Predatory Buying and the Antitrust Laws

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I. Introduction

Monopsony is the structural condition in which there is only one buyer of a well-specified good or service.1 Though it has not attracted nearly as much scholarly attention as has its counterpart, monopoly, the basic economics of monopsony have been thoroughly developed and are straightforward: A monopsonist will typically buy less of and pay less for a good or service than would firms in a competitive market. The exercise of monopsony power is profitable, but it misallocates resources and thereby reduces social welfare.

Because monopsony and monopoly are economically symmetrical, parallel antitrust treatment of the two is intuitively appealing. Indeed, the Supreme Court decided in 1948 that a price-fixing agreement among buyers violates Section 1 of the Sherman Act,2 reasoning that price fixing agreements among sellers is a per se Section 1 violation3 and that whether those specially injured by a price fixing conspiracy are sellers or buyers

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is insignificant.\textsuperscript{4} But few monopsony cases have been decided, especially by the Supreme Court, and until this term the Court had not resolved whether the standards for monopolization under Section 2 apply to claims of monopsonization. In \textit{Weyerhaeuser Co. v. Ross-Simmons Hardwood Lumber Co.},\textsuperscript{5} the Court confirmed that the acquisition of monopsony power through exclusionary conduct violates Section 2, recognizing the “theoretical similarities of monopoly and monopsony.”\textsuperscript{6} One form of exclusionary conduct to gain monopoly power is predatory pricing, in which a seller charges low prices to inhibit competition from other sellers. The monopsony analog is predatory buying, or predatory bidding,\textsuperscript{7} in which a buyer pays high prices to eliminate competition from input purchasers. In \textit{Brooke Group Ltd. v. Brown & Williamson Tobacco Corp.},\textsuperscript{8} the Court held that a plaintiff claiming predatory pricing must establish two elements: (1) the defendant’s prices were below an appropriate measure of the defendant’s costs; and (2) the defendant had a reasonable prospect, or a dangerous probability, of recouping its investment in below-cost prices.\textsuperscript{9} In \textit{Weyerhaeuser}, the Court held that the standards of unlawful predatory pricing apply to claims of predatory bidding, declaring that the “first

\textsuperscript{4} Mandeville Island Farms, 334 U.S. at 235.
\textsuperscript{5} 127 S. Ct. 1069 (2007).
\textsuperscript{6} \textit{Id.} at 1078.
\textsuperscript{7} The relevant claim in \textit{Weyerhaeuser} concerned logs purchased on the open bidding market, as opposed to logs purchased under standing short- and long-term agreements with timberland owners and logs harvested from the defendant’s own timberland. \textit{Id.} at 1072. The Court, therefore, referred to the claim as one alleging predatory bidding. The Court also described “predatory overbuying” as a scheme in which “the purchaser causes prices to rise by demanding more of the input,” rather than by “offering to pay more for inputs.” \textit{Id.} at 1076 n.3. The appellate court alluded to “predatory overbidding” and “overbuying” as distinct practices. See Confederated Tribes of Siletz Indians of Or. v. Weyerhaeuser Co., 411 F.3d 1030, 1034 (9th Cir. 2005), \textit{rev’d sub nom.} Weyerhaeuser Co. v. Ross-Simmons Hardwood Lumber Co., 127 S. Ct. 1069 (2007). The Supreme Court recognized that “[p]redatory bidding on inputs is not analytically distinct from predatory overbuying of inputs” and suggested that the legal treatment of the indistinct claims is identical. \textit{Weyerhaeuser}, 127 S. Ct. at 1076 n.3.
\textsuperscript{8} 509 U.S. 209 (1993).
\textsuperscript{9} \textit{Id.} at 222-24.
prong of *Brooke Group*’s test requires little adaptation for the predatory-bidding context.”

Thus, a “plaintiff must prove that the alleged predatory bidding led to below-cost pricing of the predator’s outputs” and that “the defendant has a dangerous probability of recouping its losses incurred in bidding up input prices through the exercise of monopsony power.”

Despite the economic symmetry between monopoly and monopsony, the idea that the first prong of the *Brooke Group* test requires “little adaptation” to the predatory bidding context is not self-evident. After all, in a predatory pricing case, the relevant comparison is between the allegedly exclusionary price charged for a good and the cost of that good; in a predatory bidding case, the comparison is between the price charged for some good other than the one whose price is allegedly exclusionary and its cost. The adaptation may be appropriate – in most instances, we believe it is – but it requires more justification than the Court offered. Moreover, a desire to achieve symmetry in legal treatment of symmetrical economic behavior has little to commend it unless the law’s approach to the original practice is appropriate. *Brooke Group*’s standards for predatory pricing have been criticized. The Court implicitly rejected those criticisms in

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10 *Weyerhaeuser*, 127 S. Ct. at 1078.
11 *Id*.
12 Justice Kennedy alluded to the issue in oral argument:

Was there any argument in the trial court or in the briefs of the Court of Appeals as to how to calculate cost? You basically have two markets. You don’t usually think of cost when you buy something. But was there any argument as to how to determine whether or not this was below cost in the *Brooke Group* sense?


Weyerhaeuser and reaffirmed the logic of its earlier decision. Again, we generally endorse the Court’s position but amplify the justifications for it.

In this Article, we explore the assumptions curiously left implicit in Weyerhaeuser about the interests protected by the antitrust laws. We explain the economics of monopsony and the theoretical basis of acquiring monopsony power through unilateral price setting. We discuss the logic of the two-pronged test of predatory pricing, and we examine its application to predatory bidding. Our examination highlights a weakness in the Court’s approach, one that occurs when the putative predator uses less than all of the input purchased to produce output in the ordinary course of production. In the end, we conclude that the Court’s decision, with certain qualifications, is sound though imperfect.

II. Background

The gap between the analysis of monopoly and monopsony in the economics literature is large,\(^{14}\) and the gap in antitrust law is even larger. The best known of the few cases centering on monopsony is Mandeville Island Farms, Inc. v. American Crystal Sugar Co.,\(^{15}\) in which the Supreme Court condemned an agreement among three sugar refiners in California to pay uniform prices for sugar beets. Ironically, the major legal significance of even that case was not its substantive application of antitrust to monopsony, but its teaching on the jurisdictional reach of the Sherman Act: the restraint

\(^{14}\) For example, in the Economics library of the JSTOR database, there are 767 entries with the word “monopoly” in the title and 47 with the word “monopsony” in the title. In the Econlit library of Westlaw, there are 2002 entries with “monopoly” in the title and 137 with “monopsony.”  (Search conducted March 19, 2007.)

\(^{15}\) 334 U.S. 219 (1948).
on competition in the purchase of sugar beets in one state had the necessary effect on interstate commerce in the sale of sugar.\textsuperscript{16} Nevertheless, the case established the framework within which acts related to monopsony power are to be treated under the antitrust laws.

First, the Court held that those injured by the exercise of monopsony power are entitled to antitrust protection. The Court reversed the dismissal of the sugar beet growers' complaint, observing:

\begin{quote}
The statute does not confine its protection to consumers, or to purchasers, or to competitors, or to sellers. Nor does it immunize the outlawed acts because they are done by any of these. The [Sherman] Act is comprehensive in its terms and coverage, protecting all who are made victims of the forbidden practices by whomever they may be perpetrated.\textsuperscript{17}
\end{quote}

The Court apparently meant to hold that a practice could offend the Sherman Act even if it harmed only those selling inputs to antitrust violators. We say “apparently” because one could define as “forbidden” only those practices that injure consumers, implying that others are protected by antitrust only if a practice also hurts consumers. As we explain in the next section, the exercise of monopsony power injures consumers as well as input suppliers, but reading the passage to require consumer harm may go too far. What the Court surely understood is that antitrust does not protect economic actors from injury caused by just any act – hard competition, for instance – but only from injury caused by a restricted set of prohibited practices.

Second, the Court placed monopsony on the same footing as monopoly. The agreement under scrutiny was “the sort of combination condemned by the Act, even

\textsuperscript{16} Id. at 241.
\textsuperscript{17} Id. at 236 (citations omitted).
though the price-fixing was by purchasers, and the persons specially injured . . . are sellers, not customers or consumers.”18 Similarly, in the passage quoted above, the Court emphasizes that “acts” are outlawed and “practices” forbidden, regardless of the side of the market the perpetrators occupy. In other words, what is illegal is the practice, a horizontal price-fixing agreement, and whether the agreement is among sellers or buyers does not matter.

The agreement at issue in *Mandeville Island Farms* is one by which competitors obtained and exercised market power through collusion. One might presume that just as the Court intended to make collusion among buyers legally indistinguishable from collusion among sellers, it intended to make the law on exclusion invariant to the identity of the actor. But that issue was not before the Court. The possession and exercise of monopoly power by a single firm does not violate Section 2 of the Sherman Act.19 Rather, Section 2 outlaws monopolization, as well as the related offenses of attempt and conspiracy to monopolize, and monopolization is the acquisition of monopoly power through exclusionary, or predatory, conduct, conduct that “‘exclude[s] rivals on some basis other than efficiency.’”20 More precisely, monopolization is the use of exclusionary conduct to hold monopoly power that the firm would not otherwise have had, for a firm can also violate the law by increasing monopoly power obtained lawfully or by retaining monopoly power that it would have lost. The corresponding application to monopsony

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18 *Id.* at 235 (footnotes omitted).

19 *See, e.g.*, Verizon Commc’ns Inc. v. Law Offices of Curtis V. Trinko, LLP, 540 U.S. 398, 407 (2004) (“The mere possession of monopoly power, and the concomitant charging of monopoly prices, is not only not unlawful; it is an important element of the free-market system.”).

power is that its mere possession and exercise is not unlawful, regardless of the adverse impact that its exploitation might have on others. Section 2 condemns only exclusionary conduct by which a firm acquires, increases, or maintains monopsony power.

As well understood within the context of monopolization, exclusionary conduct can take the form of either non-price predation, which injures competitors by increasing their costs, or price predation, which injures them by reducing their revenue. Indeed, consistent with the definition of exclusionary conduct, one general definition of predatory pricing is “pricing at a level calculated to exclude from the market an equally or more efficient competitor.”

The legal test of predatory pricing, though hardly free from controversy, was set down in *Brooke Group Ltd. v. Brown & Williamson Tobacco Corp.*: The prices charged by the predator must be below an appropriate measure of its costs, usually understood to be some proxy for short-run marginal cost; and the predator must have had a reasonable probability of recouping its investment in below-cost prices.

In the predatory pricing context, though the competitor may sustain an antitrust injury while the predator is charging predatory prices, the conduct is unlawful because of

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21 Richard A. Posner, Antitrust Law 215 (2nd ed. 2001). Although there are practical reasons for this focus on equally efficient competitors, less efficient competitors limit the pricing freedom of a more efficient dominant firm.


24 See *United States v. AMR Corp.*, 335 F.3d 1109, 1116 (10th Cir. 2003).

25 See *Brooke Group*, 509 U.S. at 224. When predatory pricing involves the charging of legally discriminatory prices and is challenged under the Robinson-Patman Act, 15 U.S.C. § 13(a), liability technically requires “a reasonable prospect” of recoupment. See *Brooke Group*, 509 U.S. at 224. When predatory pricing is challenged under Section 2 of the Sherman Act, liability requires “a dangerous probability” of recoupment. Id. The former standard is more lenient than the latter, but the “essence of the claim under either statute is the same,” and the difference is negligible. See id. at 222.
the anticipated effect on consumers after the competitor exits the market or raises its prices to a supra-competitive level. In *Brooke Group*, the Court instructed that below-cost pricing “is of no moment to the antitrust laws if competition is not injured,” and the Court equated injury to competition with injury to consumers. The Court recognized that below-cost pricing by itself causes an allocative inefficiency: “[U]nsuccessful predatory pricing may encourage some inefficient substitution toward the product being sold at less than its cost.” But allocative inefficiency is not injury to competition. Below-cost pricing “produces lower aggregate prices in the market, and consumer welfare is enhanced”; “unsuccessful predation is in general a boon to consumers.” Predatory pricing becomes unlawful – competition is injured – only if recoupment is likely. Only when the predator recoups its losses will consumers suffer by paying prices higher than those prevailing before the onset of predation.

The mirror image of monopolization through predatory pricing is monopsonization through predatory buying, or predatory bidding, the practice of increasing the prices paid for an input and the quantity purchased to injure competition and earn monopsony rents in the input market. The Supreme Court confronted the practice in *Weyerhaeuser Co. v. Ross-Simmons Hardwood Lumber Co.* In that case, Ross-Simmons, a sawmill operator in Washington, alleged that it was driven out of business largely by the pricing practices of Weyerhaeuser, one of the world’s largest

26 *Id.* at 224.

27 *Id.* The economic problem is that the cost to society of the additional units consumed exceeds the value to those consuming the added output.

28 *Id.* This is true for those who buy at predatory prices, but resources are diverted to produce the predatorily priced good from the production of goods that consumers value more highly. As a result, some consumers benefit while others are harmed.

manufacturers of hardwood lumber,\textsuperscript{30} in procuring alder sawlogs from timberland owners and loggers.\textsuperscript{31} Sawlogs represent about 75\% of a sawmill’s total cost of producing alder lumber,\textsuperscript{32} and alder sawmills typically operate within 100 miles of their timber sources. Alder is the predominant species of hardwood in the Pacific Northwest, accounting for 95\% of hardwood lumber production.\textsuperscript{33} Ross-Simmons began operating a hardwood-lumber sawmill in the region in 1962.\textsuperscript{34} Weyerhaeuser entered the market in 1980 and gradually increased the scope of its operation.\textsuperscript{35} Between 1990 and 2000, it made more than $75 million in capital investments and adopted “state-of-the-art technology” to increase the amount of lumber recovered from every log.\textsuperscript{36} By contrast, Ross-Simmons “engaged in little efficiency-enhancing investment.”\textsuperscript{37} Weyerhaeuser’s share of alder sawlog purchases in the region grew to approximately 65\% by 2001.\textsuperscript{38} But its share of North American sales for all hardwood lumber was less than 3\%,\textsuperscript{39} and because there was no separate market for alder lumber, Weyerhaeuser had no monopoly power in the


\textsuperscript{31} The plaintiff alleged “predatory overbidding (i.e., paying a higher price for sawlogs than necessary) . . . [and] overbuying (i.e., buying more sawlogs than it needed).” Confederated Tribes, 411 F.3d at 1034. The plaintiff also alleged that Weyerhaeuser entered into “restrictive or exclusive agreements with sawlog suppliers” and made “misrepresentations to state officials in order to obtain sawlogs from state forests.” Id. We do not address in this Article the allegations of nonprice predatory conduct.

\textsuperscript{32} Weyerhaeuser, 127 S. Ct. at 1073.

\textsuperscript{33} Confederated Tribes, 411 F.3d at 1034.

\textsuperscript{34} Weyerhaeuser, 127 S. Ct. at 1072.

\textsuperscript{35} Id.

\textsuperscript{36} Id.

\textsuperscript{37} Id.

\textsuperscript{38} Id.

\textsuperscript{39} Alder represents on the order of 2\% of the nation’s total net volume of hardwood growing stock See W. Brad Smith et al., U.S. Dept. of Agriculture Forest Service, Forest Resources of the United States, 2002 75-79 (2002).
hardwood lumber market.\textsuperscript{40} During the period of alleged predation, according to the appellate court, “the supply of alder sawlogs” was “relatively inelastic,” “in part because the alder harvest is a byproduct of the more important softwood harvest.”\textsuperscript{41} Though the price of alder sawlogs historically fluctuated with the price of finished lumber, during the period of alleged predation sawlog prices increased while finished lumber prices decreased.\textsuperscript{42} Ross-Simmons’s profits suffered as a result, and it shut down in 2001.\textsuperscript{43}

The district court rejected Weyerhaeuser’s argument that the plaintiff as a matter of law failed to satisfy the \textit{Brooke Group} test, and it rejected Weyerhaeuser’s proposed jury instructions that incorporated elements of the test.\textsuperscript{44} Instead, it instructed the jury that Ross-Simmons could prove its claim by establishing that Weyerhaeuser “purchased more logs than it needed, or paid a higher price for logs than necessary, in order to prevent [Ross-Simmons] from obtaining the logs they needed at a fair price.”\textsuperscript{45} The jury returned a verdict against Weyerhaeuser.\textsuperscript{46} On appeal, the Ninth Circuit affirmed, rejecting Weyerhaeuser’s argument that the \textit{Brooke Group} test applied to predatory bidding claims. The Supreme Court disagreed, taking care to point out that an

\textsuperscript{40} \textit{Weyerhaeuser}, 127 S. Ct. at 1076 n.2 (noting that the case did not appear to be one in which predatory bidding could lead to the acquisition of monopoly power in the output market).

\textsuperscript{41} \textit{Confederated Tribes}, 411 F.3d at 1038, 1038 n.20 (citing Richard O. Zerbe, Jr., \textit{Monopsony and the Ross-Simmons Case: A Comment on Salop and Kirkwood}, 72 \textit{Antitrust L.J.} 717, 722 (2005)).

\textsuperscript{42} \textit{Id.} at 1034.

\textsuperscript{43} \textit{Weyerhaeuser}, 127 S. Ct. at 1073.

\textsuperscript{44} \textit{Id.}

\textsuperscript{45} \textit{Id.}

\textsuperscript{46} \textit{Id.}
underpinning of its analysis does not exist when the predator’s competitors in the input market also compete with the predator in the output market.47

The first question posed by predatory bidding is theoretical: Is it ever a rational anticompetitive strategy? In the next section, we sketch the economics of monopsony and demonstrate that a monopsonist may profit from eliminating competitors in the purchase of an input and thereby reduce welfare in the input market, discussing the conditions necessary for an investment in exclusion to be rational. We discuss specifically the effect on rationality of an inelastic input supply that arises when that input is a joint product with a more valuable input. We also address the premise implicit in Weyerhaeuser and explicit in Mandeville Island Farms that the antitrust laws are intended to protect the interests at stake in monopsony pricing. But an analysis of theoretical possibility and legal significance is only the first step in constructing a sensible approach to predatory buying. In the following section, we consider the expected prevalence of the behavior and the ability of courts to identify it in evaluating possible legal standards.

III. The Economics of Monopsonization48

Because firms are generally assumed to be profit maximizers, identifying the opportunities to earn profits is useful in understanding firm conduct in specific settings. In this section, we explain the private benefits of becoming a monopsonist, using the alder hardwood industry by way of example, and thereby illuminate the incentives to

47 See Weyerhaeuser, 127 S. Ct. at 1077 n.5.

engage in monopsonizing behavior. The analysis also identifies the conditions necessary for monopsonizing behavior to be economically rational, or profit maximizing.

A. The Effects of Monopsony

Alder sawlogs are an essential input in the production of alder hardwood lumber. Because alder hardwood is not economically distinct from other species of hardwood and constitutes a small proportion of all hardwood, we assume the producers of alder lumber have no market power in the output market. Thus, each lumber producer will be a price taker, which means that it will make its business decisions in the belief that it cannot affect the output price. If these producers are numerous enough, none will have market power in the alder sawlog (input) market. Similarly, each purchaser of alder sawlogs will make its business decisions in the belief that it will have no impact on the price of alder sawlogs. Under these conditions, each firm will expand its purchases to the point where the marginal benefit of doing so equals the marginal cost of doing so. The marginal benefit of an additional sawlog is the marginal change in output,\(^{49}\) or “marginal product” (\(MP\)), times the price of that increased output; the resulting number is the value of the marginal product (\(VMP\)) and is therefore equal to price times the marginal product of the alder sawlog. The marginal cost of buying one more sawlog is its price, which we may denote as \(w\).

For each firm, the \(VMP\) is the demand for alder sawlogs. The market demand for alder sawlogs is the aggregation of the individual demands. The results of the competitive market are depicted in Figure 1, where \(D\) represents the demand by all lumber producers.

\(^{49}\) Our analysis necessarily assumes that the purchaser uses the good purchased to produce another good. The theoretical possibility of an ultimate consumer acquiring monopsony power through anticompetitive conduct is of no practical importance.
for alder sawlogs in the relevant geographic market and $S$ represents the supply. The competitive forces of supply and demand will lead to a quantity of $Q^*_1$ and a price per unit of $w_1$. By purchasing this quantity at the competitive price, the sawmills will earn rents equal to area $abw_1$ by producing and selling alder hardwood lumber. The suppliers of sawlogs will earn rents equal to area $w_1bc$ by harvesting alder and selling it to the sawmills. Social welfare is maximized: Any deviation from this competitive solution will reduce the sum of the surplus received by the sawmills and their suppliers. The competitive solution serves as a benchmark for evaluating the consequences of monopsony.

Suppose only one sawmill operates in the relevant geographic area. Assuming still that it is a competitor in the hardwood lumber market and that the supply of alder sawlogs is competitive, the market is a textbook example of pure monopsony. The sawmill will recognize that it influences the price it pays for sawlogs when it adjusts the quantity that it buys. If it cannot feasibly price discriminate in its purchases, it will purchase where the marginal increase in total expenditures on sawlogs equals their marginal value to the sawmill, which is the value of the marginal product ($VMP$).

Because the supply of sawlogs has a positive slope, when the monopsonist expands its purchases by one unit, the price rises by a small amount denoted by $\Delta w$. The monopsonist must pay the new, higher price for all units purchased, and therefore the effect on total costs of increasing purchases by one unit is the price paid for that unit ($w$).

\footnote{Just as price discrimination can increase the profits of a monopolist relative to the profits earned from a single price, it can increase the profits of a monopsonist. See generally BLAIR & HARRISON, supra note xx, at 88-92.}
plus the increased price paid for the other units (Δw·Q).\(^{51}\) This amount is called the marginal factor cost (MFC).\(^{52}\)

To maximize its profits, the monopsonist will purchase the quantity of alder sawlogs such that MFC equals VMP, or demand.\(^{53}\) Thus in Figure 1, the monopsonist will purchase \(Q_2\) rather than \(Q_1\) sawlogs, and it will pay the price as determined by the supply curve that is required to purchase \(Q_2\) sawlogs, which is \(w_2\). The profit maximizing behavior of the monopsonist, therefore, leads to the purchase of less input at a correspondingly lower price.

The sawmill gains at the expense of the sawlog producers and society as a whole. In Figure 1, the sawmill’s profit increases from area \(abw_1\) to area \(adew_2\); its net gain equals area \(w_1few_2\) minus area \(dbf\). The suppliers’ rents shrink from \(w_1bc\) to \(w_2ec\). Thus, area \(w_1few_2\) has been converted from sawlog supplier rents to sawmill profit, and the increase in sawmill profit is the incentive to become a monopsonist. This profit is a

\(^{51}\) If \(w = w(Q)\) is positively sloped, \(dw/dQ > 0\). Total expenditures on \(Q\) are \(wQ\). When the monopsonist expands its purchases, the effect is

\[
\frac{dwQ}{dQ} = w + Q \frac{dw}{dQ},
\]

which is the result in the text.

\(^{52}\) Some authors refer to this as the marginal expense of input or marginal expenditure. See Perloff, supra note xx, at 529.

\(^{53}\) Profit (\(\Pi\)) can be written as

\[
\Pi = PQ(x_1, x_2, \ldots x_n) - \sum_{i=1}^{n} w_i x_i
\]

where \(P\) is the output price, \(Q\) is output, the \(x_i\) are inputs, and \(\Sigma\) denotes the summation. To maximize profits, inputs are increased until the marginal effect on profit is zero. If \(w_j = w_j(x_j)\), then the monopsonist will employ \(x_j\), where

\[
\frac{\partial \Pi}{\partial x_j} = P \frac{\partial Q}{\partial x_j} - w_j + x_j \frac{dw_j}{dx_j} = 0.
\]

Now, \(P(\partial Q / \partial x_j)\) is VMP and \(w_j + x_j (\partial w_j / \partial x_j)\) is MFC.
transfer within society and, therefore, raises few economic concerns.\textsuperscript{54} But the monopsonist’s behavior also reduces social welfare. The sum of the monopsonist’s profits and the suppliers’ rents is smaller than area $abc$. The difference is the triangular area $dbe$. This welfare loss is the economic rationale for a policy concern with monopsony.

The social welfare loss results from a misallocation of resources. At the monopsonist’s optimum, demand exceeds supply. The height of the demand curve measures the value to society of having one more unit employed while the height of the supply curve measures the cost to society of having one more unit employed. Because the marginal value of employing another unit exceeds the marginal social cost of doing so, employing an extra unit increases social welfare. The same reasoning applies until demand and supply are equal. Starting at $Q_2$ there is some net benefit gained as the quantity expands until $Q_1$ is reached. Conversely, as quantity decreases from $Q_1$ to $Q_2$, some net social value is lost. Consequently, the reduced purchases of a monopsonist may be privately optimal as profits increase, but they are suboptimal from a social perspective; the losses outweigh the gains.

In the scenario that we analyze here, where the firm is a monopsonist in the input market and a competitor in the output market, the effect of restricting purchases is felt most dramatically in the input market. As noted above and shown in Figure 1, monopsony reduces the rents enjoyed by the input suppliers from area $w_1bc$, under

competitive conditions, to area $w_2 ec$ -- a loss of area $w_1 bew_2$. But reducing input purchases will also lead the monopsonist to reduce output, which will cause some price increase in the output market. Because even a significant percentage reduction in the output of a single firm in a competitive market will represent a tiny percentage reduction in aggregate output, the price increase may be minuscule, perhaps even undetectable as a practical matter. Nonetheless, the reduction from the competitive price to the monopsony price for the input causes welfare losses that may be observed in the input or the output market.

B. A Measure of Monopsony Power

A measure of monopsony power is the percentage deviation from competitive pricing. In a competitive market, a profit-maximizing firm will expand its input purchases until the value of the marginal product ($VMP$) of the input equals the input price ($w$). The Lerner Index of monopsony power can be written as:

$$\lambda = \frac{VMP - w}{w}.$$

The monopsonist restricts its purchases to the point where $VMP$ equals the marginal factor cost ($MFC$), which can be written as $w + Q \frac{dw}{dQ}$, where $dw/dQ$ is the change in price caused by the change in quantity. Substituting this for $VMP$ results in:

$$\lambda = \frac{w + Q \frac{dw}{dQ} - w}{w}$$

55 The equivalence of the welfare losses in the input and the output markets is shown in Roger D. Blair & Richard E. Romano, Collusive Monopsony in Theory and Practice: The NCAA, 42 ANTITRUST BULL. 681, 688-91 (1997).

56 This approach follows Roger D. Blair & Jeffrey L. Harrison, The Measurement of Monopsony Power, 37 ANTITRUST BULL. 133 (1992), which adapts the Lerner Index of monopoly power to monopsony power. See Abba Lerner, The Concept of Monopoly and the Measurement of Monopoly Power, 1 REV. ECON. STUD. 157 (1934).
\[
\frac{Q}{w} \frac{dQ}{dw} - \frac{w}{dQ}.
\]

The term on the right-hand side of the equation is the reciprocal of the supply elasticity \(\varepsilon\)\(^{57}\) and, therefore,

\[\lambda = \frac{1}{\varepsilon}.
\]

The economic intuition behind this measure is straightforward: the less elastic the supply, the smaller will be the quantity reduction resulting from any given price decrease. Indeed, a supply elasticity less than infinity is a necessary condition for monopsony power.\(^{58}\) The monopsonist, therefore, can depress the price it pays to a greater extent as supply becomes less elastic.

C. The Dominant Buyer

In *Weyerhaeuser*, the defendant was not the only purchaser of alder sawlogs, i.e., Weyerhaeuser was not a pure monopsonist. Rather, it was a dominant buyer accounting for about 65 percent of the purchases of alder sawlogs in the relevant geographic market.\(^{59}\) A dominant buyer can influence the supply price through its purchase decisions and thereby wield some monopsony power, though not to the extent that a pure monopsonist can. The economic analysis of the dominant buyer is somewhat more complicated than that of a pure monopsonist.\(^{60}\)

\(^{57}\) The elasticity of supply is defined as \(\varepsilon = (dQ/dw)(w/Q)\). See Walter Nicholson, *Microeconomic Theory* 371 (8th ed. 2001).


\(^{59}\) See *Weyerhaeuser*, 127 S. Ct. at 1072.

\(^{60}\) See Blair & Harrison, *supra* note xx, at xx.
Suppose a large buyer is aware of its influence on the market price of an input, but faces a competitive fringe of smaller buyers. The competitive fringe firms act as pricetakers; they accept the price that the dominant firm pays as the market-determined price. The fringe firms will buy this input up to the point where their collective demand equals this price. The dominant buyer’s objective is to adjust its purchases to maximize profit subject to the behavior of the fringe buyers. This is shown in Figure 2, where $D_f$ represents the demand for the input in question by the competitive fringe, $D_{df}$ represents the demand of the dominant firm, and $S$ is the competitive supply curve of the input. The dominant firm recognizes that at every price the competitive fringe will purchase as any competitive firm would, viz, where $D_f$ equals the price. It incorporates this behavior by subtracting $D_f$ from $S$ to obtain the residual supply, which is denoted $S_r$ in Figure 2. Then the curve marginal to $S_r$, which is labeled $mfc$, represents the marginal cost of expanding its purchases, i.e., its marginal factor cost. The dominant buyer purchases $Q_{df}^*$ where $mfc$ equals $D_{df}$, which determines the dominant firm’s price equal to $w^*$ from the residual supply. At a price of $w^*$, the fringe will purchase $Q_f^*$, where $w^*$ equals $D_f$. At $w^*$, input sellers will provide $Q^*$, which is equal to the sum of $Q_f^*$ and $Q_{df}^*$. The marginal factor cost ($mfc$) exceeds the price of the input ($w^*$). As a result, $VMP$ will also exceed $w^*$. The implication is that the pricing behavior of a dominant buyer results in welfare losses analogous to those associated with a pure monopsony.

D. Monopsony Power of the Dominant Buyer
The Lerner Index for a dominant buyer can be derived in a straightforward fashion. Figure 2 shows that the quantity supplied to the dominant firm ($Q_{df}$) is equal to the quantity supplied to the market as a whole ($Q_m$) minus the quantity purchased by the competitive fringe ($Q_f$). Thus, the residual supply curve is

$$Q_{df} = Q_m - Q_f$$

The elasticity of this residual supply ($\varepsilon_{df}$) is

$$\varepsilon_{df} = \varepsilon \frac{Q_m}{Q_{df}} + \eta_f \frac{Q_f}{Q_{df}}$$

where $\varepsilon$ is the elasticity of supply, and $\eta_f$ is the elasticity of demand by the fringe. The share of the dominant buyer ($S$) is $Q_{df}/Q_m$ and, therefore, $\varepsilon_{df}$ may be expressed as

$$\varepsilon_{df} = \frac{\varepsilon}{S} + \frac{\eta_f (1-S)}{S}$$

Because the Lerner Index is the reciprocal of the supply elasticity, the result is

$$\lambda = \frac{S}{\varepsilon + \eta_f (1-S)}$$

Thus, the monopsony power of the dominant buyer depends upon the elasticity of supply, the elasticity of fringe demand, and the market share of the dominant buyer.

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62 To obtain the second term, observe that

$$\eta_f \frac{Q_f}{Q_{db}} = \eta_f \frac{Q_f}{Q_m} \frac{Q_m}{Q_{db}} = \eta_f (1-S) \frac{1}{S}$$
Just as the monopsony power of a pure monopsonist declines as the elasticity of supply increases, so does the monopsony power of a dominant buyer. The more elastic the supply, the smaller will be the price change for any given quantity decrease. As for the elasticity of fringe demand, monopsony power declines as demand elasticity rises. This is because the fringe expands its purchases when price falls and, therefore, the fringe’s increased purchases mitigate the effect of the dominant buyer’s reduction in purchases. The effect of the dominant buyer’s share of the market is consistent with intuition: the larger is $S$, the greater the monopsony power. This follows because the more significant the market share – all else equal – the more influence the dominant buyer has over price through its purchase decisions.

E. Numerical Illustrations

The facts reported in *Weyerhaeuser* are insufficient to calculate the Lerner Index. The facts indicate that $S = 0.65$ and consequently $(1-S) = 0.35$. The appellate court characterized the supply as “relatively inelastic,”\(^63\) though not perfectly inelastic,\(^64\) and it did not offer any numerical estimate of $\varepsilon$. The opinions provide no information regarding $\eta_f$, the elasticity of demand for alder sawlogs by the fringe. This demand elasticity depends upon the capacity utilization of the fringe buyers’ production facilities and their cost functions.

\(^{63}\) *Confederated Tribes*, 411 F.3d at 1038.

\(^{64}\) At oral argument, counsel for Weyerhaeuser explained that the plaintiff’s “claim is that the supply was relatively inelastic, not that it’s perfectly inelastic, and as long as the supply market is not perfectly inelastic, an increase in price may lead to more supplies.” Transcript of Oral Argument, Weyerhaeuser Co. v. Ross-Simmons Hardwood Lumber Co., 127 S. Ct. 1069 (2007) (No. 05-381), 2006 WL 3422209 at *8.
Using the facts that \( S = 0.65 \) and \((1-S) = 0.35\), we can assume various values for \( \varepsilon \) and \( \eta_f \) to gain a sense of the variation in \( \lambda \) that can result. These values are contained in the Table below.

<table>
<thead>
<tr>
<th>Numerical Values of ( \lambda )</th>
</tr>
</thead>
<tbody>
<tr>
<td>( S = 0.65 )</td>
</tr>
</tbody>
</table>

\[
\lambda = \frac{0.65}{\varepsilon + \eta_f (0.35)}
\]

<table>
<thead>
<tr>
<th>( \eta_f )</th>
<th>( \varepsilon )</th>
<th>0</th>
<th>0.5</th>
<th>1.0</th>
<th>1.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>undef</td>
<td>1.30</td>
<td>0.65</td>
<td>0.43</td>
<td></td>
</tr>
<tr>
<td>0.5</td>
<td>3.71</td>
<td>0.96</td>
<td>0.55</td>
<td>0.39</td>
<td></td>
</tr>
<tr>
<td>1.0</td>
<td>1.86</td>
<td>0.76</td>
<td>0.48</td>
<td>0.35</td>
<td></td>
</tr>
<tr>
<td>2.0</td>
<td>0.93</td>
<td>0.54</td>
<td>0.38</td>
<td>0.30</td>
<td></td>
</tr>
</tbody>
</table>

In the Table, we have assumed varying values for \( \varepsilon \) — 0, 0.5, 1.0, and 1.5 — as well as varying values for \( \eta_f \) — 0, 0.5, 1.0, and 2.0. If the supply is perfectly inelastic, then \( \varepsilon = 0 \). For that case, the value of the sawlogs to a dominant buyer would be 371 percent higher than the price paid, if the fringe elasticity of demand were only 0.5. As \( \eta_f \) increases to 1.0 and 2.0, the percentage deviation drops to 186 percent and 93 percent, respectively, even though the supply is perfectly inelastic. The percentage deviation declines because the fringe buys more as price falls below the competitive level, for the fringe demand is more elastic. At the other extreme in this Table, if \( \varepsilon = 1.5 \), then even if the fringe demand is perfectly inelastic, implying that reduced prices will not lead to increased purchases, the
deviation between value and the price paid is only 43 percent. The last column shows that as \( \eta_f \) increases, \( \lambda \) declines. The Table demonstrates that increases in \( \varepsilon \) reduce \( \lambda \) for any value of \( \eta_f \). Similarly, for any value of \( \varepsilon \), increases in \( \eta_f \) lead to reductions in \( \lambda \).^{65}

F. The Incentive to Exclude the Fringe

A dominant buyer’s incentive to exclude rival buyers can be seen in Figure 3. In Figure 3, \( D_f, D_{df}, S, S_r, \) and \( mfc \) are identical to those in Figure 2. In the presence of a competitive fringe, the dominant buyer earns profits equal to area \( adcw^* \). With the elimination of the fringe, the dominant buyer becomes a monopsonist. Profit maximization will lead the firm to purchase where \( MFC = D_{df} \) rather than where \( mfc = D_{df} \). As a result, its purchases decline from \( Q^*_{df} \) to \( \hat{Q}_{df} \). Because there are no other buyers, the price falls from \( w^* \) to \( \hat{w} \). As a consequence, profits rise to area \( abe\hat{w} \). The increase in profit is the return to excluding the competitive fringe. But exclusion is not free, and the costs of excluding the fringe must be taken into account in deciding whether to exclude or not.

From an economic perspective, predatory buying is best viewed as an investment opportunity. Costs are incurred in injuring rivals, and incremental profits result. Over the expected life of the firm, the present value of those increased profits must exceed the

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^{65} The same is true for values of \( S \). Analytically, \( \partial \lambda / \partial S > 0 \), i.e., an increase in \( S \) will increase \( \lambda \); \( \partial \lambda / \partial \varepsilon < 0 \), i.e., an increase in \( \varepsilon \) will decrease \( \lambda \); \( \partial \lambda / \partial \eta_f < 0 \), i.e., an increase in \( \eta_f \) will reduce \( \lambda \).
costs of exclusion or else the investment is not worth making. In more precise terms, predatory buying is not rational unless its net present value is positive.\footnote{Starting at the point where profit ($\Delta \Pi$) sacrifices are made, one must compare the present value of those losses ($L_t$) with the present value of the future increment in profit due to the elimination of the fringe ($\Delta \Pi$):

$$\text{NPV(predation)} = - \sum_{t=1}^{T} L_t / (1+i)^t + \sum_{t=r+1}^{T} \Delta \Pi_t / (1+i)^t$$

If $\text{NPV} > 0$, predation is economically sensible as a business strategy.}

G. The Use of Price to Exclude the Fringe

The fringe buyers of alder sawlogs can be excluded from the market by raising price enough to make their continued purchases unprofitable. As we shall see, using price to exclude the fringe is easier if the fringe buyers are relatively less efficient employers of sawlogs. In this case, the fringe demand ($D_f$) lies below that of the dominant buyer ($D_{df}$), as depicted in Figure 4. Inefficiency in such a case can arise in two ways. First, if the dominant buyer and the fringe are competitors in the same output market, $D_f$ lies below $D_{df}$ because the fringe is less efficient in the sense that the marginal product of alder sawlogs is lower for the fringe than for the dominant buyer. For example, the dominant buyer may be able to extract more lumber from a sawlog than can a fringe firm, as the Court noted in \textit{Weyerhaeuser}.\footnote{See \textit{Weyerhaeuser}, 127 S. Ct. at 1072 (noting that Weyerhaeuser invested in sawing equipment “to increase the amount of lumber recovered from every log” whereas its competitor did not).} Second, if they are in separate output markets, then the fringe may be allocating the sawlogs to a lower valued use. For example, the dominant buyer may be making hardwood for residential flooring while the fringe is making mulch. In either event, the dominant buyer can exclude the fringe simply by engaging in a form of limit pricing. By not exercising as much monopsony
power as it could, the dominant firm can keep price too high for the fringe to operate profitably.

Consider the situation shown in Figure 4. Initially, suppose that there is only one buyer, with a demand of $D_{d}$. That buyer will act as a monopsonist and purchase $Q_i$ units, where $MFC = D_{d}$, and pay a price of $w_i$. This low price attracts entry by less efficient firms with a collective demand of $D_f$. At a price of $w_i$, these firms will want to buy $Q_f$. They will not be able to buy this amount, of course, because suppliers will only provide $Q_i$ at a price of $w_i$, and the dominant firm wants all of that. The dominant buyer could accommodate that entry and maximize profits subject to the presence of the fringe buyers. But it could also price them out of the market by offering a price of $w_2$ and buying the resulting quantity supplied of $Q_2$. At a price of $w_2$, the fringe buyers have no demand; they want to enter only because of monopsonistic pricing. Nevertheless, the strategy may involve a short-run profit sacrifice by the dominant firm: It may be more profitable to accommodate entry and maximize profit subject to the presence of the fringe than it is to exclude the fringe. In any event, exclusion could be a profitable long-run strategy.

Notice that this strategy yields the competitive price and output. In this instance, setting a price to exclude competitors does not result in any allocative inefficiency, because the competitive price excludes only fringe competitors that are less efficient users of sawlogs than is the dominant buyer. In fact, during the predatory period, the

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68 In Figure 4, for illustrative purposes, $D_f$ was constructed so that its intercept at $w_2$ equals the competitive price where $D_{d}$ and $S$ are equal.
dominant buyer is not exercising monopsony power, and supply equals demand. Notice also that the demand of the dominant firm ($D_{df}$) equals the value of the marginal product ($VMP$), which is the price of output ($p$) multiplied by the marginal product ($MP$). The price of the input divided by the marginal product equals the marginal cost of the output. Therefore, if the dominant buyer pays a price of $w_2$ for the input and uses all of it in producing output, the price of the output will equal the marginal cost of production. Under the test adopted in *Weyerhaeuser*, the dominant buyer cannot be held liable for predatory buying because its input purchases do not result in its selling the output at a price below marginal cost.69

In Figure 5, we present a less attractive prospect for the dominant buyer. An input price of $w_1$ is the lowest price that will drive the fringe buyers out of the market, because the value of the input to them as measured by the height of their collective demand curve ($D_f$) is below $w_1$. If the dominant buyer pays $w_1$, it will have to buy $Q_1$, which is the quantity that suppliers will provide at that price. Figure 5 shows that at $Q_1$, $w_1$ is above $VMP$, or the dominant firm’s valuation of the marginal product as measured by the height of its demand ($D_{df}$). Excluding input competitors by paying a price of $w_1$ will always involve a short-run profit sacrifice. In other words, while it is engaged in predatory buying, it earns less profit than it could have earned by continuing to accommodate the presence of the fringe buyers. And because the price paid for the input is above the value of the marginal product, if the dominant buyer converts the input into output, the price of the output will be less than its marginal cost. The dominant buyer

69 *See generally Blair & Harrison, supra* note 1, at 67.
H. Predatory Buying by a Monopolist

In Weyerhaeuser, the Court assumed that the defendant had no monopoly power; it excluded from its analysis the case in which the dominant buyer’s competitors in the input market are also its competitors in the output market, and the dominant buyer uses predatory bidding to increase monopoly power. Predatory buying may be an even more attractive business strategy for a dominant buyer that also has monopoly power than for one that does not. We show above that the elimination of fringe buyers enhances the profits of the dominant buyer because it increases the dominant buyer’s monopsony power. In this section we discuss the economics of eliminating fringe competitors in both the input and output markets.

In a market with a dominant seller, fringe competitors respond to the prices set by the dominant firm just as competitive firms respond to market-determined prices. They are price takers, in that each behaves as though its output decisions will have no effect on market price. Each will maximize its profits by producing where its marginal cost is

70 See Weyerhaeuser, 127 S. Ct. at 1076 n.2.
equal to price. In this market setting, the dominant firm’s challenge is to take the supply responses of the competitive fringe into account in maximizing its own profit.

The market demand for a homogeneous product supplied by a dominant firm and a competitive fringe may be written as:

\[ Q_M = Q_M(P) \]

where \( Q_M \) is quantity and \( P \) is price. The market demand is assumed to have a negative slope, such that \( \frac{dQ_M(P)}{dP} < 0 \). The supply of the competitive fringe is an increasing function of price:

\[ Q_F = Q_F(P) \]

where \( Q_F \) is the total fringe supply. The assumption that supply is positively sloped means that \( \frac{dQ_F(P)}{dP} > 0 \). The dominant firm’s profit function (\( \Pi \)) is

\[ \Pi = PQ_D - C(Q_D) \]

where \( Q_D \) is the dominant firm’s output and \( C(Q_D) \) is its total cost function. The dominant firm recognizes that the total quantity purchased in the market (\( Q_M \)) will be the sum of its output (\( Q_D \)) and the fringe output (\( Q_F \)): \( Q_M = Q_D + Q_F \). As a consequence, it will take the presence of the fringe into account by incorporating the fringe supply into its own profit function:

\[ \Pi = P(Q_M - Q_F) - C(Q_D) \]

since \( Q_D = Q_M - Q_F \). Now, \( Q_D \) is the residual demand curve that shows the quantity that the dominant firm can sell at any price. That quantity will be the total demanded by all buyers (\( Q_M \) ) minus the quantity supplied by the competitive fringe (\( Q_F \) ). The dominant
firm maximizes profit by expanding output to the point where its marginal revenue equals its marginal cost:
\[
\frac{d\Pi}{dQ_D} = P + Q_D \frac{dP}{dQ_D} - \frac{dC}{dQ_D} = 0
\]
where \( P + Q_D \frac{dP}{dQ_D} \) is the dominant firm’s marginal revenue, and \( \frac{dC}{dQ_D} \) is the marginal cost.

These results are depicted graphically in Figure 1. The industry demand curve is represented by \( D \), and the supply curve of the competitive fringe is denoted by \( S_{CF} \). Given the presence of the competitive fringe, the dominant firm must allow for the supply response of the fringe to its price decision. Thus, the demand that the dominant firm faces is not the market demand, but the residual demand \( d \), which is the difference between the market demand and the supply of the competitive fringe, i.e.,
\[
d = D - S_{CF}.
\]

The marginal revenue associated with the residual demand \( d \) is denoted by \( mr \) in Figure 1. The dominant firm proceeds to maximize its profits in the usual way: it produces that output where its marginal cost \( (MC) \) equals marginal revenue \( (mr) \) and sells it for the market clearing price, which is found on the residual demand. The quantity and price are shown as \( Q_{DF}^* \) and \( P^* \) in Figure 1. The competitive fringe will respond to this price by producing \( Q_{CF}^* \), which is the quantity on \( S_{CF} \) that corresponds to a price of \( P^* \). Together, the dominant firm and the competitive fringe supply \( Q^* \), which is the amount the market demands at a price of \( P^* \), i.e., \( Q^* = Q_{DF}^* + Q_{CF}^* \). The result is not
coincidental: The dominant firm selected $Q_{DF}^*$ with the knowledge that the fringe would produce $Q_{CF}^*$ and consumers would demand $Q^*$ at a price of $P^*$.

Notice that in Figure 1 the residual demand $d$ is much flatter than the market demand $D$. As a result, the dominant firm’s ability to raise price is constrained by the presence of the fringe suppliers. The benefit to the dominant firm of excluding the fringe is shown in Figure 2. Once the competitive fringe is eliminated, the dominant firm will become a monopolist. As a result, it will maximize its profits by producing where the marginal revenue associated with the market demand (labeled $MR$) equals marginal cost. The dominant firm’s output rises from $Q_{DF}^*$ to $\hat{Q}_{DF}$; the price jumps from $P^*$ to $\hat{P}$; and the firm’s profit increases.

Another way of seeing this is to examine the Lerner Index of monopoly power, as presented by Landes and Posner.\textsuperscript{71} As applied to the dominant firm, the Lerner Index\textsuperscript{72} is

$$\lambda = \frac{S}{\eta + \varepsilon_f (1 - S)}$$

where $S$ is the market share of the dominant firm, $\eta$ is the demand elasticity, and $\varepsilon_f$ is the elasticity of the fringe supply. The effect of increasing $S$ is to increase $\lambda$, because the numerator increases and the denominator decreases.

The implication of this analysis is that a dominant seller can increase monopoly profits by eliminating fringe competitors, just as a dominant buyer can increase monopsony profits by eliminating fringe competitors. If at least some of the same firms compete with the dominant firm as both buyers and sellers, predatory buying that drives

\textsuperscript{71} Landes & Posner, supra note xx.

\textsuperscript{72} See Lerner, supra note xx.
some or all of them out of the input market may also drive them out of the output market. Indeed, for successful predatory buying to have an anticompetitive effect in the output market, some of the firms affected in the input market must be competitors in the output market. In such a case, successful predatory buying enhances both the monopsony and monopoly profits of the dominant firm, and the social welfare loss it imposes is compounded, for it increases the deadweight loss in both the input and output markets. Moreover, because the dominant firm’s return from predatory buying increases with the increase in expected monopoly profits, a rational predator can afford to invest more in predation.

Further, the dominant firm may profit by raising input price even when it does not drive the fringe from the market. The increase in input price will increase the marginal cost of output for any competitor that operates in both markets. That increase in cost may result in an increase in the market price of the output, if the increase in input price is significant, the cost of the input represents a substantial proportion of the marginal cost of production, and some of the input is not converted into output. If the increase in the cost of the input has a larger impact on the fringe competitors than on the dominant firm, the dominant firm will increase profits as the market price of the output increases. An increase in input price designed to increase the marginal costs of production for the fringe firms will affect the dominant firm’s residual demand and residual marginal revenue curves. The profit-maximizing price of the output will increase, and the total


74 If marginal costs rise faster than average costs, an increase in input price can benefit the fringe as well as the dominant firm. Id. at 238.
output quantity will fall. The welfare effects are unambiguously negative, even though competitors are not completely driven from the market. The output of the fringe shrinks as a result of their higher marginal cost. Of course, the dominant firm will be even better off if the competitors are driven from the market. An implication of the analysis is that paying high prices during a predatory campaign to drive competitors from the market may reduce welfare, even if the campaign fails, if the high price exceeds the competitive price.

Suppose, however, the dominant firm competes with completely different firms in both the input and output markets, and predatory buying is used to increase monopsony power in the input market. During the predatory period, as input price increases above the dominant buyer’s profit-maximizing price towards the competitive price, the welfare loss in the input market is reduced. The change in input price has no effect on the fringe output supply curve, and hence no effect on the dominant firm’s residual demand or residual marginal revenue curves. The dominant firm will operate at a higher point on its marginal cost curve, and it will convert at least some of the additional input into output; to that extent, the welfare loss in the output market is also reduced. As input price rises above the competitive level, the welfare loss in the input market becomes positive again and increases with further increases in input price, and output will increase beyond the socially optimal amount if all of the input is used to produce output. Unsuccessful predatory buying in these circumstances can increase or decrease net welfare, taking into account welfare effects in both the input and output markets. The dominant firm will sacrifice profits in the output market, but depending on how much additional input it must buy to force input competitors out of the market, it may not have to sell output at a
price below marginal cost. During the recoupment period, which will occur if the predator is successful, the dominant firm will purchase less input and produce less output than it did prior to the beginning of predation, and welfare in both markets will decline relative to pre-predation levels.

IV. The Appropriate Legal Policy

We have thus far focused on the economic theory of predatory buying. We have demonstrated that monopsony pricing yields profits for the monopsonist and misallocates resources, that a dominant buyer may increase monopsony profits and deadweight loss by excluding competitors, that predatory buying can be a rational strategy to eliminate competitors, and that a monopsonist with monopoly power can increase profits and deadweight social welfare losses by engaging in predatory buying to injure firms that are competitors in both the input and output markets. Determining the proper antitrust treatment of predatory buying, however, depends upon a number of other factors as well. First, antitrust liability is inappropriate unless predatory buying causes the kind of injury the antitrust laws are intended to prevent. Second, given that antitrust enforcement is costly, however liability is defined, the expected benefits of deterring the practice must exceed the expected costs of enforcement. The benefits are a function of the prevalence of the practice. The costs include the costs of error, and accurately identifying predatory buying in litigation is complicated: the anticipated payoff from an investment in predatory buying can come from multiple sources, and the economic inferences drawn from observable behavior are ambiguous. We explain the significance of these conditions below. But we begin by considering whether predatory buying is a legitimate object of antitrust concern.
A. Scope of Antitrust Protection

As we demonstrate in Section III, monopsony pricing invariably injures input suppliers and, absent perfect price discrimination, imposes a deadweight loss in the input market.\textsuperscript{75} The units of input not purchased by the monopsonist are released for use elsewhere in the economy, but the value derived from alternative use is less than the value they would have returned had they been used productively by the monopsonist. The monopsonistic reduction in input purchases will in theory result in an increase in output price and an attendant deadweight loss, even when the monopsonist has no monopoly power, though the actual impact on price may be imperceptible.

If the goal of antitrust is understood to be the maximization of social wealth, or efficiency, the allocative distortions in the input market alone warrant antitrust concern.\textsuperscript{76}

\textsuperscript{75} If a monopsonist could engage in perfect price discrimination, it would slide along the supply curve and pay the minimum price necessary to obtain each unit purchased. In this way, the monopsonist would extract all of the producer surplus and would end up buying the competitive quantity. Perfect price discrimination is an interesting theoretical possibility, but of no practical significance. \textit{Cf. Posner, supra} note 21, at 80 (noting that perfect price discrimination by a seller “is never feasible”).

\textsuperscript{76} In cases of unlawful monopoly pricing, wealth is always transferred from consumers to producers, but social wealth may not decline. For instance, if price discrimination is perfect and costless, all wealth lost by consumers is transformed into producer wealth. Whether antitrust is intended to prevent wealth transfers or deadweight losses has been a matter of enduring debate. The issue is usually posed as a choice between an efficiency, or aggregate economic welfare standard, on the one hand and a pure consumer welfare standard on the other. \textit{See, e.g.}, Robert H. Lande, \textit{Wealth Transfers as the Original and Primary Concern of Antitrust: The Efficiency Interpretation Challenged}, 34 HASTINGS L.J. 65 (1982) (arguing for a strict consumer welfare standard); Dennis W. Carlton, \textit{Does Antitrust Need to be Modernized?}, 21 J. ECON. PERSP. 155, 157 (2007) (“The proper objective of antitrust should be total surplus, not consumer surplus.”); Joseph Farell & Michael L. Katz, \textit{The Economics of Welfare Standards in Antitrust}, 2 COMPETITION POLICY INT’L 3, 8 (2006) (arguing that antitrust law “has evolved toward prohibiting only acts that both (a) hurt competition in an ordinary (if sometimes vague) sense and (b) hurt efficiency and/or consumer surplus”). Monopsony pricing raises a corresponding issue: It always transfers wealth from suppliers to buyers, but in theory it may not cause a deadweight loss. \textit{See generally} Salop, \textit{supra} note xx, at 686-89 (arguing that courts and federal enforcement agencies have opted for the pure consumer welfare standard); John B. Kirkwood, \textit{Buyer Power and Exclusionary Conduct: Should Brooke Group Set the Standards for Buyer-Induced Price Discrimination and Predatory Bidding?}, 72 ANTITRUST L.J. 625, 630 n.11 (adopting pure consumer welfare standard); Richard O. Zerbe Jr., \textit{Monopsony and the Ross-Simmons Case: A Comment on Salop and Kirkwood}, 72 ANTITRUST L.J. 717, 718-19 (2005) (arguing for aggregate welfare standard and noting that harm to competitors does not necessarily imply a loss of efficiency); Noll, \textit{supra} note xx, at 591, 612 (noting that monopsony pricing is usually harmful under either
Unless the acquisition of monopsony power generates offsetting social wealth, it is appropriately condemned.\textsuperscript{77} In this conception of antitrust, allocative distortions in input markets are legally equivalent to allocative distortions in output markets, and input suppliers and consumers are equivalent antitrust victims. If instead the goal of antitrust is understood to be the maximization of consumer welfare or social wealth in output markets, monopsony pricing is still suspect, but only because it misallocates resources in output markets, however trivial the effects may be. Under this analysis, consumers and other output purchasers are the only legitimate victims of monopsony pricing, though other actors functioning as surrogates for those suffering cognizable injuries might be allowed to sue unlawful monopsonists.

Because monopsony pricing, absent perfect and costless price discrimination, invariably causes distortions in both the input and output markets, antitrust condemnation of anticompetitive practices that lead to monopsony pricing could be justified under either conception of antitrust law. As a policy matter, therefore, identifying the purpose of the law may not be of much practical consequence, except perhaps in the area of private antitrust standing. If the focus of antitrust is exclusively on output markets, input suppliers may not suffer antitrust injury, because their harm might not be “injury of the

\textsuperscript{77} It is possible, for example, for the formation of buying cooperatives to improve efficiency enough to offset the allocative distortions of any resulting monopsony power. See Roger D. Blair & Jeffrey L. Harrison, \textit{Cooperative Buying, Monopsony Power, and Antitrust Policy}, 86 NW. U. L. REV. 331 (1992).
type the antitrust laws were intended to prevent and that flows from that which makes defendants’ acts unlawful.”78

*Mandeville Island Farms* appeared to hold that a misallocation of resources in the input market is by itself a matter of antitrust concern. Though the case was decided long before the Court articulated the antitrust injury doctrine,79 the Court permitted sugar beet suppliers to sue sugar refiners functioning as a buyers’ cartel. “The [Sherman] Act is comprehensive in its terms and coverage, protecting all who are made victims of the forbidden practices by whomever they may be perpetrated.”80 Though the sugar refiners had no apparent monopoly power, their exercise of monopsony power theoretically had an allocative (albeit indeterminate) impact on the sugar market. But the Court gave no indication that such an impact was necessary to make the input price fixing agreement “forbidden.” The practice of naked price fixing is forbidden, whether the price fixers are sellers or buyers and whether their immediate victims are consumers or input suppliers. Antitrust apparently promotes wealth maximization, or at least it is not interested exclusively in consumer welfare.

The *Weyerhaeuser* Court might have confirmed the apparent meaning of *Mandeville Island Farms* by citing the case for the proposition that the antitrust laws are intended to protect against allocative distortions in input as well as output markets caused by anticompetitive acts. Surprisingly, the Court did not cite the case at all, a fact made all


80 *Mandeville Island Farms*, 334 U.S. at 236.
the more curious by the dearth of Supreme Court cases on monopsony. Perhaps the Court thought that by 2007 the proposition had become self-evident. But the picture that emerges from the oral argument is hazy. Counsel for Weyerhaeuser asserted, “[W]e think that the Sherman Act protects [the sellers of the logs] and gives them the benefit of full competition just as much as it does consumers.”

Chief Justice Roberts asked, “Have we ever identified that as a benefit that the antitrust laws try to achieve, people get higher prices for what they sell?” Weyerhaeuser’s counsel replied, “Yes. In *Mandeville Farms* . . . .” Later, however, Justice Breyer remarked that the antitrust laws “are just as concerned about a group of small farmers or a group of small growers or a group of small fishermen faced with a monopsony buyer as they are with a group of consumers having to fight off a monopoly seller. . . . I mean that’s pretty well established, isn’t it?”

Despite the comments during oral argument, the Court made no explicit reference to the point in its decision. What the Court did say is that a firm that engages in predatory buying “to reap monopsony profits in the input market” accomplishes an “anticompetitive purpose[].” If the adverse impact on input suppliers from monopsony pricing is “anticompetitive,” within the meaning of the law, the goal of antitrust law must embrace efficiency in input markets.

So far, so good. But this analysis pertains to the period during which monopsony pricing occurs. The Court assumes a two-period model: in the first period, the predator

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82 *Id.*
83 *Id.*
84 *Id.* at *29.
85 *Weyerhaeuser*, 127 S. Ct. at 1076.
raises its prices above the profit-maximizing level for a dominant buyer and eventually excludes its competitor; in the second period, after the competitor departs, it recoups its losses and earns net profits by paying low, monopsony prices. Are interests protected by antitrust adversely affected during the first period? The question is important, because the second period may never begin – the predatory strategy may fail because competition prevents the predator from lowering price. As we demonstrate above, if the monopsonist also has monopoly power and at least some of its input competitors are also output competitors, then the two-period model is inapt: by forcing its competitors to pay higher input prices, it may be able to raise output price almost simultaneously, and output purchasers would suffer immediately. But suppose, as the Court did in *Weyerhaeuser*, that the alleged predator has no monopoly power. Any increase in price paid by the monopsonist represents a profit sacrifice, and input competitors suffer a loss. Input suppliers, however, benefit. If the high price paid by the monopsonist is no higher than the competitive input price, the pricing conduct improves efficiency. If the price exceeds the competitive price, the conduct produces an allocative distortion, though perhaps one that is less than the original distortion associated with dominant-buyer pricing, but input suppliers gain even more than they would at the competitive price.

The symmetry explicit in *Mandeville Island Farms* means that the welfare of input suppliers is equal in value to the welfare of output purchasers. In *Brooke Group*, the Court held that when recoupment is unlikely, consumers benefit while the predator charges a price below cost, and the result is not anticompetitive even though allocative efficiency is distorted; anticompetitive harm occurs only during recoupment, when consumers are injured. The symmetrical analysis of predatory buying is that when
recoupment is unlikely, input suppliers benefit while the predator pays a price above the value of the marginal product, and the result is not anticompetitive even though allocative efficiency is distorted; anticompetitive harm occurs only during recoupment, when input suppliers are injured. But this is not what the Court says. The Court explains that “[f]ailed predatory-bidding schemes can . . ., but will not necessarily, benefit consumers,” and that during the recoupment period of successful schemes consumers may nevertheless escape injury because monopsony prices “may have little or no effect on consumer prices.” Both assertions are economically correct, but if monopoly and monopsony are treated symmetrically, they are off the mark. Whether or not consumers benefit while input prices are high, suppliers benefit; whether or not consumers lose while input prices are low, suppliers lose. Indeed, the Court observes that input sellers and new entrants into the input market “obviously benefit” from competitive increases in input prices, making its emphasis on the consumer impact of predatory buying all the more mysterious. The Court cannot mean that if paying low input prices during recoupment has no effect on consumer prices, cognizable antitrust interests are unaffected, for the Court explains that monopsony pricing is anticompetitive because input suppliers are harmed. The implication seems to be that the welfare of input suppliers counts, but the welfare of consumers counts more, an idea reinforced by the

86 Weyerhaeuser, 127 S. Ct. at 1077 (emphasis added).
87 Id. at 1078 (emphasis added).
88 Id. at 1077 n.4.
Court’s observation that “predatory bidding presents less of a direct threat of consumer harm predatory pricing.”

The Court’s focus on consumer welfare in the context of predatory buying does not weaken its policy conclusions. If the Court had focused on the welfare of input suppliers, it would have reached the same conclusions. But the Court’s failure to embrace explicitly the symmetry inherent in Mandeville Island Farms is puzzling, and its suggestion that anticompetitive losses suffered by buyers have greater weight than anticompetitive losses suffered by sellers is devoid of any metric that might be used if ever a case arises that requires a tradeoff.

B. The Benefits of Proscribing Predatory Buying

Antitrust enforcement is costly, both because of the social resources consumed in identifying, prosecuting, and adjudicating violations and because of the inevitable imprecision in imposing liability. Even adopting a deliberately under-inclusive approach to outlawing harmful practices will not avoid the direct costs of enforcement. Whether predatory buying should simply be ignored by the law depends in part on the magnitude of the cognizable loss it imposes in individual cases and the prevalence of the practice. The magnitude of the loss depends, of course, on the facts of the markets involved as well as the duration of the period during which the successful predator can maintain prices below the profit-maximizing price for a dominant buyer. These are idiosyncratic issues, and little more can be said about them. But more can be said about prevalence.

There are theoretical reasons to believe that predatory buying is uncommon, and many of them reflect the reasons that predatory pricing is thought to be rare. Indeed, one

89 *Id.* at 1078.
of us has observed that “[s]uccessful monopsony predation is probably as unlikely as
successful monopoly predation,”90 an assertion quoted by the Weyerhaeuser Court91 and
made cogent by the conclusion in Brooke Group that “‘predatory pricing schemes are
rarely tried, and even more rarely successful.’”92 As a matter of fact, to the extent that
complaints resulting in published opinions reflect the prevalence of the challenged
practice, predatory buying is far less common than predatory pricing. If predatory buying
represents an investment, its rationality depends in part on its expected payoff. In the
simplest explanation of the practice, the one the Weyerhaeuser Court analyzes, the
monopsonist drives fringe competitors with higher capital costs out of a market during
the first period, then earns offsetting gains in the second period by lowering price in that
market to a level below the price that prevailed when it was merely a dominant buyer.
The payoff is a function of the inability of competitors to enter the market in the second
period. An alternative explanation is that the predator invests in establishing a reputation
for predation.93 Once competitors are driven from a market, these firms and others are
dissuaded from entering this market or others in which the predator has monopsony
power. The payoff is a function of the unwillingness of competitors to challenge the
monopsonist. A third possibility is that the dominant buyer was tacitly colluding with
fringe firms to restrict input purchases. If one of them increases its purchases, the

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90 BLAIR & HARRISON, supra note xx, at 66.
91 See Weyerhaeuser, 127 S. Ct. at 1077.
U.S. 574, 589 (1986)).
93 See generally Patrick Bolton, Joseph F. Brodley & Michael H. Riordan, Preemptory Pricing:
Strategic Theory and Legal Policy, 88 GEO. L.J. 2239, 2300-01 (2000); David M. Kreps & Robert Wilson,
Reputation and Imperfect Information, 27 J. ECON. THEORY 253, 267 (1982); Paul Milgrom & John
dominant firm might increase its prices yet more to induce the competitor to return to the
tacit buyers’ cartel. The payoff comes from the restoration of the monopsony cartel
gains.

In all of these possibilities, the predator’s gains are derived from input markets. Another possibility is that, by increasing its competitors’ input costs, the predator increases the market price of their output. The predator’s payoff comes from rents in the output market. The connection between predatory buying and higher output rents implies that at least some of the firms compete with the predator in both the input and output markets. The *Weyerhaeuser* Court explicitly acknowledged this potential source of recoupment, but found that it apparently was not the relevant source in the case.94 Of course, predatory buying might return gains from both input and output markets. The elimination of competing buyers, for example, might eliminate competing sellers. Indeed, an investment in earning a predatory reputation might deter entrants in both input and output markets.

Regardless of the source of the anticipated payoff, preexisting monopsony power, in its technical rather than literal sense, is a practical precondition for predatory buying, just as monopoly power is a precondition for predatory pricing. To monopolize by charging unlawfully low prices, a seller must already be a monopolist, perhaps lawfully.95 Analogously, as a practical matter a buyer cannot profitably expand input purchases enough to affect market price appreciably, and thereby exclude competitors, unless it has

94 *See Weyerhaeuser*, 127 S. Ct. at 1076 n.2.

95 *See* Am. Academic Suppliers, Inc. v. Beckley-Cardy, Inc., 922 F.2d 1317, 1320 (7th Cir. 1991) (explaining that a firm found guilty of attempting to monopolize through predatory pricing “must always be” a monopolist).
some monopsony power. As a theoretical matter, entry barriers, which are necessary for
the creation of monopsony power, are not necessary for the firm to be able to increase
purchases enough to raise price while not increasing costs inordinately. That condition
is a function of market share. Entry barriers permit a monopolist to raise price or a
monopsonist to lower price profitably and thereby recoup predatory losses, and if they
exist during the recoupment period, they likely exist during the predatory period. And
though monopsony itself might be more common than some people assume, it is not
ubiquitous.

In addition, to be successful, the predator would have to raise the price paid for all
of the input purchased in competition with the buyers to be excluded, and it would have
to pay that price for any units that had been purchased by its rivals to the extent rivals
reduce their purchases to minimize their losses. As a result, the predator bears a larger
proportion of the total losses incurred during predation than its market share prior to the
start of the predatory campaign. Indeed, in the long run, if input suppliers were
attracted into the market by the supra-competitive price offered, the predator would be
forced to absorb their production.

Ignoring for now the expected cost of antitrust liability, the losses sustained by the
 predator depend on conditions in the output market, but those losses can be substantial.
A buyer that has no market power in the output market will not be able to affect price and

\footnote{Cf. Salop, supra note xx, at 690 n.52 ("Pre-existing monopsony power is not a strictly necessary
condition for successful overbuying, particularly RRC overbuying. However, the typical overbuying firm
would have pre-existing monopsony power.").}

\footnote{See BLAIR & HARRISON, supra note xx, at 3.}

\footnote{A predatory buyer might be able to discriminate in price by offering a high price only to those
suppliers that can sell to the predator’s rivals.}

\footnote{See ROBERT H. BORK, THE ANTITRUST PARADOX 151 (2nd ed. 1993).}
will be able to sell at the market price all of the output it produces. If the overbought input represents a large proportion of the variable production costs, the buyer will almost certainly use the additional units of input to increase output. The alternatives to increasing output are destroying the additional input or storing it at a positive cost, but once acquired, the marginal cost of using the input is zero. The marginal cost of increasing output is only the marginal costs of the other inputs, and the sum of those costs will be less than the output price, except in the extreme case in which the marginal costs of the other inputs rise drastically with additional production. The return on the additional units of output is the difference between the price and the sum of the costs of the other variable inputs. That is a positive return, whereas the predator would earn no return if the additional units of the input subject to predation are destroyed, and it would earn a lower though positive return if they were stored and used later.

Relative to the marginal costs measured at the time of acquisition, however, price is below full marginal cost. For example, suppose before predation the buyer purchased 100 sawlogs at a price of $7.50 each, incurred a marginal cost of $2.50 for other inputs, and sold 100 boards at a price of $10.00 each.\textsuperscript{100} It then purchases 150 sawlogs at a price of $8.50, and its marginal cost of other inputs increases to $3.00. Once the sawlogs are acquired, it will make production decisions based only on the marginal cost of other inputs. Its incentive is to turn all of the sawlogs into boards because the price of a board exceeds the marginal cost of other inputs by $7.00, even though the full marginal cost is $1.50 more than the price of a board.

\textsuperscript{100} Recall that in \textit{Weyerhaeuser}, the Court noted that “[l]ogs represent up to 75 percent of a sawmill’s total costs.” \textit{Weyerhaeuser}, 127 S. Ct. at 1073. And in a competitive output market, price will equal marginal cost.
If the input affected by overbuying represents a small proportion of the variable production costs, the predator’s optimal strategy will not be to convert all of the additional input purchased into output. Instead, the predator may well destroy much of that additional input or, if feasible, store it for future use. Suppose the predator consumes one saw blade in turning one log into a board.\footnote{We borrow the example of saw blades from Herbert Hovenkamp. See Herbert Hovenkamp, \textit{The Law of Exclusionary Pricing}, 2 \textit{Competition Pol’Y Int’l} 21, 38 (2006).} At an output of 100 boards, the marginal cost of a saw blade is $.10, and the marginal cost of all other inputs combined is $9.90. If the predator buys 150 saw blades, the price climbs to $.15, and the marginal cost of other inputs if 150 boards are manufactured increases to $13. The predator may produce a few more than 100 boards, but even if it cannot store the blades, it will be better off destroying some of the additional units than incurring the variable costs of other inputs necessary to use all of them to make logs. The principle is general: The predator will produce that quantity of output at which price equals the marginal cost of inputs other than the overbought input.

Thus, the predator will minimize losses either by converting additional input into output or by permanently or temporarily withholding it from the output market, but purchasing the additional input will invariably result in a short-run loss. If the predator has market power in the output market, it may be able to increase its profits by overbuying even though its own marginal costs increase. For example, if the predator uses the input less intensively than its competitors, the predator may be able profitably to raise market price by forcing them to incur the higher input cost. Suppose the predator alone adopts a production technology that uses lasers as well as sawblades so that it
consumes one sawblade for every five logs, whereas its competitors consume one blade per log. An increase in the price of blades would increase the competitors’ costs of producing boards more than it would increase the predator’s costs. If the predator has output market power but cannot raise output price through overbuying, it may be able to use the additional input to increase output without suffering a loss, except in the sense of forgone monopoly profits.

Moreover, if the predator expects to profit by reducing input price below the (imperfect) monopsony price prevailing in the market before predation, it will suffer immediate losses from predatory buying, but its gains will be delayed, potentially for a long time. Successful predation requires that the present value of predatory gains be larger than the present value of predatory losses, and the gains in this case but not the losses would have to be discounted appreciably. Of course, the predator might anticipate a simultaneous pay-off. For example, the strategy might be to create a reputation for predation that inhibits competition in another market almost immediately. Alternatively, the strategy might be to raise the price of output by forcing output competitors to incur higher input costs. In these situations, profits are not delayed, and discounting is inappropriate.

Finally, if the strategy is to earn monopsony profits in the market in which predatory buying occurred after exit because competition in the second period is prevented, the conditions in that market will have to permit the predator to maintain the lower monopsony price long enough to earn net profits. Both reentry and new entry of competing buyers must be delayed. If the payoff is expected to be earned from establishing a reputation for predation in input markets, the strategy could be rational
even if the predator would suffer net losses from purchases in the market where it overbought. Indeed, the apparent irrationality of the behavior is vital in convincing competitors to cede the market. But over time, input supply may become more elastic, as suppliers discover new uses for their production, and changes in the production technology of the output may rob the input monopsony of its value. For example, even if a music producer could monopsonize the market for vinyl, the gains would be lost when the industry shifts to digital media. The rationality of predatory buying when the payoff is expected to come from an increase in output price is less sensitive to changes in the input market over time than is the case of a payoff anticipated in the market subject to monopsony predation.

In sum, these observations suggest that the likelihood of predatory buying in theory depends on the predator’s strategy. Some strategies are more plausible than others. The only firm conclusion is that predatory buying cannot be dismissed as theoretically irrational conduct. There is no empirical evidence that predatory buying is common; one can infer from the paucity of predatory buying cases that the practice is uncommon, but litigated cases are not a perfect indicator of prevalence in the economy.

C. Maximizing Enforcement Efficiency

That overbuying can be rational and predatory does not mean that it should be outlawed. Because we assume that legal policy should be formulated to yield net welfare gains, the social benefits in reducing predatory buying must exceed the costs. The simple fact that paying more than a competitive price for an input causes an allocative

102 We have focused on the assumptions necessary to make a strategy based on a payoff in input markets rational. We do not mean to assess the likelihood of predatory buying as a strategy to increase rents in the output market. Such a strategy may be unlikely for idiosyncratic reasons.
inefficiency is not a sufficient justification for condemning the conduct. In *Brooke Group*, for example, the Supreme Court recognized that pricing below marginal cost reduces allocative efficiency, but the conduct is not unlawful unless the predator had a reasonable probability of recouping the investment in predation by charging high prices. More generally, no antitrust doctrine prohibits a firm in a competitive market from foolishly reconfiguring a product in a way that reduces demand or extending production beyond a sustainable level, despite the attendant loss in efficiency. If efficiency is the goal of antitrust law, a loss of efficiency is a necessary but not sufficient condition for illegality. For a practice to be unlawful, the actor causing the inefficiency must gain from the conduct. The market disciplines the actor that loses from its own conduct. Inefficient conduct may impose losses on others as well as the actor, but antitrust law recognizes that enforcement is costly, and market discipline is a less costly way of deterring inefficient conduct than is legal intervention.

Moreover, antitrust enforcement is costly in part because it creates a risk that socially beneficial conduct will be mistakenly deterred. The Supreme Court has recognized that the prospect of erroneous condemnation of low prices may chill legitimate price competition, and therefore reduce efficiency. One might argue that in the context of predatory pricing, the beneficiaries of below-cost prices and the victims of forgone legitimate price competition are consumers, who have the strongest claim to antitrust protection. By contrast, the direct beneficiaries of supra-competitive input prices are suppliers, and they are the direct victims when high but non-predatory prices

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103 See *Brooke Group*, 509 U.S. at 224.
104 See *Brooke Group*, 509 U.S. at 226.
are discouraged; high input prices may have no appreciable effect on consumers. Antitrust standards governing predatory buying, therefore, can be more expansive than those governing predatory pricing.

But the argument is unconvincing. Supra-competitive input prices may benefit consumers, of course, if the additional input lowers output price. To be sure, that additional input will injure consumers of other products, as input resources are sucked away from more valuable uses, but that dynamic is also at work in predatory pricing where below-cost prices are protected even though consumers elsewhere in the economy are harmed. The more important point, as we explain above, is that the immediate welfare of consumers cannot be valued more highly than that of input suppliers if monopsony law is to be coherent. The unlawful acquisition of monopsony power is unlawful because input suppliers are harmed by the exercise of monopsony power. That is the message of Mandeville Island Farms. One cannot condemn the acquisition of monopsony power because it injures suppliers but ignore the benefits they receive when input prices are supra-competitive or when price competition is vigorous because they are not consumers.

V. Evaluating the Weyerhaeuser Test and Its Alternatives

A number of rules for predatory buying are possible. In general, rules should be designed to identify cases in which a firm incurs losses by increasing input purchases with the expectation that the losses will be more than offset by gains resulting from a likely reduction in competition. Any private plaintiff, of course, must also satisfy the requirements of an injury in fact caused by predatory buying, antitrust injury, and
antitrust standing. In this section, we evaluate *Weyerhaeuser* based on the objective of maximum efficiency in firm behavior as well as enforcement.

We begin by considering approaches the Court explicitly or implicitly rejected. What is observable in any case of alleged predatory buying is an increase in the quantity purchased and price paid by the defendant. If that conduct never increased efficiency, it could be safely condemned per se, even if input suppliers and possibly consumers thereby lost out on a windfall. But as the Court recognized, “There are myriad legitimate reasons – ranging from benign to affirmatively procompetitive – why a buyer might bid up input prices.”

Consider some efficiency-enhancing explanations: Current or anticipated demand for the output may increase. The buyer may anticipate an input shortage and act to store a quantity for future use, a productive decision ex ante even if the shortage does not materialize. Other input costs may decline, implying an increase in the buyer’s profit-maximizing output and creating the need for an additional amount of the relevant input. The buyer may implement a more efficient production process that renders a more intensive use of the input profitable. For instance, in *Weyerhaeuser*, the Court noted that the defendant “made more than $75 million in capital investments in its hardwood mills” and adopted “‘state-of-the-art technology’ . . . to increase the amount of lumber recovered from every log.”

A buyer with monopsony power may increase purchases and raise price in response to the entry of new purchasers in the input market.


106 *Weyerhaeuser*, 127 S. Ct. at 1072.
The intent of the actor can sometimes help distinguish socially beneficial conduct from socially harmful conduct where observable acts are ambiguous.\textsuperscript{107} Though intent evidence can play an important role in applying specific, cost-based standards, as we explain below, it is not an appealing general test of price predation, and the Court wisely stayed away from it. To see why, consider the classic, two-period predation model that underlies the Court’s analysis. From society’s standpoint, when (1) the present value of the marginal expected benefit in efficiency while bid prices are high equals or exceeds (2) the present value of the marginal expected cost of inefficiency after rivals exit, no liability should be imposed. That is, if \( qB \geq pL \rightarrow \text{No Liability} \), where \( q \) is the probability of efficiency, \( B \) is the present value of the efficiency created by an increase in input prices, \( p \) is the probability of inefficiency, and \( L \) is the present value of the inefficiency resulting from the exit of rivals driven from the input market by higher prices.\textsuperscript{108} Conversely, if \( qB < pL \rightarrow \text{Liability} \). We put aside the optimal amount of liability and focus on whether liability should be imposed at all.

The first prong of the \textit{Weyerhaeuser} test is an imperfect attempt to estimate the value of \( B \), the efficiency generated by the increase in the defendant’s input purchases. If the high input price does not result in an output price below marginal cost, the assumption is that paying the high price increases efficiency, and \( B \) is therefore positive. As we explain below, the rule is imperfect because it appears to assume that all input is converted to output; increased input purchases that are destroyed or stored can reduce


\textsuperscript{108} Students of tort law will recognize this expression as an adaptation of the Hand Formula for determining negligence. See United States v. Carroll Towing Co., 159 F.2d 169, 173 (2d Cir. 1947) (L. Hand, J.)
efficiency yet pass the marginal cost prong if output is reduced. But the rule nevertheless functions as a kind of efficiency screen. The second prong of the test is an attempt to measure the value of $pL$, at least in a gross way, and it bears indirectly on the value of $B$:

If recoupment is unlikely, $pL$ is close to zero, and because actors are assumed to be rational, if $pL$ is close to zero, $B$ is likely to be positive – if recoupment is unlikely, a rational buyer would not raise price unless the conduct increased efficiency.

Therefore, if the pricing conduct of a dominant buyer satisfies neither prong, the logic of the test is that the left-hand side of the inequality is greater than the right-hand side – the conduct increases expected efficiency and poses no threat of long-run inefficiency. If the conduct does not satisfy the second prong, the left-hand side may be less than the right-hand side, because even though $pL$ is close to zero, $B$ may well be negative – high input prices may cause allocative distortions. But the conduct is self-deterring, because the allocative inefficiency caused by excessive input prices will translate into a private loss for the dominant buyer, and antitrust intervention is unnecessary and costly. If the conduct satisfies both prongs, the left-hand side of the inequality is likely to be much less than the right-hand side, even if $qB$ is positive – a possibility that exists because the higher input price may reduce the distortion of the profit-maximizing dominant firm price.

Notice that pricing conduct will typically be challenged during what the plaintiff claims is the predatory period in the Court’s two-period model – when high prices are being paid and before the defendant is able to drop prices. For this reason, $B$ is usually examined in an ex post sense, so that $q$ seems irrelevant, whereas the probability ($p$) of subsequent low prices and their attendant deadweight loss is relevant. In fact, though,
both costs and benefits should be measured ex ante. The social desirability of behavior depends upon a comparison of expected costs and benefits at the time the conduct takes place, because the purpose of legal sanctions is to create incentives to influence future behavior. Imposing liability that cannot be anticipated does not shape behavior but does consume resources.

Probabilities, both $q$ and $p$, can be estimated objectively. The question is whether evidence of subjective intent can be used instead and is less costly to use in determining the relationship between $q_B$ and $p_L$. In general, if a firm intends to profit by excluding rivals and thereafter lowering input price, $q_B$ is likely to be negative, or at least low. The intent to bring about a result increases the probability that the result will occur, and though rivals in some circumstances can be excluded from the market when the dominant buyer raises price no higher than the competitive level, the exclusionary price is apt to exceed that level. And $p_L$ is likely to be high – the intent to exclude increases $p$, and $L$ must be high to make the strategy privately profitable. If the buyer does not have the intent described, expected costs may nevertheless exceed expected benefits when the values are determined objectively, but the values will be close – the conduct is socially harmful on balance because of the actor’s mistake. The size of the divergence is important because of errors in assigning liability. If pricing conduct that in fact increases efficiency on balance when measured ex ante is nevertheless occasionally condemned, buyers will tend to shy away from it; they will not raise input price as much as efficiency requires, to avoid incurring liability erroneously. If instead the buyer’s actual prices create a wide disparity between $q_B$ and $p_L$, imposing liability is not likely to chill
efficient price increases. Stated otherwise, imposing liability only when \( qB \) is much less than \( pL \) will not deter efficient price increases near the margin.

Although intent can be used as a proxy for an ex ante objective measurement of costs and benefits, it is unacceptably dangerous as a general test.\(^{109}\) First, intent is easy to define improperly. The malign intent is intent to eliminate rivals by paying high prices and thereafter lowering prices so that net monopsony profits increase. It is not the intent to eliminate rivals. Justice Breyer alluded to the distinction in oral argument:

\[ \text{[O]f course, I want to injure competition always when I in fact sell at a lower price that I very much hope my competitor can’t possibly meet, indeed would go out of business. I cheer. I would love to get a monopoly. I would love to make a better product, lower prices, et cetera.} \]

The gist of his point is that the intent to destroy a competitor through hard competition is commendable. Second, evidence of intent is susceptible to mischaracterization, even when intent is correctly defined.\(^{111}\) Documents that in fact show nothing more than a laudable intent to compete ruthlessly may be misconstrued, especially by a lay jury, to demonstrate an intent to compete unlawfully. But there is a caveat. A buyer could

\(^{109}\) See generally R.J. Reynolds Tobacco Co. v. Cigarettes Cheaper!, 462 F.3d 690, 696 (7th Cir. 2006) (recognizing that an intent to destroy rivals through predatory pricing is not objectionable); A.A. Poultry Farms, Inc. v. Rose Acre Farms, Inc., 881 F.2d 1396, 1401 (7th Cir. 1989) (holding that “intent plays no useful role” in predatory pricing litigation); Barry Wright Corp. v. ITT Grinnell Corp., 724 F.2d 227, 232 (1st Cir. 1983) (rejecting intent test in predatory pricing case).


\(^{111}\) Counsel for the United States in Weyerhaeuser observed that “it’s famously difficult to distinguish between a legitimate competitive attempt on the one hand and an illegitimate monopolistic intent.” Transcript of Oral Argument, Weyerhaeuser Co. v. Ross-Simmons Hardwood Lumber Co., 127 S. Ct. 1069 (2007) (No. 05-381), 2006 WL 3422209 at *23. See also Ill. Corporate Travel, Inc. v. Am. Airlines, Inc., 806 F.2d 722, 725 (7th Cir. 1986) (“Intent is a slippery issue [in antitrust law], because firms may ‘intend’ to harm rivals or acquire monopolies even though their practices, objectively viewed, are beneficial to consumers . . . .”); Olympia Equip. Leasing Co. v. W. Union Telegraph Co., 797 F.2d 370, 379 (7th Cir. 1986) (noting that though intent is important in tort and criminal law, it is irrelevant in antitrust law); Ball Mem’l Hosp., Inc. v. Mutual Hosp. Ins., Inc., 784 F.3d 1325, 1338-39 (7th Cir. 1986) (finding that “intent to harm rivals” and other kinds of intent are not useful antitrust standards).
increase purchases of an input in anticipation of changes in supplies, costs, or demand that do not materialize. The result might be that the buyer sells output at a price below marginal cost, and structural conditions in the input market may permit the buyer to increase monopsony profits. Even though the buyer might satisfy both prongs of the *Weyerhaeuser* test, liability would be inappropriate when the conduct is viewed in the proper ex ante way. As long as the predictions were objectively reasonable, expected benefits are at least as great as expected costs, or \( qB \geq pL \). If objective evidence of probabilities at the time of input purchase decisions is difficult to come by, however, evidence of the defendant’s subjective forecasts may be useful, and forecast evidence may well be intertwined with evidence of intent.

A rule that condemned per se any increase in input purchases by any buyer would be grossly overbroad, therefore, and even a rule of “per se” illegality limited to buyers with market power in the output market would be intolerable. After all, monopolists may be motivated to increase input purchases for all of the legitimate reasons that motivate competitive output sellers, and a monopolist may have the additional justification that it is forced to increase output by the erosion of its output monopoly.

The Court similarly rejected the stunningly expansive approach endorsed by the appellate court. That court approved a jury instruction that if the defendant “purchased more logs than it needed or paid a higher price for logs than necessary, in order to prevent the [Ross-Simmons] from obtaining the logs they needed at a fair price,” the jury could find the conduct anticompetitive.\(^{112}\) As a practical matter, any increase in price under this test exposes a large buyer to antitrust liability, for the jury has free reign to conclude that

\[^{112}\text{*Weyerhaeuser*, 127 C. Ct. at 1073.}\]
the buyer bought too much and paid too much, forcing competitors to pay an unfair price. Herbert Hovenkamp aptly called the jury instruction “an antitrust disaster of enormous proportions.”

The Court also implicitly dismissed the possibility of a rule of per se legality. Certainly such a rule would be easy to apply; the law would simply not recognize a cause of action based solely on the pricing conduct of a single buyer. Because we have demonstrated above that predatory buying can be rational and anticompetitive, treating it as per se lawful would almost certainly be underinclusive, in that harmful instances of the practice could go undetected. The rule might nevertheless be justifiable if the enforcement costs of intermediate approaches that condemn some relevant conduct are sufficiently high. But we conclude, as did the Court, that immunizing input pricing conduct is not necessary to maximize social welfare.

The practical alternatives to blanket per se rules are a reasonableness standard on the one hand and specific rules determinative of liability on the other. Under a standard of reasonableness, all relevant evidence in every case is admissible, and the practice is deemed unlawful if the court concludes that it was anticompetitive in the particular circumstances. As understood in this way, the traditional rule of reason in antitrust is actually a standard. By contrast, a rule isolates specific conduct and makes it conclusive

113 Hovenkamp, supra note xx, at 37. The Supreme Court also recognized the shortcomings of the test. During oral argument, in reference to a paraphrase of the instructions – “bought more than they needed” – a seemingly exasperated Justice Alito asked counsel for Ross-Simmons, “What does that mean? What does a fair price in this . . . context mean? Does it mean the price that’s necessary in order to keep an inefficient competitor in business?” Transcript of Oral Argument, Weyerhaeuser Co. v. Ross-Simmons Hardwood Lumber Co., 127 S. Ct. 1069 (2007) (No. 05-381), 2006 WL 3422209 at *38. Counsel replied, “[I]t meant . . . how much did Weyerhaeuser artificially increase the log market above where it otherwise would have been?” Id. Justice Souter replied, “Why is that the standard of fairness? I mean that, you know, that may be fine. But . . . A, what’s the authority for saying that is the standard of fairness and B, how does a jury know that?” Id. at *38-39. Justice Souter concluded, “[The instruction] basically left the jury . . . on a free float, didn’t it?” Id. at *39.
of legal liability. One court has adroitly described the trade-off between rule and standard as methods of legal governance:

Rules have the advantage of being definite and of limiting factual inquiry but the disadvantage of being inflexible, even arbitrary, and thus overinclusive, or of being underinclusive and thus opening up loopholes (or of being both over- and underinclusive!). Standards are flexible, but vague and open-ended; they make business planning difficult, invite the sometimes unpredictable exercise of judicial discretion, and are more costly to adjudicate . . . .

The attraction of a rules approach to predatory buying, therefore, is not that it will result in a perfect fit between instances that are condemned and instances that are inefficient. Rather, it will be less costly to administer than a standard and may achieve greater accuracy, thereby encouraging socially desirable conduct.

The logic of Weyerhaeuser is that monopoly and monopsony are symmetrical, that predatory pricing and predatory bidding are symmetrical, and that the rules for predatory pricing should therefore apply with little adaptation to predatory bidding. Though the Weyerhaeuser Court does not defend Brooke Group against claims that the test articulated there is under-inclusive, the test is defensible. In discussing predatory pricing, Judge Easterbrook observed that “it is impossible to say that a given practice ‘never’ could injure consumers. A creative economist could imagine unusual

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114 As one court explained, “A rule singles out one or a few facts and makes it or them conclusive of legal liability; a standard permits consideration of all or at least most facts that are relevant to the standard’s rationale. A speed limit is a rule; negligence is a standard.” Mindgames, Inc. v. W. Publ’g Co., 218 F.3d 652, 657 (7th Cir. 2000) (Posner, J.). See also Bruce H. Kobayashi, Game Theory and Antitrust: A Post-Mortem, 5 GEO. MASON L. REV. 411, 411 n.6 (1997) (observing that a standard “denotes a general goal of policymaking . . . achieved via discretionary rules” whereas a “rule withdraws from the decisionmaker’s consideration one or more of the circumstances that would be relevant to enforcing the standard”).

115 Mindgames, 218 F.3d at 657.

116 See Weyerhaeuser, 127 S. Ct. at 1078 (“The general similarities of monopoly and monopsony combined with the theoretical and practical similarities of predatory pricing and predatory bidding convince us that our two-pronged Brooke Group test should apply to predatory-bidding claims.”).
circumstances of costs, elasticities, and barriers to entry that would cause injury in the rare situation." But the rules for predatory pricing are nevertheless justified:

Lower prices almost always benefit consumers. Subjecting all low prices to litigation, and the inevitable risk of error in a search for the rare instances in which consumers could be made worse off in the long run by low prices today, would make it more risky for firms to reduce prices, and they would be less inclined to do so—to consumers’ considerable detriment. That’s why in *Matsushita* and *Brooke Group* the Supreme Court held that low prices are lawful, even if the seller has considerable market power, unless rivals have been driven out of the market and recoupment is either ongoing or imminent.

Even when the purpose of predatory pricing is to discipline a renegade deviating from the profit-maximizing oligopoly price, the rules of predatory pricing can be justified. In these cases, a disciplinary price can achieve its objective even though it is above cost; the renegade need only be convinced that it will earn higher profits if it prices at the oligopoly level than if the oligopoly disintegrates and it is forced to price at or near the competitive level. Because the renegade is more likely to relent than is a firm subject to a campaign to drive it from the market, the investment in low prices is more likely to be rational. But in litigation, it would be nearly impossible to determine whether the defendant’s price was calculated to induce the renegade to raise price or was itself a competitive response to the alleged renegade’s lower price. Certainly the response to tacit collusion cannot be a rule that inhibits competition whenever one seller drops price. False negatives in this case are more costly than false positives. Much the same can be

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117 See Schor v. Abbott Labs., 457 F.3d 608, 612-13 (7th Cir. 2006).
118 Id. at 613.
119 See, e.g., Hovenkamp, supra note xx, at 26.
120 See generally POSNER, supra note xx, at 223.
said about models of predation that rely upon reputational effects to yield profits and reduce wealth.

The justification for the rules governing predatory pricing is important, because it underlies the fundamentally identical rule adopted in *Weyerhaeuser* for predatory buying. The Court observed, “As with predatory pricing, the exclusionary effect of higher bidding that does not result in below-cost output pricing ‘is beyond the practical ability of a judicial tribunal to control without courting intolerable risks of chilling legitimate’ procompetitive conduct.”121 The statement is an admission that raising input prices can have an “exclusionary effect” even though it does not force marginal cost above output price, in other words, that the Court’s test is under-inclusive. In a nutshell, the Court’s assertion is that the sum of administrative and error costs of the best alternative approach is greater than the sum of administrative and error costs of the rule adopted.

Consider the case in which inefficient competitors constrain the input price paid by the profit-maximizing dominant buyer, as depicted in Figure 4. Increasing price to the competitive level will exclude the fringe, and if entry barriers exist, the dominant buyer will be able to function as a pure monopsonist after the competitors exit, dropping price below the initial equilibrium level. The conduct is on balance profitable and may reduce welfare, depending on price levels and duration, yet it is not unlawful under the Court’s marginal cost rule.

This possibility suggests a profit-sacrifice test as an alternative to a marginal cost test. A rule that buying is predatory when the price paid for the input results in a short-run profit sacrifice for the defendant that is rational only because it excludes competitors

121 *Weyerhaeuser*, 127 S. Ct. at 1078.
in the long run would be comprehensive and theoretically sound.\footnote{See Salop, \textit{supra} note xx, at 699-701 (arguing that the profit-sacrifice test should be a source of evidence in applying the rule of reason but not the sole liability standard); Brief of Economists as Amici Curiae Supporting Petitioner, Weyerhaeuser Co. v. Ross-Simmons Hardwood Lumber Co., 126 S. Ct. 2965 (2006) (No. 05-381) (arguing that the conditions for unlawful predatory buying are profit-sacrifice and likely recoupment). The United States as amicus curiae in \textit{Weyerhaeuser} endorsed a similar test, arguing that the lower courts should have approved a jury instruction that bidding conduct is “anticompetitive only if respondent proved that (1) petitioner suffered a short-term loss as a result of its allegedly higher bid prices, and (2) there was a dangerous probability that petitioner would recoup its loss in the long term.” Brief for the United States as Amicus Curiae on Petition for Writ of Certiorari at 10, \textit{Weyerhaeuser Co. v. Ross-Simmons Hardwood Lumber Co.}, 126 S. Ct. 2965 (2006) (No. 05-381).} It would capture the case in which the predatory price equals the competitive price, as in Figure 4, and the case in which it exceeds the competitive price, as in Figure 5. Such a test, however, potentially outlaws price changes that increase efficiency in the short run, as price moves from the profit-maximizing price of a dominant buyer toward the competitive price. A rule that condemns an efficient price increase is perverse, especially given uncertainty in determining the value of the marginal product, the likelihood of recoupment, and the actor’s intent. For analogous reasons, the Court implicitly rejected the profit-sacrifice test in \textit{Brooke Group}. An efficient monopolist might be able to lower price to a level still above marginal cost yet exclude less efficient competitors. That price would result in a profit sacrifice, but it would not satisfy the \textit{Brooke Group} test. One could argue that a profit-sacrifice test would not deter efficient price changes because the second part of the rule requires the likelihood of recoupment, and any efficiency realized during predation is washed out by the inefficiency imposed during recoupment. But that condition is equally true for predatory pricing, and the Supreme Court adopted a price-cost test for predatory pricing even though it also required a likelihood of recoupment. The price-cost test for predatory pricing is under-inclusive, but it is arguably a justifiable per se rule because it is relatively easy to apply and yields few false negatives and false positives.
A much more troubling implication of the *Weyerhaeuser* rule is its application when a monopsonist does not use additional inputs to increase output. The Court recognizes that to raise input price during the predatory period, the buyer must increase the quantity it purchases, and the Court notes that consumers may not benefit during this stage because the buyer may destroy excess inputs rather than use them to expand output. We demonstrate above that a profit-maximizing predatory buyer with no monopoly power will increase output by using at least some of the additional units of input purchased to exclude competitors, when expected antitrust liability is ignored. If the input represents a large proportion of the variable costs of production, the predator will likely use all of the additional units to produce output; if it represents a small proportion, the predator may destroy or store much of the additional input. In either case, the marginal cost of production rises above output price, though in the second case the difference may be minimal.

But suppose the predator takes potential antitrust liability into account under the Court’s test, understood to require an output price below marginal cost. To avoid liability, the firm must sell output at (or above) marginal cost, and it has no power to affect market price. Even if it destroys all of the excess input, its marginal cost of output will still exceed price, because absent price discrimination it will have to pay the higher, predatory price for all of the units it buys, and so the marginal cost at the quantity it produced before raising input price will rise. But with higher marginal costs, the firm can reduce output below the pre-predation level to the point where the market-determined

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123 See *Weyerhaeuser*, 127 S. Ct. at 1076 n.3.
124 See *id.* at 1078 n.5.
output price equals marginal cost. The predator not only destroys all of the additional units of input purchased, but also some of the units that it had previously used to produce output. The strategy implies a profit sacrifice in the relevant markets, but it may be profitable on balance by reducing competition while avoiding liability.

Whether the Court intended to withhold liability for engaging in this behavior is not altogether clear. No allegation was made in *Weyerhaeuser* that the defendant had destroyed input, but the plaintiff did allege that the defendant had stored logs at an extraordinary rate, and the Court was aware of the charge.\(^{125}\) The anticompetitive effect of destroying input could be achieved alternatively by storing it for future use, or more generally, by withholding it from the market in any way, such as by selling it for scrap or to producers in other output markets. Conceivably the Court would treat the situation as an exception to its cost rule, but the opinion on its face makes the test absolute. Thus, the Court states:

> As with predatory pricing, the exclusionary effect of higher bidding that does not result in below-cost pricing ‘is beyond the practical ability of a judicial tribunal to control without courting intolerable risks of chilling legitimate’ procompetitive conduct. Given the multitude of procompetitive ends served by higher bidding for inputs, the risk of chilling procompetitive behavior with too lax a liability standard is as serious here as it was in *Brooke Group*. Consequently, only higher bidding that leads to below-cost pricing in the relevant output market will suffice as a basis for liability for predatory bidding.\(^{126}\)

If the Court intends its cost rule to apply to the hypothesized strategy, the question becomes whether the cost of input not used is included in the “cost” of output sold. Output cost is conventionally measured by the cost of the input used in the output


\(^{126}\) *Weyerhaeuser*, 127 S. Ct. at 1078 (quoting *Brooke Group*) (citation omitted).
produced. The United States in arguing for application of the *Brooke Group* standard asserted that the plaintiff must show “that the defendant suffered (or expected to suffer) a short-term loss as a result of its allegedly higher bidding,” a requirement that demands “consideration of the relationship between (1) the cost that the defendant incurred (or expected to incur) for its finished product (taking into account its allegedly predatory bidding for the relevant input) and (2) the revenue that the defendant received (or expected to receive) for that product.” That proposed test is sufficiently elastic to include in the relevant cost calculation the cost of input not employed in the short-run production of output. But the description of “cost . . . for its finished product” is not definitive, and the government argued that “the Court need not specify exactly how cost (or revenue) should be calculated” because no consensus has emerged as to the appropriate cost measure in predatory pricing cases and the lower courts in *Weyerhaeuser* had not elaborated on the standard in the predatory bidding context. The government’s position is perplexing, because one cannot sensibly consider “the cost that the defendant incurred” without knowing “exactly how cost . . . should be calculated.” The position is all the more perplexing because the United States did indeed advocate a particular cost standard during oral argument, asserting that it should be incremental cost.

Perhaps the buyer that strategically destroys input to avoid running afoul of the antitrust laws is one of the false negatives that the Court contemplates and tolerates because the costs of eliminating the error are excessive. More likely, though far from

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128 *Id.* at 22.
certain, the Supreme Court, which agreed with the United States that the Brooke Group test in general should apply, intends that the cost of input destroyed or otherwise unproductively withheld or diverted from the output market counts in the calculation of output cost. If so, the appropriate measure of cost, which the Court did not define and which the United States asserted did not need to be defined by the Court, cannot be a conventional measure of marginal cost, for that measure would not include the cost of unused input. It could be average total cost, but that measure, which includes all fixed costs, has generally been rejected in the predatory pricing context. It could instead be a measure limited to the marginal cost of output produced and input purchased but not used. Such a standard, however, would be unconventional at best, and precisely how it would be determined in a particular case is far from clear.

Whatever measure is used, however, serious evidentiary issues can arise if a finding of “below-cost pricing in the output market” depends upon including the cost of unused input. The problem is that even the destruction of input, much less its storage or diversion, is ambiguous. What is observed in every case of alleged predatory buying is an increase in the price paid for an input and an increase in the quantity purchased. The increases may trigger a suspicion of predation. The market price of the output can be

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130 In advocating an incremental cost standard, the United States argued that in the context of predatory buying incremental costs “would mean looking to the amount of the input that was the subject of the alleged predation.” Transcript of Oral Argument, Weyerhaeuser Co. v. Ross-Simmons Hardwood Lumber Co., 127 S. Ct. 1069 (2007) (No. 05-381), 2006 WL 3422209 at *26. The government may have meant that the costs of unused input should be included in calculating the relevant cost, but its position is murky. The point of the statement was that costs incurred to obtain logs from sources other than producers in the bidding market under investigation should be excluded from the calculation, not that costs incurred in acquiring unused input should be included. For example, the opportunity costs incurred for logs grown by the predator and converted to output would be excluded from the analysis. Thus, the government explained, “[I]n a case such as this one, looking to incremental costs may be useful because it effectively excludes from the analysis any potential cross-subsidization, whether by virtue of the fact that in this case, for example, petitioner may have harvested logs from its own land.” Id.
seen, and the defendant’s marginal cost can be determined, at least in theory, and its average variable cost can be estimated in practice with fair precision. The difference between price and actual cost can be calculated. But the inference of expected gains from a price below cost is shaky. The lag between input purchase and output production can be substantial and critical. The defendant may have anticipated a surge in demand that would raise the market price of the output. The defendant may have anticipated lower costs of other inputs. In an ex ante sense, these expectations may not even have been wrong. If the production decisions prove wrong in an ex post sense, the market will punish them. A legal sanction is appropriate only if the decisions were designed to be profitable and had the potential to injure suppliers. The very same observable outcome – a price below cost – is dangerous to the economy depending upon the actor’s purpose and ability.

The destruction of additional input would seem to lead inescapably to an inference of predatory intent. But even here, the inference may be incorrect. The buyer may have misestimated an increase in demand or failed to anticipate an increase in the cost of other inputs. Destruction of the additional input may make sense absent predatory design. For instance, if expected new demand does not materialize and the storage costs of the input are substantial, the loss-minimizing action may be to destroy the excess input. If the input is not perishable and storage costs are low, the loss-minimizing response to a mistaken demand forecast may be to store the excess input. In fact, the decision to increase the amount of input purchased and stored may not have been a competitive mistake even in an ex post sense; because a legal challenge may be initiated.
before the anticipated changes in market conditions occur, the court may not be able to determine accurately whether the defendant’s prediction was correct.

In our view, the best practical approach when the defendant has no monopoly power is to require the plaintiff to prove as a condition of potential liability either that the defendant’s output price is below a conventional measure of marginal, or incremental, cost or that the defendant increased its purchases of the relevant input and destroyed at least a substantial quantity of it; if the plaintiff makes only the latter showing, the burdens of production and persuasion shifts to the defendant to justify the action based on an ex ante assessment of legitimate competitive considerations.\textsuperscript{131} The justification is likely to turn on evidence of intent. An inquiry into intent in antitrust is always problematic, but in the case of predatory buying, intent evidence used carefully, narrowly, and correctly, is all but indispensable.

Our test is not perfect. A strict test that requires an output price below marginal cost is seriously under-inclusive, in that it creates the strategic opportunity for a predator to avoid liability by purchasing input and withholding it from the market. Our proposed test is less under-inclusive than a pure marginal cost-based test, but it is still under-inclusive, because it would permit a strategic predator to harm competition by purchasing excess input and storing it solely to produce an exclusionary effect. As a practical matter, however, a rule that would permit a plaintiff to satisfy its burden of production by showing that the defendant stored input at a higher rate than before would have

\textsuperscript{131} Justice Breyer during oral argument suggested that a rule might permit a justification for pricing conduct that otherwise would be considered predatory: “One test is if they are not going to make money legitimately out of this [i.e., paying high input prices] in the long run, it’s bad, \textit{unless they can explain it away}.” Transcript of Oral Argument, Weyerhaeuser Co. v. Ross-Simmons Hardwood Lumber Co., 127 S. Ct. 1069 (2007) (No. 05-381), 2006 WL 3422209 at *32-33 (emphasis added).
unaclltaetitie seetions. Storage rates are bound to fluctuate naturally and competitively with the vagaries of conditions in the real world. An assertion of uncommonly high storage rates is easy to make and easy to support with enough evidence to avoid summary judgment. The result would be to impose on the defendant the burden of justifying storage decisions routinely in predatory buying cases, thereby increasing the costs of litigation. Our sense is that the costs of a more theoretically precise rule are not worth the benefits.

Our rule would permit the use of a surrogate for marginal cost. We are mindful of the dispute over the appropriate measure, given the practical problems attendant on using marginal cost. The best practical standard probably is average variable cost, despite its theoretical infirmities, though the United States argued in Weyerhaeuser that the standard should be incremental cost.\footnote{Transcript of Oral Argument, Weyerhaeuser Co. v. Ross-Simmons Hardwood Lumber Co., 127 S. Ct. 1069 (2007) (No. 05-381), 2006 WL 3422209 at *26.} Moreover, we recognize the practical difficulties of detecting a difference between marginal cost and output price in some cases. As we demonstrate above, if the predator has no monopoly power, a rational overbuying strategy will result in an increase in the quantity of output sold so that the marginal cost of the output will exceed market price. If the input represents a large proportion of the total variable cost of the output, all or most of the additional input will be used to produce output, and the difference between marginal cost and market price should be discernible. If the input represents a small proportion, little of the additional input will be used, and the difference between marginal cost and market price may be difficult to discern. Nevertheless, the plaintiff shoulders the burden of demonstrating in all cases that output
price is below marginal cost or that input was destroyed. Any lesser requirement poses unacceptable risks of over-inclusion.

The plaintiff must also prove that the defendant recouped or was likely to recoup its predatory losses through profits earned from a reduction in competition. As the *Weyerhaeuser* Court recognized, recoupment is critical, and demonstrating an inability to recoup may be an expeditious way to resolve a claim by avoiding a more difficult inquiry into other parts of the test. The prospect of recoupment is necessary to make predation rational. For this purpose, the relevant concept is that the predator expected to recoup the losses it allegedly sustained in overbuying. Recoupment is also necessary to justify antitrust intervention. Investments in predation are self-deterring if in fact recoupment is impossible, regardless of the predator’s expectations. The inefficiency associated with predatory buying is not alone sufficient to justify the cost of antitrust intervention. When recoupment has either occurred or is likely to occur, however, the conduct is not self-correcting, and the potential welfare loss is much greater.

The Court does not purport to address the case in which the monopsonist also has monopoly power in the output market, whether or not any of its input and output competitors are the same. Suppose a dominant buyer competes with fringe buyers for an input in one market and has monopoly power while competing with a different group of fringe sellers in another market. For example, a firm that produces finished lumber may have monopsony power in the purchase of logs in a regional market where it competes with small pulp mills, and it may have monopoly power in a national lumber market while facing competition from sellers who buy logs in different regional markets. In such a case, the predator might be able to convert the entire increase in the quantity of the
input purchased to additional output without incurring a marginal cost above output price. Rather, the firm would merely reduce its monopoly profits. In such a case, we would require the plaintiff to prove that the defendant sacrificed profits in the output market. No simpler test works. Once again, though, we would allow the defendant to establish a competitive justification.

When the alleged predator has monopoly power and competes with some of the same firms in the input and output markets, overbuying can be rational anticompetitive strategy to increase market price in the output market by increasing the costs of output competitors. In such a case, the firm must have monopoly power, but the other conditions necessary for an anticompetitive effect are different from those that apply when the firm’s objective is to increase monopsony power. For instance, in one typical scenario, a firm can profitably raise output price by raising the input price when the predator uses the input less intensively than its competitors. The rationality of overbuying to increase monopsony power does not depend on a disparate intensity of use. Further, a rational cost-increasing strategy in the output market requires that the overbought input represent a substantial proportion of the total output cost. The condition is not required when the strategy is to increase monopsony power. Rules could be formulated to address the strategy of overbuying to increase output price, but we have not attempted to do so in this Article. We believe a full-blown reasonableness analysis is imperative. We are concerned, however, that if the approach to output market overbuying is not rigorous, a plaintiff could circumvent the rules for the input market case by merely alleging output predation. At a minimum, therefore, the plaintiff should
be required to prove that the defendant had monopoly power and that the alleged overbuying resulted in an increase in output price and a decrease in output quantity.

VI. Reconsidering Weyerhaeuser

The Court believed that “Ross-Simmons has conceded that it has not satisfied the Brooke Group standard.”133 The Court, therefore, had no occasion to consider the evidence as it bore upon cost and recoupment. But the appellate court’s opinion cites evidence indicating that Weyerhaeuser’s pricing conduct was not predatory, and it demonstrates the wisdom of a per se rule.

Under the first prong of our modified rule, the plaintiff would be required to prove that the alleged predator sold its output at a price below marginal cost (or a surrogate) or destroyed input. In this case, because sawlogs represent about 75% of a sawmill’s total cost of producing alder lumber, overbuying would result in an output price below marginal cost if all input were converted to output, and the difference between price and cost would be discernable. No evidence of such a relationship was introduced. Moreover, the plaintiff apparently did not allege that Weyerhaeuser destroyed any sawlogs, and therefore the defendant was not obliged to establish a competitive justification. It did allege that Weyerhaeuser stored unusually high volumes of sawlogs,134 but that allegation does not satisfy the first part of our test.

Absent the requisite proof of potential anticompetitive effect, an analysis of recoupment is unnecessary. Nevertheless, the plaintiff did not establish the likelihood of

133 See Weyerhaeuser, 127 S. Ct. at 1078. At oral argument, however, counsel for Ross-Simmons conceded that if the Brooke Group standard applies, the jury instruction was wrong, but did not appear to concede that Ross-Simmons did not or could not satisfy the standard. See Transcript of Oral Argument, Weyerhaeuser Co. v. Ross-Simmons Hardwood Lumber Co., 127 S. Ct. 1069 (2007) (No. 05-381), 2006 WL 3422209 at *49.

134 See supra note xx and accompanying text.
recoupment. The allegation in this case was that Weyerhaeuser would recoup its predatory losses by lowering prices for alder sawlogs after competitors were driven from the market. That conduct would require significant entry barriers; the alleged period of predation was at least the three- or four-year period 1998-2001, and for the predation to be rational, the present value of monopsony profits earned during recoupment would have to exceed the losses incurred during that period. The court concluded that the market was protected by entry barriers because of “the high capital costs new entrants faced and the limited availability of sawlogs.” The conclusion is problematic. The court sensibly defined entry barriers consistent with the Stiglerian definition as “additional long-run costs that were not incurred by incumbent firms but must be incurred by new entrants . . . .” It pointed to evidence that new technology had been developed since Weyerhaeuser had entered the market and that the cost of entering the market had risen to $20-$25 million. But the court recognized that Weyerhaeuser had been forced to acquire the new technology, implying that the cost did not qualify as an entry barrier under its own definition. The court’s explanation for the apparent anomaly was that Weyerhaeuser was able to incur the cost “over time without bearing the burden of heavy front-end costs to gain entry into the market.”


139 Id.
The court’s logic is elusive. By itself, the cost of operating an efficient sawmill is not an entry barrier. The time required to enter a market may be relevant as a matter of antitrust policy, even if it is not a Stiglerian entry barrier, but the amount of capital needed says little about time. Moreover, the fact that Weyerhaeuser purchased 65% of the available sawlogs implies that 35% of the input was available for new entrants and fringe competitors. Of course, any new entrant would have to pay the market price for sawlogs, which had been driven up by Weyerhaeuser’s increased purchases. But contrary to the court’s insinuation, market price is not an entry barrier in a relevant sense of the term. A competitive price deters entry, but it is the antithesis of a condition that allows a firm to exercise market power. A price above the competitive level because of predatory overbuying also deters entry, but the relevant question is whether some condition would forestall entry after price drops, when firms would otherwise be inclined to enter.

Worse yet, the court mangled the significance of actual entry and exit. Four new mills entered the market during the period of predation, and 31 competitors left the market. New entry does not necessarily demonstrate a lack of entry barriers, according to the court, because the new entrants may be “‘insufficient to take significant business away from the predator’” and would therefore not “‘represent a challenge to the

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140 See generally POSNER, supra note xx, at 73-74.

141 The court recited evidence that Weyerhaeuser also “entered into exclusive agreements that restricted competitors’ access to sawlogs.” Confederated Tribes, 411 F.3d at 1044, rev’d sub nom. Weyerhaeuser Co. v. Ross-Simmons Hardwood Lumber Co., 127 S. Ct. 1069 (2007). The competitive significance of any such agreements cannot be assessed without additional information.

142 See id. at 1044. The court noted ominously that “as soon as the [actual] new entrants came into the market, they had to pay the sawlog prices Weyerhaeuser set.” What price would an entrant pay other than the market price?

143 Id. at 1044, 1044 n.57.
predator’s market power.”144 Certainly actual new entry during recoupment does not disprove the recoupment necessary to make a predatory buying strategy rational and unlawful. If the predator lowers price after eliminating former competitors, that price may attract new entrants, if entry is possible. But they may not enter on a scale or at a rate sufficient to prevent the predator from earning monopsony profits that fully offset the predatory investment. This seems to be the logic the court had in mind. But the significance of new entry during predation is quite different. If a predator has driven the market price of an input above the competitive level, it would rarely make sense for a new buyer to enter the market at that time. (Indeed, if a predatory strategy were intended to create a reputation for predation, the fact that new entry occurred in the market where high prices were paid while those prices were being paid would indicate a disastrous miscalculation.) The natural inference from new entry during alleged predation is that the market price, albeit higher than previously paid, is in fact a competitive price. Exit of competitors while prices are high is, of course, consistent with predation, but it is hardly conclusive proof. The court suggested that expensive and important new technology had been developed during the prior several years.145 A reasonable assumption is that some inefficient, incumbent sawmills chose to exit the market rather than invest in the equipment necessary for efficient production; conversely, the new entrants elected to make the required investment. The pattern of exit and entry was consistent with a competitive, dynamic alder sawlog market.

144 Id. at 1044 (quoting Rebel Oil Co. v. Atl. Richfield Co., 51 F.3d 1421, 1440 (9th Cir. 1995)).
145 Id. at 1044.
Of potentially greater significance is evidence that “Weyerhaeuser’s market share actually increased even though the four new mills entered the market.” An overbuying monopsonist would be expected to increase market share during predation, as competitors either reduced their purchases or held their purchases constant. And if new competitors had some conceivable interest in entering the market during predation, their purchases might not be sufficient to prevent the predator’s market share from increasing. But new entry during predation will rarely be rational, and the more likely reason that Weyerhaeuser increased its market share while pricing high and entry was occurring is that it was an efficient operation in a competitive, dynamic market; inefficient firms were leaving the market, and efficient, new competitors were beginning to arrive.

VII. Conclusion

The use of price to injure competition on the buying side of a market and thereby increase monopsony profits cannot be dismissed as theoretically implausible, but there are reasons to believe the practice is uncommon. Monopsony and monopoly are economically symmetrical, and both reduce efficiency by distorting the allocation of resources. A coherent antitrust policy designed to maximize wealth would treat monopsony and monopoly as equivalents. For that reason, exclusionary behavior is equally objectionable whether it increases monopsony power of monopoly power. The fact that an increase in monopsony power may have little impact on consumers does not mitigate the antitrust concern, because the negative impact on sellers by itself warrants equal antitrust concern, a point oddly unacknowledged by the Supreme Court.

146 Id.
Just as monopsony and monopoly are economically symmetrical, predatory buying and predatory pricing are legally symmetrical, at least when the purpose of predatory buying is to increase monopsony profits. The Court’s two-prong approach to predatory pricing is clear and, though criticized, defensible. The Court believes that the approach can be applied to predatory buying with little adaptation. Indeed, the second prong – that the defendant had a reasonable probability of recouping its investment in predation – does apply easily to predatory buying. But the comparison between cost and price required by the first prong is problematic in the context of predatory buying, because the comparison is not conducted for the good that is the subject of the alleged predation. The Court requires an examination of the price and cost of the defendant’s output, whereas the predation relates to the defendant’s purchase of an input. The Court’s test nevertheless works well as long as one assumes that the defendant productively uses all of the input purchased. Otherwise, the test breaks down. The Court’s test can be usefully modified to require a defendant to justify the destruction of input. Even so, input can be disposed of strategically and anticompetitively in other ways, and neither the Court’s test nor any practical modification of it is a perfect antitrust screen.
Figure 1
Figure 2
Figure 4
Figure 5