.S. 46 (1990).

¹⁹ *NCAA v. Board of Regents of the University of Oklahoma*, 468 U.S. 85 (1984).

revenue-sharing would lead to more competitive balance across teams, which would create a better product for viewers and advertisers.

Major League Baseball (MLB) and other sports leagues also engage in revenue-sharing to create greater competitive balance, which can increase attendance at individual games.²⁰ In 2025, for example, attendance at MLB games where the Los Angeles Dodgers were the opposing (“away”) team was more than 35,700—almost 2,000 more than the next-highest team (Chicago Cubs) and more than 5,000 above the average.²¹ Revenue-sharing can also reduce the incentives of teams to compete for star players (actions related to competition for star players is not subject to antitrust laws, because the players are unionized and there is an associated collective bargaining agreement).

*California v. Safeway*²² was an interesting horizontal revenue-sharing case in this regard. As a way to gain greater bargaining power with the supermarket workers union, several large supermarket chains in southern California agreed to share revenues with any supermarket that was involved in a union strike. This action not only reduced the incentive of the supermarket being struck to agree to a higher wage settlement that might spread to other chains, it also reduced the incentives of the remaining supermarket chains to compete intensely during the strike. The court ruled that the revenue-sharing escaped per se or quick-look condemnation because the stores had a multi-employer labor agreement, which was permitted under the relevant labor law, implying that the revenue-sharing agreement required rule of reason treatment. It was not clear that the collective bargaining context would have protected the downstream revenue-sharing agreement. However, the State of California chose to dismiss the case rather than litigate under the rule of reason for reasons that were not entirely clear.

B. Collusive Resale Price Maintenance

*Leegin*²³ recognized that resale price maintenance (RPM) could be used as an exclusionary conduct to raise barriers to entry at the retail or manufacturer level. Traditionally, the practice has been viewed as a collusive device. The standard analysis was that RPM involved efforts by retailers to use the manufacturer to orchestrate a retailer cartel by setting the resale price at the monopoly level and then policing the cartel by monitoring the retail prices being charged.

RPM can be a collusive conduct that facilitates the charging of higher prices by competing manufacturers and the stabilizing of a manufacturer cartel. This mechanism is based on a more subtle economic analysis. To see why, assume that manufacturers agree to the wholesale prices charged to retailers but face a potential cheating problem by a defecting manufacturer. Absent RPM, if a manufacturer cheats by lowering its wholesale price, its retailers will have incentives to increase their sales by both increasing nonprice promotion by reducing their retail prices, increased sales

²⁰ See, e.g., Roger G. Noll, *Attendance, Prices, and Profits in Professional Sports*, in Noll, *GOVERNMENT AND THE SPORTS BUSINESS* (1974); David J. Berri et al., *THE WAGES OF WINS: TAKING MEASURE OF THE MANY MYTHS IN MODERN SPORT*. UPDATED EDITION 69 (2007).

²¹ Ariadna Pinheiro, *MLB teams with the highest road game attendance: Baseball's biggest draws away from home* (October 8, 2025), <https://bolavip.com/en/mlb/mlb-teams-with-the-highest-road-game-attendance>

²² *State of California v. Safeway, Inc.*, et al, No. 08-55671 (9th Cir. 2010).

²³ *Leegin Creative Leather Products, Inc. v. PSKS, Inc.*, 551 U.S. 877 (2007).

which also will increase the profits of the deviating manufacturer. By contrast, if manufacturers employ RPM and the defecting manufacturer maintains the same retail price to avoid detection, its benefit from defecting from the cartel by discounting wholesale price will be reduced, because RPM prevents the retailers from reducing their prices. As this limitation will mitigate the increase in retail sales, it will also reduce the incremental profits gained by the defecting manufacturer and thus reduce its incentive to defect. This conduct will make the manufacturer cartel more stable.

Analysis of RPM was key to the development of the economic analysis of the free-rider effect that led to the rejection of per se illegality for intra-brand vertical restraints. RPM and exclusive retail territories can be used to prevent free riding by competing retailers. Suppose, for example, that a brick-and-mortar department store displays the latest fashions and new products in attractive settings that increase demand for these products. After seeing these products and learning about them from knowledgeable sales associates, consumers can purchase them from a nearby or online discount store for 20 percent less from stores that do not bear these costs but instead take a free ride on the department store. Although the customers benefit in the short run, the loss of those sales would reduce the incentive of the department store to display. Although the manufacturers may initially benefit from the increased sales, demand may be lower in the longer run as the department stores cuts back on or drops the product. Faced with this free-rider problem, the manufacturer has several choices: It can open its own retail store, pay the department store directly to act as a showcase, or terminate the online discounter and provide the department store with an exclusive.

In the 1977 *GTE Sylvania*²⁴ case, the Court recognized the validity of this free-rider analysis and rejected per se treatment of non-price intra-brand vertical restraints in favor of the rule of reason. This case was also a watershed for the acceptance of economic efficiency arguments as a rationale for rejecting per se illegality. Although the economic analysis of free riding is the same for RPM as for non-price vertical restraints—a fact recognized by Justice White in his concurrence—it took 30 more years until the per se rule for RPM was finally rejected (in the 2007 *Leegin*²⁵ case).

C. Spot Market Price Manipulation

*Socony Vacuum*²⁶ was a classic cartel. It is doctrinally significant because of its articulation of the per se illegality of price fixing and its diatribe against claims of ruinous competition. This doctrine eliminated the need for detailed economic analysis. However, the economic analysis of the conduct and its effects are very interesting and provide an introduction into the ways in which contracts can be structured to facilitate anticompetitive price coordination.

The refiners' long-term wholesale contract prices were pegged to a price index based on the daily spot price at which some gasoline was bought and sold. In situations in which long-term contracts create efficiencies such as ensured sales or purchases, pegging long-term contract prices to a spot price is an efficient contract provision. A fixed-price contract would not be economically efficient, because the refiners' costs might move dramatically when the price of crude oil changes. The parties would also have an interest in sharing the impact of demand increases or decreases. Constantly

²⁴ *Continental T.V., Inc. v. GTE Sylvania, Inc.*, 433 U.S. 36 (1977).

²⁵ *Leegin Creative Leather Products, Inc. v. PSKS, Inc.*, 551 U.S. 877 (2007).

²⁶ *United States v. Socony-Vacuum Oil Co.*, 310 U.S. 150 (1940).

renegotiating the price would be a recipe for opportunism by one side or the other.²⁷ Pegging to the spot price is efficient, because the spot price varies directly with the price of crude oil and with demand factors.

The major oil refiners faced competition from independent refiners. The independents lacked storage facilities, however, and sold their excess gasoline on the competitive spot market when they refined more than they could sell on contract. These “excess” sales led to lower spot prices during the Great Depression. Although they were efficient, these lower spot prices created an economic problem for the majors. The lower spot prices also decreased the long-term contract prices they received from their customers. The lower contract prices benefited automobile owners when they were passed on as lower retail gasoline prices, but they reduced the profits of the majors.

These lower prices were the impetus for the agreement among the majors, which involved each one purchasing excess gasoline from the independents, termed their “dancing partners.” These purchases inflated the spot market prices, which in turn increased the contract prices. Thus, rather than their profits suffering when they had to pay more for spot purchases, the majors’ profits increased, because the higher spot prices on their small purchases led to higher contract prices on large sales. Gas stations passed on the higher wholesale contract prices as higher retail prices, which then harmed retail customers.

D. Collusive Effects of MFNs: Ethyl (1984) and GE/Westinghouse (1977)

This FTC matter involved the market for tetraethyl lead, the ingredient in leaded gasoline that raises octane levels.²⁸ The FTC alleged several types of behavior: advance notice of price increases, uniform delivered pricing, and MFN price provisions. It alleged that after the announced regulatory phase-out of leaded gasoline raised barriers to entry, this conduct facilitated price coordination.

The Second Circuit decision²⁹ focused on the advance notice. But the MFN involves a more interesting economic analysis. The two leading firms, Ethyl and DuPont, both had MFN provisions in their standard contract with their oil refiner customers. An MFN contractual provision offers the customer a type of pricing protection. If the seller offers a lower price to another buyer, the seller must offer that same lower price to the customer with the MFN. Thus, the MFN may have the potential procompetitive effect of allowing the customer to obtain a lower price, leading the customer to be willing to pay a premium for the protection. The protection may have even more value if the seller also supplies the customer’s competitors. In this case, the MFN ensures that the customer will not face a cost disadvantage in purchasing this input. For this reason, MFNs were long seen as procompetitive buyer-protection devices.

In fact, the use of MFNs in oligopoly markets can have the reverse effect—reducing price competition among the sellers and leading to higher prices, which can harm all customers.³⁰ If providing a lower

²⁷ The impetus for the *Tampa Electric* exclusive dealing case was attempted opportunism by Tampa to reduce the price of coal it purchased under a fixed-price contract.

²⁸ There were also two fringe producers, Nalco and PPG.

²⁹ *E.I. Du Pont De Nemours & Company, Petitioner, v. Federal Trade Commission, Respondent. Ethyl Corporation, Petitioner, v. Federal Trade Commission, Respondent*, 729 F.2d 128 (2d Cir. 1984).

³⁰ Steven C. Salop, *Practices that (Credibly) Facilitate Oligopoly Co-ordination*, in *NEW DEVELOPMENTS IN THE ANALYSIS OF MARKET STRUCTURE* 265 (Joseph E. Stiglitz & G. Frank Mathewson eds., 1986); Thomas E. Cooper,

price to one customer forces the seller to provide that lower price to more—or perhaps all—of its customers, it will be less likely to offer the lower price to the one customer. The lower prices provided to the others acts like a tax on the first discount. In an oligopoly market, this impediment to secretly discounting to just a few customers can stabilize prices at a supra-competitive level through tacit collusion. MFNs eliminate the secrecy, as rivals are likely to detect the general discount. Absent the MFN, firms may offer secret discounts, which might have a destabilizing effect and set off a price war.

Ethyl was not the first case alleging collusive effects of MFNs. A few years earlier, the Justice Department had uncovered the anticompetitive effects of MFNs by GE and Westinghouse in the market for large-scale electric turbine generators sold to electric utilities. After the cartel broke down, prices fell, and Allis Chambers exited the market. Profits fell. A GE executive then got the idea to both simplify the pricing of the equipment and provide customers with a retroactive MFN. Price simplification makes it easier to monitor and match prices. Under the MFN, if GE reduced the price to subsequent customers for a period after the customer ordered the equipment, GE would reduce the price accordingly. Westinghouse followed with the same structure. These MFNs reduced the incentive to reduce prices, because doing so would entail paying rebates to customers that already agreed to pay higher prices. GE and Westinghouse prices increased substantially after these provisions were adopted. When the Justice Department discovered the scheme, the companies agreed to a modification of their consent decrees to prohibit the MFNs.³¹

MFNs should not be conclusively presumed to be anticompetitive or subject to the per se illegality. Indeed, MFNs can increase efficiency and competition in several ways:

- They can deal with “hold-up” problems, where the parties have long-term contracts that lock in one or both of the parties and market costs and prices vary over time.
- They can eliminate contract delays, by reducing the need for the buyer to shop around.
- They can reduce transactions costs.

An MFN’s efficiency and anticompetitive effects are not mutually exclusive. Both effects can occur at the same time.³²

The market structure and use of MFNs also affect their competitive impact. For example, MFNs offered solely to a few small customers are unlikely to deter discounting to large customers. In this situation, they may provide real price protection. MFNs are also unlikely to stabilize supra-competitive prices in a highly competitive, unconcentrated market. However, where they are provided to all customers in an oligopoly market, they are more likely to cause competitive harm, by

Most-Favored-Customer Pricing and Tacit Collusion, 17 RAND J. ECON. 377 (1986); Fiona Scott Morton, *The Strategic Response by Pharmaceutical Firms to the Medicaid Most-Favored-Customer Rules*, 28 RAND J. ECON. 269 (1997).

³¹ *United States v. Gen. Elec. Co.*, No. 28228, 1977 WL 1474, at 1 (E.D. Pa. Sept. 16, 1977). A sad aspect of the Second Circuit’s *Ethyl* decision is that it overlooked the competitive concerns with the MFN provisions. In rejecting the FTC’s claims, the court explained that there was no evidence of conduct contrary to independent self-interest. As an example of such conduct, it flagged GE’s “price protection” policy, although it noted that it, too, was an MFN. See *E.I. du Pont de Nemours & Co. v. F.T.C.*, 729 F.2d 128, 140 n.10 (2d Cir. 1984).

³² See, e.g., Jonathan B. Baker, *Vertical Restraints with Horizontal Consequences: Competitive Effects of “Most-Favored-Customer” Clauses*, 64 Antitrust L. J. 517 (1996); Jonathan B. Baker & Judith A. Chevalier, *The Competitive Consequences of Most-Favored-Nations Provisions*, 27 ANTITRUST 20 (2013).

detering discounts and stabilizing oligopoly prices, as was the case in *Ethyl*.³³ MFNs can also have exclusionary effects, as discussed in the exclusionary conduct section.

E. “Meeting Competition” and “Best Price” Promises

A meeting competition promise (MCP) obligates the seller to reduce its price to match discounts by named competitors or rebate the price difference to consumers who have already purchased. MCPs may be included in long-term contracts or promised by a retailer. Either way, they are designed to assure the customer that it is obtaining the best price and to eliminate the need for the customer to shop around. These promises may require the customer to discover the lower prices. Alternatively, the seller may include a promise to monitor and disclose price differentials. Some supermarkets, for example, promise to offer the best price for a particular (seemingly typical) market basket of products. The supermarket then surveys and discloses the relative cost of the market baskets.

Like MFNs, MCP provisions have a certain insurance value to individual consumers. However, in oligopoly markets, they have the reverse effect, of leading to higher and more stable supra-competitive prices, because they reduce the incentive to reduce prices by the competitors of the firm or firms offering the MCP. The reason is clear: If the discounts are quickly matched, they will not lead to significantly higher sales, which reduces the incentive to offer them. If the rivals’ prices are being monitored, they will be rapidly matched.

To fully grasp this dynamic, suppose there is a duopoly market in which the two firms have competed intensely. The price has landed at a stable equilibrium at or slightly above marginal cost, because if either firm raises its price, it will quickly lose sales to the other. One of the firms makes the following announcement. “I am raising my list price up to the monopoly level. However, I promise my customers in a binding contract that I will match any lower prices by my competitor.” This strategy is safe for the firm, because it will charge a higher price only if its rival does, too. And given this announcement, the rival now has an immediate incentive to raise its price up to the monopoly level. Once that price is achieved, there is no incentive for either firm to deviate.

Would this conduct violate Section 1? Suppose a duopolist communicates to its competitor, “If you raise the price, I will match the price increase.” In the *American Airlines*³⁴ case, the court interpreted this nonbinding but secret invitation as an attempt to monopolize violation of Section 2, even though the competitor did not raise its price. Had the competitor airline accepted the invitation and raised the price, the communication presumably would have constituted an agreement, in that there was both “offer” and “acceptance.” In the hypothetical, the offer is binding but offered openly to customers, not the competitor. However, as the competitor heard the binding offer, it could recognize that it amounted to an invitation based on the competitor’s economic incentives.

F. Buyer-Side Collusion and Joint Purchasing Agreements: Alston and Other Cases

Collusion by sellers in the output market may also involve collusion by them in purchasing inputs. By combining monopsony and monopoly, input sellers are harmed. Even if the buyers continue to

³³ MFNs can also raise barriers to entry, as discussed in the exclusionary conduct section.

³⁴ *United States v. American Airlines, Inc.*, 743 F.2d 1114 (5th Cir. 1984).

compete downstream, buyer-side collusion in purchasing inputs can harm the sellers. This buyer-side collusion was held to be per se illegal in *Mandeville Farms*.³⁵

The doctrine becomes more complex when the buyer argues that its collusive purchasing behavior will lead to more downstream output market competition, which will benefit downstream consumers. *Northwest Wholesale Stationers*³⁶ applied the rule of reason to a cooperative association of retail stores that jointly purchased products for resale independently from one another. In light of the potential beneficial impact on downstream consumers, *Law v. NCAA*³⁷ applied the rule of reason to an NCAA agreement to set the maximum salaries paid to coaches. *Alston*³⁸ applied the rule of reason in evaluating the settlement regarding payments to student athletes.

The potential impact on downstream consumers raises three separate but related economic questions:

- Under what circumstances do downstream consumers benefit from the upstream collusion or joint purchasing?
- Are there circumstances in which the upstream input sellers also benefit from the collusive purchasing? If so, there is no conflict between upstream input sellers and downstream consumers.
- If downstream consumers benefit, do those benefits justify collusive conduct that leads to competitive harms to the upstream input sellers?

The first and second questions involve economic analysis. The third question involves legal as well as economic analysis.

1. Impact of buyer-side collusion on downstream consumers

Buyer-side (monopsony) power over sellers is the power to profitably reduce the price paid for an input. Textbook economic models of monopsony power focus on buyers who gain the power to reduce the input price below the competitive level, which can be termed classical monopsony power. However, if buyers gain “countervailing” bargaining power over sellers that have some market power, the outcome may involve a price that is lower but remains at or above the competitive level.³⁹

The classical monopsony economic model is the mirror image of the monopoly model. Facing an upward-sloping competitive supply curve, the monopsony buyer restricts its purchases. By doing so, it is able to obtain a lower input price on the remaining purchases, a price that is below the competitive level. Because fewer inputs are purchased, the buyer typically reduces its output. Tracing this effect downstream, total market output is reduced, which leads to higher downstream prices and

³⁵ *Mandeville Island Farms, Inc. v. Am. Crystal Sugar Co.*, 334 U.S. 219 (1948).

³⁶ *Northwest Wholesale Stationers, Inc. v. Pacific Stationery & Printing Co.*, 472 U.S. 284 (1985).

³⁷ *Law v. National Collegiate Athletic Association*, 134 F.3d 1010 (10th Cir. 1998).

³⁸ *National Collegiate Athletic Association v. Alston*, 594 U.S. 69 (2021).

³⁹ For further analysis of these models, see Steven C. Salop, *Countervailing Exploitative Pricing With Joint Negotiation Entities*, __ ANTITRUST L.J. __ (2026) (forthcoming). This distinction between classical monopsony power and countervailing bargaining power was recognized by then-Judge Kavanaugh in his dissent in the Anthem/Cigna merger. *United States v. Anthem, Inc.*, 855 F.3d 345, 377 (D.C. Cir. 2017) (Kavanaugh, J., dissenting).

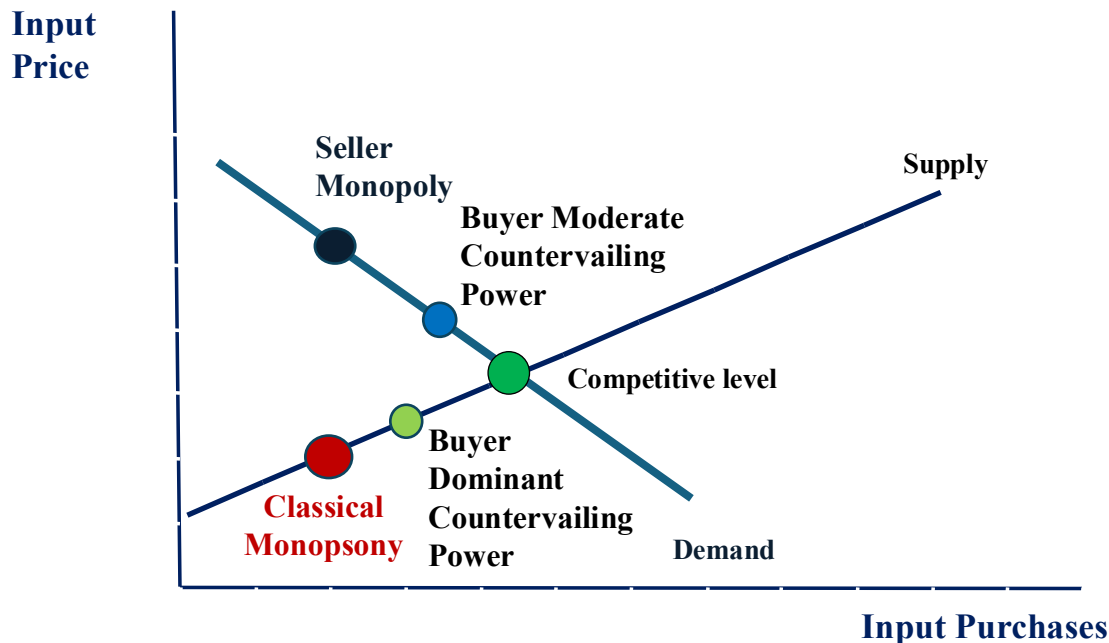
injury to downstream consumers. Thus, in addition to causing competitive harm to the seller, achieving and exercising classical monopsony power reduces consumer welfare.

Countervailing power achieved by a dominant purchaser or an agreement among purchaser is different. If sellers have market (or monopoly) power that has restricted sales to (and purchases by) buyers below the competitive level, achieving and exercising a moderate amount of buyer-side countervailing power will lead to an input price that is reduced but remains above the competitive price level. In this case, the lower input price leads to increased purchases, which leads the buyers to increase their output. Tracing this effect downstream, total market output is increased, which leads to lower downstream prices and increases in the welfare of downstream consumers. Only if buyers gain dominant countervailing power that leads to an input price below the competitive level will output fall.

Figure 7.2 summarizes the economic outcomes of these two types of buyer-side power. In its most extreme form, classical monopsony involves a movement away from the competitive outcome down the supply curve to the monopsony outcome, leading to a decrease in purchases and output as well as a lower price. Imperfect classical monopsony power is represented by a movement part-way down the supply curve. If there is initial substantial market power by sellers, buyer countervailing power can lead to a movement away from the monopoly point down the demand curve to the competitive outcome, leading to an increase in purchases and output as well as a lower price. Limited countervailing power may involve only a movement part-way down the demand curve. If there is no monopoly power but only some lesser degree of market power or seller bargaining power, the starting point would be somewhat lower on the demand curve.

It is also possible that joint purchasing by a set of buyers facing sellers with market power could gain dominant (rather than just moderate) countervailing bargaining power. If it does, the price would fall to below the competitive level into the monopsony region. In the presence of the most extreme conduct along the continuum, the joint action could move the outcome from the classical monopoly price and output to the classical monopsony price and output.

These monopoly and monopsony outputs are illustrated in Figure 7.2 as more or less equal, though either one may be larger in practice. These classical monopoly and classical monopsony outputs depend on the shape of the demand and supply curves. It would be very unusual for countervailing power to lead from the classical monopsony point all the way to the classical monopoly point. If, however, the market initially involves classical monopoly or dominant seller bargaining power, it is theoretically possible that a move to dominant buyer power could lead to increased output and welfare of downstream consumers. What is clear is that increased buyer-side power increases output and downstream consumer welfare if it pushes inputs down to the competitive level and no lower.

Figure 7.2 Illustration of classical monopsony versus countervailing power

Returning to the original question, it is not true that downstream consumers typically benefit from collusive restraints among purchasers that lead to the achievement and exercise of buyer-side (monopsony) power. The outcome depends on whether the power involves classical monopsony or moderate countervailing power.

2. Impact of buyers' collusive agreements on sellers

Although sellers are directly harmed by either version of the naked buyer-side power just discussed, they may obtain benefits from efficiencies created by the cooperation among buyers that can mitigate or possibly even exceed these direct harms. The *Northwest Wholesale*⁴⁰ stationers cooperative apparently created warehousing and other logistical benefits that reduced the costs of buyers. These offsetting cost reductions would have increased the sellers' demand, which would benefit the sellers who contracted with the association. At the same time, the ability to make larger shipments may have reduced the sellers' costs. In principle, these cost reductions and demand increases could lead sellers to benefit from collective activity by purchasers. At the same time, because the retailers continued to compete independently downstream, this combination of factors would also likely lead to gains by downstream consumers, as the association members passed on some of the cost reductions as lower retail prices.

In *Alston*,⁴¹ the NCAA focused on the benefits to downstream consumers. The Court permitted the settlement between the NCAA and the class of athletes. Absent a settlement, one can envision the NCAA arguing that the lack of restraints on payment would lead to "ruinous competition" for the best

⁴⁰ *Northwest Wholesale Stationers, Inc. v. Pacific Stationery & Printing Co.*, 472 U.S. 284 (1985).

⁴¹ *National Collegiate Athletic Association v. Alston*, 594 U.S. 69 (2021).

athletes that would have destroyed both competitive balance and the appeal of amateur athletics. In the end, few students would obtain athletic scholarships.

3. Evaluating conduct that harms input sellers but benefits downstream consumers

Suppose that collective action by the purchasers allows them to gain countervailing power against sellers with some market or monopoly power, leading to an increase in purchases and output. In this case, the input sellers are harmed, but, assuming that the purchasers continue to compete in the downstream market, downstream consumers benefit.⁴² This situation raises the question of whether and how to deal with the fact that there is harm to counterparties in one market (here, input sellers) and benefits to counterparties in a second market (here, downstream consumers).

Attempting to aggregate these effects would involve the type of interpersonal comparisons that goes beyond classical economic welfare analysis. The Kaldor-Hicks method would attempt to determine the overall “efficiency” of the conduct by calculating and then adding up in dollar terms the surpluses gained and lost. This method of estimating “aggregate welfare” would be very difficult to implement. It would also treat as equal a dollar gained by a rich consumer and a dollar lost by a poor worker, which might look objective but represents a value judgment. In decision theory terms, this method would be costly and perhaps beyond the competence of generalist courts, increasing the likely error rate.

Consider how difficult it would have been in *Alston*. The harm would be suffered by the student athletes, whereas the benefits would be gained by mainly alumni and television viewers.⁴³ For the student athletes, the impact would be financial. For the alumni and television viewers, the benefit would be greater utility from watching the games knowing that the players were amateurs. Even putting aside the income distribution issues, these effects seem incommensurate.⁴⁴

Antitrust law can avoid this comparison by focusing exclusively on the harms to the sellers or the gains to the downstream consumers.⁴⁵ In *Alston*,⁴⁶ the Court formally side-stepped the issue of whether to balance the consumer benefits from watching amateur sports versus the harms to the student athletes. But the opinion did send out some interesting signals.

⁴² If the collective action by the purchasers leads to classical monopsony power, output declines, harming both downstream consumers and input sellers. The balancing issue could arise if the joint action also creates other cost reductions separate from the exercise of monopsony power.

⁴³ This Kaldor-Hicks methodology considers a hypothetical redistribution from the parties whose welfare rises to those whose welfare falls. It evaluates whether the winners can compensate the losers to make both sides better off. It is important to note, however, that the redistribution is hypothetical. It is not required in the particular case. Thus, it is implicitly hoped that over time, particular individuals are sometimes winners and sometimes losers so that everyone gains in the long run. Of course, this hoped-for outcome is unlikely to occur. Market power benefits shareholders and harms consumers. Stockholding is concentrated among much higher income people.

⁴⁴ Rebecca Haw Allensworth, *The Commensurability Myth in Antitrust*, 69 VANDERBILT L. REV. 1 (2016).

⁴⁵ In merger law, such multi-market balancing of benefits and harms is not permitted. In vertical exclusion cases brought under either Section 1 or Section 2, liability normally focuses solely on whether there is harm to downstream consumers, not the harm to the excluded rivals. This issue is discussed elsewhere in this monograph.

⁴⁶ *National Collegiate Athletic Association v. Alston*, 594 U.S. 69 (2021).

First, in evaluating the NCAA's wished-for summary approval under a quick-look exoneration, the Court initially stressed the importance of economic efficiency and the need for caution before condemning business practices, including a quotation to that effect from an article by Judge Easterbrook.⁴⁷ But when it finally rejected that standard, it quoted other language by Judge Easterbrook in the *Chicago Bulls*⁴⁸ case:

Just as the ability of McDonald's franchises to coordinate the release of a new hamburger does not imply their ability to agree on wages for counter workers, so the ability of sports teams to agree on a TV contract need not imply an ability to set wages for players.⁴⁹

Second, Justice Kavanaugh's concurrence directly addressed the issue. He stated his view that "traditions [regarding amateur sports] alone cannot justify the NCAA's decision to build a massive money-raising enterprise on the backs of student athletes who are not fairly compensated."⁵⁰

Suppose that the upstream seller whose power is countervailed by a buyer cartel is a monopolist. Even here, favoring the welfare of downstream purchasers would violate the normal antitrust privileging of pricing by firms with legitimate monopoly power.

G. Labor No-Poach Agreements as Collusive Conduct to Achieve Monopsony Power

Labor no-poach agreements have gained substantial visibility in recent years.⁵¹ In 2010, the Justice Department discovered a wide-ranging series of bilateral agreements between Silicon Valley tech firms) not to attempt to hire ("poach") each other's engineers.⁵² The agreements were made by the CEOs, not by human resources executives or managers.

Despite what might have appeared to be criminal violations, the Justice Department settled the cases with consent decrees. In other matters, some lower courts have been reluctant to intervene on the

⁴⁷ Frank Easterbrook, *On Identifying Exclusionary Conduct*, 61 NOTRE DAME L. REV. 972, 975 (1986).

⁴⁸ *Chicago Professional Sports Ltd. Partnership v. National Basketball Association*, 95 F.3d 593, 600 (7th Cir. 1996).

⁴⁹ *National Collegiate Athletic Association v. Alston*, 594 U.S. 69, 90-91 (2021) (quoting *Chicago Professional Sports Ltd. Partnership v. National Basketball Association*, 95 F.3d 593, 600 (7th Cir. 1996)).

⁵⁰ *Id.* at 112. This seemingly definitive statement by Justice Kavanaugh is a very different from his earlier dissent in the *Anthem/Cigna* merger case while serving on the D.C. Circuit. In that matter, he recommended a remand to determine whether the buyer power created by that merger would lead to monopsony power that would harm downstream consumers versus countervailing power that would benefit consumers.

⁵¹ A growing body of economic and legal literature has emerged. See, for example, Evan Starr et al., *Mobility Constraint Externalities*, 30 ORGANIZATION SCIENCE 961 (2019). For a cross-state empirical study on the effect of franchise no-poach agreements on wage rates, see Brian Callaci et. al. *The Effect of Franchise No-Poaching Restrictions on Worker Earnings*, Upjohn Institute Working Paper 24-405 (2024), <https://doi.org/10.17848/wp24-405>. For a survey of recent litigation, See Eric A. Posner & Sarah Roberts, *No-Poach Antitrust Litigation in the United States*, Coase-Sandor Working Paper Series in Law and Economics, No. 993 (2023), https://chicagounbound.uchicago.edu/law_and_economics_wp/118/.

⁵² U.S. Department of Justice, Antitrust Div., *Justice Department Requires Six High-Tech Companies to Stop Entering into Anticompetitive Employee Solicitation Agreements* (Sept. 24, 2010). A recent article suggests that the agreements had substantial effects on salaries. Matthew Gibson, *Employer Market Power in Silicon Valley* (March 19, 2024), <https://ssrn.com/abstract=4765016> or <http://dx.doi.org/10.2139/ssrn.4765016>.

grounds that the agreements would lead to lower costs, which could benefit downstream consumers. In *Aya v. AMN*, a Ninth Circuit panel held that an agreement between the parties that prohibited Aya from soliciting AMN's employees was not a naked restraint but was reasonably necessary for their otherwise procompetitive collaboration and so should be evaluated under the multi-step rule of reason standard.⁵³

However, in recent years, there has been greater concern about the anticompetitive effects of buy-side agreements on workers. The Justice Department announced that such agreements are per se unlawful and has brought some criminal cases.⁵⁴

The *Deslandes*⁵⁵ class action case involved a “no-poach” agreement among McDonalds and its franchisees not to hire employees away from franchisees or company-owned stores. This elimination of competition directly harms employees. The lead plaintiff, Ms. Deslandes, was denied the ability to obtain a higher-paying position at a different McDonalds outlet. In its rebuttal, McDonalds initially claimed that its policy lead to lower retail prices and that consumer welfare effect was the sole issue. In denying class certification in the *Deslandes* case, the district court focused on the impact in the downstream market.⁵⁶ In a decision written by Judge Easterbrook, the Seventh Circuit reversed on the grounds that the impact on the employees was the paramount issue.⁵⁷ As he explained in the decision:

One problem with this approach is that it treats benefits to consumers (increased output) as justifying detriments to workers (monopsony pricing). That's not right; it is equivalent to saying that antitrust law is unconcerned with competition in the markets for inputs, and *Alston* establishes otherwise.⁵⁸

The court explained that the issue is whether the employees ended up with higher wages over time from the increased training or lower wages from the elimination of competition and remanded the case.⁵⁹

In 1879, the professional baseball team owners in the nascent National League adopted an agreement “reserving” a single player from being poached by another team (for one year after his contract expired). By 1887, the “reserve clause” was expanded to cover the teams’ entire roster and included in the players’ contracts as noncompetitive clauses. A century before *Board of Regents*, the claimed

⁵³ *Aya Healthcare Services, Inc. v. AMN Healthcare, Inc.*, 2021 WL 3671384 (9th Cir. Aug. 19, 2021) (affirming summary judgment for AMN in antitrust suit challenging a nonsolicitation clause, holding the restraint ancillary [rule of reason], not per se illegal). See also *North Jackson Pharmacy, Inc. v. Caremark RX, Inc.*, 385 F. Supp. 2d 740 (N.D. Ill. 2005).

⁵⁴ See, e.g., *United States v. Lopez*, Case No. 2:23-cr-00055 (D. Nev.); *United States v. DaVita Inc*, Case No. 1:21-cr-00229 (D. Colo.); *United States v. Surgical Care Affiliates LLC*, et al., Case No. 21-cr-00011 (N.D. Tex.); *United States v. Patel*, et al., Case No. 21-cr-00220 (D. Conn.).

⁵⁵ *Leinani Deslandes v. McDonald's USA LLC*, 81 F.4th 699 (7th Cir. 2023).

⁵⁶ *Deslandes v. McDonald's USA, LLC*, No. 17 C 4857, 2022 WL 2316187 (N.D. Ill. June 28, 2022).

⁵⁷ *Leinani Deslandes v. McDonald's USA LLC*, 81 F.4th 699 (7th Cir. 2023).

⁵⁸ *Id.* at 703.

⁵⁹ *Id.* at 704-705.

rationale of the agreement was competitive balance—that is, a fear that the wealthiest teams would sign all the best players.

By maintaining control over the players, the contractual clause also created an entry barrier to new leagues. When one player jumped to the new Federal League, his previous National League team brought a breach of contract case. Facing financial constraints, the Federal League quickly settled the case by agreeing to dissolve the league. After the settlement, the judge, Kennesaw Mountain Landis, announced that he would have found for the Federal League but that he delayed his judgment out of a fear that the decision would have destroyed professional baseball. Judge Landis then went on to become the first commissioner of Major League Baseball, in 1921. The reserve clause litigation also led to Major League Baseball gaining an antitrust exemption based on its failure to effect interstate commerce in 1922. That exemption lives on today, based on a surprising 100-year application of *stare decisis*.⁶⁰ The reserve clause was subsequently relaxed in an agreement with the Major League Baseball Players Association (MLBPA) union in 1975 that established a system of arbitration and limited “free agency.”

IV. Patent Licensing

A. Two-Way Cross-Licensing Payments

Competitors in an oligopoly market protected by entry barriers who sell inputs to one another might structure the arrangement in a way that eliminates competition between them. Consider a duopoly market in which the duopolists sell homogeneous products at equal and constant marginal cost. Suppose that price competition is intense and drives the competitive duopoly price down to marginal cost, where each has a 50 percent market share. Suppose that each of the duopolists owns a patent that either is invalid or not infringed upon by the other duopolist.

As a clever way to cartelize the market, suppose that they make an agreement to cross-license their patents and set the per unit royalty level in a way to raise their marginal costs high enough that the new “competitive” price (the price equal to the marginal production cost plus the per unit royalty cost) is equal to the monopoly price. Suppose the patents are invalid or not infringed. Although neither appears to make a profit on the sale of the product and the two-way royalty payments are equal in both directions so neither firm has to write a check, the price of the product is actually above the marginal production cost. As (by assumption) the patents are invalid or not infringed, this arraignment amounts to naked price fixing. However, it can be uncovered as naked cartelization only if the court is willing to permit government or private plaintiff to litigate the patents and prove that they are invalid or not infringed.

Consider next the opposite extreme. Suppose that the patents are valid and infringed on by one another. When there are multiple patents of relatively equal value, firms sometimes agree to zero-

⁶⁰ Justice Blackmun’s opinion in *Flood v. Kuhn* (1972) conceded that baseball did constitute interstate commerce, but he concluded that “it is an aberration that has been with us now for half a century, one heretofore deemed fully entitled to the benefit of *stare decisis*.” For a somewhat different interpretation, see Stephen F. Ross, *The Story of Flood v. Kuhn: Dynamic Statutory Interpretation, At the Time*, in William Eskridge et al., eds., *STATUTORY INTERPRETATION STORIES* (2010).

royalty cross-licenses—a solution that is best for consumers. Suppose that each duopolist's patent reduces the cost of the product by \$5 per unit. If the patents are cross-licensed with a zero royalty, each firm's costs will fall by \$10. In light of the constant marginal production costs and intense price competition for their homogeneous products, they will fully pass the cost reduction on, causing the market price to fall by \$10.

Firms do occasionally engage in zero-royalty cross-licensing. However, in this duopoly market structure, the firms would likely lack an incentive to do so.

Suppose instead that the firms set the cross-license per unit royalty at \$5, the value received from the other firm's patent. On first glance, this arrangement would appear to mean that each firm's marginal cost falls by \$5—a \$10 product cost reduction but a \$5 per unit payment to the rival. In this case, the market price would seem to fall by \$5.

This conclusion is not correct. Each firm would reason in an economically more sophisticated way that each unit it sells is a unit not sold by the rival, which entails a loss of the \$5 royalty of the rival's sales: The forgone royalty is the opportunity cost of producing an incremental unit instead of ceding it to the rival. Thus, each firm would reckon that its marginal cost of producing an incremental unit is the production cost plus the \$5 royalty paid to the rival plus the \$5 opportunity cost of forgoing the rival's royalty payment if it produces the unit instead. Thus, the market price will not fall. Each rival will earn a profit of \$10 per unit after the royalty payments cancel out.

But why stop at \$5? Suppose that a business consultant for one of the firms suggests that it raise the royalty far above the incremental value of the patents, all the way up to the level that will drive the competitive price up to the monopoly level. This version of cartelization could be revealed only if the court were willing to evaluate the incremental value of the patents in addition to their validity. Many courts would not permit this determination, because antitrust courts are generally treated as incompetent to determine reasonable prices.

To complete the set of scenarios, suppose that the court permits the plaintiff to litigate validity and infringement. Suppose the court determines that there is a nonzero but less than 100 percent likelihood that the two patents are valid. Would the court be willing to find cartelization if the likelihood of validity is (say) only 5 percent but the royalty is (say) five times higher than the inherent value of the patent? If so, what would the court do in less extreme situations? The relevant economic analysis may be clear; the judicial intervention is far less certain. Courts generally apply only a "sham" standard to intellectual property assertions, which might not apply if the probability of validity and infringement was (say) 33 percent.

*Actavis*⁶¹ was a major exception. In that case, the Court addressed a patent settlement that involved a "reverse payment" from the patentee to the alleged infringing entrant in exchange for the entrant delaying its entry until shortly before the expiration of the patent. The payment was far in excess of the litigation costs saved. The Court concluded that such a large payment implied that the patent was weak and that the payment represented a noncompete payment.

⁶¹ 1 *FTC v. Actavis, Inc.*, 133 S. Ct. 2223 (2013).

B. Patent Pools

Instead of a two-way cross-license, the market might be cartelized by forming a patent pool comprising competing (substitute) patents rather than complementary one. Suppose that two firms each have patents that can be used to create a particular type of machine. Suppose that either firm's patents could be used equally well. The distribution of patent licenses has a zero marginal cost. If the patents are perfect substitutes for one another and there are no other alternatives, they could compete as duopolists in a market for a homogeneous product. The perfectly competitive royalty would be zero. The equilibrium royalty would most likely be between zero and the monopoly level. To achieve the monopoly royalty, the firms might pool their patents or license them jointly, with the royalty set at the monopoly level, and divide the proceeds by some predetermined formula.

The FTC applied this type of analysis to the *Summit/Visx* patent pool.⁶² Summit and Visx were producers of equipment for laser surgery (before Lasik replaced their technologies). Each had relevant patents that the FTC alleged were competing, not complementary. The firms created a joint venture that pooled their patents and set a licensing fee on each machine sold. The parties also agreed not to license these patents without permission from the other. The parties settled with the FTC and agreed to dissolve their patent pool. The FTC alleged (in the context of a settlement, where the Commission is master of its own complaint) that the parties' patents were not blocking.

By contrast, pooling patents that are purely complementary can be procompetitive. Suppose production of particular type of machine requires access to the patents of both firms. This situation creates the Cournot complements problem, which can lead to excessive prices. By forming a joint venture pool that sets their two prices jointly, the pool will have the incentive to reduce the price, because the pool operator will recognize that by setting that a lower price for one patent, the demand for the other patent will increase and total sales and profits will rise.

Suppose there is a downward-sloping demand curve for the machines by perfectly competitive machine producers, which implies a downward-sloping demand for the two patents. Suppose that the monopoly per unit royalty rate for the pair of patents is \$200 (\$100 each) and 1,000 licenses are sold, generating total revenue of \$200,000. This amount would be the total rate set by the pool.

Absent the pool, each profit-maximizing patent holder would have the unilateral incentive to set its rate above \$100. Holding the other patentee's rate at \$100, suppose one patentee raises its rate by (say) \$1, raising the total rate to \$201. As \$200 was the profit-maximizing level, the combined total profits will fall, but only slightly, because the price increase above the joint profit-maximizing level is small.

Suppose that the number of licenses falls to 995. The combined revenue would drop by \$5, but the revenue accruing to the patentee that raised its rate would rise to \$100,495 (\$101 x 995), an increase of \$495, and the revenue of the other patentee would fall to \$99,500 (\$100 x 995), a decrease of \$500. If they set rates independently, each would have the incentive to set a royalty rate such that the

⁶² FTC Press Release: *Summit and VISX Settle FTC Charges of Violating Antitrust Laws* (August 21, 1998). <https://www.ftc.gov/news-events/news/press-releases/1998/08/summit-visx-settle-ftc-charges-violating-antitrust-laws>. The FTC also alleged that one of the patents was obtained by fraud on the Patent Office.

combined royalty exceeds the monopoly level. When they form a pool, the pool operator can increase total revenue by reducing the royalties down to the monopoly level.

Taking these two scenarios together, the analysis implies that patent pools should be permitted for complementary blocking patents but not for substitute (competing) patents. The analysis becomes more complicated if a pair of patents are complements for some uses but substitutes for others. In this situation, the pool might be permitted to price jointly for the complementary uses, with the individual patentees required to license the individual patents for substitute uses. This situation creates a tricky issue, as the patentees have the incentive to collude in setting their rates for the substitute uses, and it may be difficult to detect the collusion if they are communicating as part of the operation of the pool. Several Justice Department Business Review Letters have expressed this concern.⁶³

Another complication arises if the patented technology of both firms is needed but it is not clear that the patents are valid. Suppose that two patentees are engaged in cross-litigation over the validity of the other's patent. Suppose the firms each think that the probability of validity for each of the patents is 60 percent. Despite having only a 40 percent chance of winning, one of the firms might consider the litigation costs worth incurring, because if it wins, it would be the sole recipient of the monopoly royalty rate.

Suppose the two firms decide to settle the lawsuits and form a patent pool instead. It is not obvious that the government should permit this settlement and pool. The settlement and pool would be procompetitive if both patents are valid, because the pool would charge a lower royalty than the independently set royalties. If only one of the patents turns out to be valid, the royalty would be set at the monopoly level, the same as the pool. But even with an 80 percent probability of validity for each, there is a 16 percent (40 percent x 40 percent) likelihood that neither is valid, in which case access to the technology would be free.

In expected value terms, it is not clear that the expected royalty would be lower by accepting the pool than by forcing the firms to fight it out. To see why, suppose that the monopoly royalty is \$200, the rate that would apply if the pool is approved. If the pool is not approved and only one patent is valid—an event with a probability of 48 percent ($2 \times 60 \text{ percent} \times 40 \text{ percent}$)—the royalty would be \$200. If the pool is not approved and both patents are valid—an event with a probability of 36 percent ($60 \text{ percent} \times 60 \text{ percent}$), the royalty rate on the independently set patents would be \$250. If neither patent turned out to be valid—an event with a probability of 16 percent ($40 \text{ percent} \times 40 \text{ percent}$), the royalty would be zero. Thus, the expected value of the no-approval royalty would be \$186 ($[16 \text{ percent} \times 0] + [36 \text{ percent} \times \$250] + [48 \text{ percent} \times \$200]$), which is less than the \$200 pool royalty. Of course, if the validity probabilities were higher or the pool royalty was more of a discount off the

⁶³ See, e.g., Department of Justice, *Response To Intellectual Property Exchange International, Inc.'s Request For Business Review Letter* (March 26, 2103), <https://www.justice.gov/atr/response-intellectual-property-exchange-international-incs-request-business-review-letter>; Letter from Joel I. Klein, Assistant Attorney Gen., Antitrust Div., U.S. Department of Justice, to Carey R. Ramos, Partner, Paul, Weiss, Rifkind, Wharton & Garrison LLP, at 11 (June 10, 1999), <http://www.usdoj.gov/atr/public/busreview/2485.pdf>.

independently set royalties, the expected value of the no-approval royalty could be higher than the pool royalty.⁶⁴

One way to side-step the issue that courts will not have robust information on probabilities and expected values is to look for a less restrictive alternative. Absent the reverse payment in *Actavis*, for example, the parties likely would have negotiated a different settlement with greater benefit for consumers.⁶⁵ With a two-player pool (or, more extreme, a merger), no obvious less restrictive alternative may exist that does not involve courts assigning probabilities and regulating price. The Justice Department Business Review Letters in the pool context assume validity and infringement, side-stepping the issue.

⁶⁴ An analogous issue arose in 1999, when Gemstar and TV Guide proposed settling their patent litigation and merging. It is not clear whether the Justice Department took account of the likelihood that neither patent was valid. John Lippman, *Gemstar and TV Guide Complete Merger for \$14.2 Billion in Stock*, WALL ST. J. (July 13, 2020), <https://www.wsj.com/articles/SB963444319641934848>.

⁶⁵ Aaron Edlin et al., *Activating Actavis*, ANTITRUST (Fall 2013); Aaron Edlin et al., *Actavis and Error Costs: A Reply to Critics*, ANTITRUST SOURCE (October 2014).