



VOLUME 2 | NUMBER 1 | SPRING 2006

Competition Policy International

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The success of the Areeda-Turner test for predatory pricing and the U.S. Supreme Court's adoption of demanding proof requirements in its 1993 *Brooke Group* decision have made it very difficult for plaintiffs to win conventional predatory pricing claims. While many challenges to exclusionary pricing continue to be made, the legal theory has evolved away from classical predation to a variety of other theories. These theories include challenges to quantity and market share discounts, single item and package discounts, and various purchasing practices, including slotting fees, overinvestment in fixed cost assets, and overbuying of variable cost inputs. Plaintiffs have enjoyed somewhat greater success with these alternative theories, in large part because the practices are not as well understood as conventional price predation is. This paper examines the state of the law of both conventional predatory pricing and these more recent variants and offers some recommendations.

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I. Introduction

The thirty years since the publication of Areeda and Turner's landmark article on predatory pricing have witnessed a revolution in the antitrust law of exclusionary pricing.¹ The result has been that classical predatory pricing complaints have nearly disappeared from the antitrust case law, and plaintiffs rarely win them.² Nevertheless, the law of exclusionary pricing has hardly disappeared. Rather it has morphed into the law of anticompetitive discounts, slotting fees, or spending.

Areeda and Turner's 1975 article, subsequently expanded in Volume 3 of the *Antitrust Law* treatise,³ observed that predatory pricing was rational only if the predator could recoup its investment in predation with a comfortable period of post-predation monopoly profits.⁴ In addition they argued, because the danger of false positives is considerable, predatory pricing should be condemned only on prices that are below cost, and that the most useful measure of cost is either short-run marginal cost (MC) or average variable cost (AVC). Areeda and Turner added that in most cases AVC is the better measure because it is typically easier to compute in litigation.⁵

While the U.S. Supreme Court has never passed judgment on the correct price/cost test for predatory pricing, the U.S. Circuit Courts have generally agreed that either marginal cost or average variable cost is the correct number. Only the U.S. Court of Appeals for the Eleventh Circuit adheres to an average total cost

1 See Phillip E. Areeda & Donald F. Turner, *Predatory Pricing and Related Practices Under Section 2 of the Sherman Act*, 88 HARV. L. REV. 697 (1975) (reprinted in 1 COMPETITION POL'Y INT'L 2, 177-212).

2 One important, recent counterexample is *Spirit Airlines, Inc. v. Northwest Airlines, Inc.*, 431 F.3d 917 (6th Cir. 2005) (denying summary judgment on small air carrier's predatory pricing claim against Northwest Airlines) [hereinafter *Spirit Airlines*].

3 3 PHILLIP E. AREEDA & DONALD F. TURNER, *ANTITRUST LAW*, at Ch. 7C (1978); the current version is 3 PHILLIP E. AREEDA & HERBERT HOVENKAMP, *ANTITRUST LAW*, at Ch. 7C (2d ed. 2002 & 2005 Supp.).

4 See Areeda & Turner, *supra* note 1, at 698:

[P]redation in any meaningful sense cannot exist unless there is a temporary sacrifice of net revenues in the expectation of greater future gains. Indeed, the classically-feared case of predation has been the deliberate sacrifice of present revenues for the purpose of driving rivals out of the market and then *recouping* the losses through higher profits earned in the absence of competition. Thus, predatory pricing would make little economic sense to a potential predator unless he had (1) greater financial staying power than his rivals, and (2) a very substantial prospect that the losses he incurs in the predatory campaign will be exceeded by the profits to be earned after his rivals have been destroyed. (emphasis added)

These concerns were restated in 3 ANTITRUST LAW ¶ 711b (1st ed. 1978).

5 See 3 ANTITRUST LAW ¶ 740 (2d ed. 2002).

test.⁶ While Areeda and Turner never elaborated very much on their recoupment requirement, other than to state that it required a close appraisal of monopoly power and entry barriers, subsequent literature did. In its 1993 *Brooke Group* decision, the Supreme Court assessed a stringent recoupment requirement.⁷

These twin requirements have proven to be devastating for most predatory pricing plaintiffs in the federal courts. The requirements are well-established in the case law and unlikely to be rejected anytime soon. Taken together, they almost certainly make the law of predatory pricing somewhat underdeterrent; that is, current law probably fails to recognize some instances of exclusionary pricing whose overall welfare effects are negative. But it is equally clear that a more lenient set of rules would produce many challenges and chill a great deal of aggressive, but pro-competitive, pricing. The social cost of the resulting limits on competition would almost certainly be much greater than that of the occasional instance of anticompetitive strategic pricing that goes unrecognized.

The antitrust law of predatory pricing, more than any other area, is dedicated to the principle that the social cost of false positives in antitrust analysis is higher than the cost of false negatives.⁸ False positives often will induce firms not to price aggressively for fear of large treble damage awards. As a result, their impact reaches far beyond the parties to a particular lawsuit and can cause significant harm to the economy. By contrast, false negatives are thought to be much rarer and, as a result, they affect only a few firms in a few situations. The number of markets that are structurally conducive to durable monopoly created by predatory pricing is undoubtedly quite small. Further, the natural forces of competition are more likely to correct for false negatives. To be sure, these propositions are difficult to test, but they seem intuitively correct.

Notwithstanding the numerous criticisms to the MC/AVC test that have been addressed, no alternative has proven to be more reliable or more workable. The intuition behind using reasonably anticipated marginal cost⁹ is that competition drives prices to that level, and firms cannot profit when they go below it. As a result, prices above marginal cost are consistent with at least competitive returns, and prices below marginal cost require an explanation. The intuition behind

6 See *McGahee v. Northern Propane Gas Co.*, 858 F.2d 1487, 1500 (11th Cir. 1988), *cert. denied*, 490 U.S. 1084 (1989).

7 *Brooke Group Ltd v. Brown & Williamson Tobacco Corp.*, 509 U.S. 209 (1993) [hereinafter *Brooke Group*]; see 3 ANTITRUST LAW ¶ 726 (2d ed. 2002).

8 See HERBERT HOVENKAMP, *THE ANTITRUST ENTERPRISE: PRINCIPLE AND EXECUTION* 158-174 (2006).

9 We speak of “reasonably anticipated” MC or AVC because the number must be measured *ex ante*. Whenever there is a time lag between production and sale, a firm must guess at how much to produce and may have to estimate both input costs and market price. Firms cannot be penalized because *ex post* prices fall below the cost measure where the firm’s reasonable expectations were to the contrary.

using AVC as a surrogate is that, first, in a competitive equilibrium MC and AVC are very close to each other. Second, AVC is theoretically easier to measure—one simply identifies the firm’s variable costs over a defined time period, and divides this number by the number of units of output. Indeed, AVC is more than a surrogate. It is independently defensible because AVC is the typical firm’s “shutdown” price. That is, a firm will continue in production as long as it is recovering variable costs and making some contribution to fixed costs; but, once prices fall below AVC, production itself is costly. To be sure, practical problems are considerable. The line between variable and fixed costs is often ambiguous and joint costs are very difficult to take into account. Nevertheless, AVC is typically easier to measure than MC.¹⁰

As legal tests, both marginal cost and average variable cost are fairly crude attempts to equate non-predatory price levels with sustainability. Prices below MC or AVC are non-sustainable because the firm has greater costs than revenues and must eventually exit from the market. A few writers have equated the recoupment requirement with lack of sustainability. In that view, the *Brooke Group* showing of recoupment is necessary only if the law requires prices below cost, because when prices are above cost there is nothing to recoup.¹¹ But this position ignores the fact that predatory pricing strategies are costly to the firm whether or not the predatory price is below or above cost. Consider the dominant firm that has costs of 6 and a short-run profit-maximizing price of 10¹² but who expects entry to the competitive level to occur within four years if it charges that price. However, the firm also calculates that a price of 8, still well above its costs, would deter new entry indefinitely. While the price of 8 is completely sustainable, this hardly entails that the firm who employs this strategy has nothing to recoup. During the first four years it will earn less, and this loss must be regarded as an investment in the longer stream of supracompetitive profits that it anticipates. The investment is profitable only if the longer stream of sales at a price of 8 generates greater profits than the shorter stream of sales at a price of 10. In sum, even if predatory pricing law abandoned the requirement of below-cost sales, some theory of recoupment would very likely be required—indeed, the requirement would be even more important because the risk of false positives is significantly higher when courts are authorized to condemn above cost prices as predatory.

EVEN IF PREDATORY PRICING LAW ABANDONED THE REQUIREMENT OF BELOW-COST SALES, SOME THEORY OF RECOUPMENT WOULD VERY LIKELY BE REQUIRED.

10 See 3 ANTITRUST LAW ¶¶ 740, 742 (2d ed. 2002).

11 E.g., Aaron S. Edlin, *Stopping Above-Cost Predatory Pricing*, 111 YALE L.J. 941, 942 (2002); Einer Elhauge, *Why Above-Cost Price Cuts To Drive Out Entrants Are Not Predatory—and the Implications for Defining Costs and Market Power*, 112 YALE L.J. 681, 697 (2003).

12 A firm’s short-run profit-maximizing price is the price determined by equating the firm’s immediate marginal costs and marginal revenues without considering the impact of this price on expansion by or entry of rivals.

One problem with using AVC rather than MC as a measure of predation is that at high levels of output, where predation presumably occurs, MC and AVC diverge, with MC higher than AVC.¹³ Assuming that MC is the theoretically correct measure, the AVC surrogate becomes increasingly favorable to defendants as output increases beyond the plant's optimal level. This result has prompted some critics to label the AVC test a "defendant's paradise."¹⁴ Of course, this is fully consistent with the observation that the current law of predatory pricing is somewhat underdeterrent, but that false negatives are not nearly as damaging in this situation as false positives.

Another problem with the marginal and average variable cost tests has been the tendency to measure these costs too myopically, considering only the short-term possible run. In some markets, such as those having significant intellectual property components, short-run marginal cost would produce prices that are much, much lower than the sustainable level. For example, consider computer software, where development costs might run into the hundreds of millions of dollars, but short-run production costs consist of little more than the cost of stamping a CD-ROM and packaging, or become virtually zero in the case of downloadable software. In such cases, a sustainable price must be sufficient to amortize the firm's R&D development. In order to be effective, a predatory pricing test would have to attribute some element of R&D costs to each unit of production. But doing this is extraordinarily difficult unless the product has already exhausted its commercial life, given that most firms set price without knowing how many units they will sell over the product's lifecycle. A firm that anticipated sales of 1,000,000 units might later be charged with predatory pricing if it ended up selling only 300,000, thus entailing larger per unit production costs. To date, these problems have no administrable solutions.

A good example of myopia in the computation of AVC is the *American Airlines* case, where the court refused to consider opportunity costs in determining whether American had charged below-cost prices.¹⁵ In response to entry by small carriers American not only cut prices drastically, it also shifted aircraft from profitable routes elsewhere in order to flood the routes where competitive entry had occurred. The court refused to consider the revenue foregone from the vacated routes as part of the cost of predation. The court incorrectly characterized the government's theory as showing, not that prices were below cost, but that American was simply not maximizing its profits.

13 See 3 ANTITRUST LAW ¶1 740c (2d ed. 2002).

14 See Oliver E. Williamson, *Predatory Pricing: A Strategic and Welfare Analysis*, 87 YALE L.J. 284, 305 (1977).

15 *United States v. AMR Corp.*, 140 F.Supp.2d 1141 (D.Kan. 2001), *aff'd*, 335 F.3d 1109 (10th Cir. 2003).

To be sure, excessive speculation about opportunity costs could lead courts on fishing expeditions for ways that a defendant might have earned more by selling a different product or selling it in a different place. But that was not what the government was asking for in this case. Known aircraft were being shifted into the predatory routes and shifted back again once rivals had been driven from the market. The U.S. Court of Appeals for the Sixth Circuit appraised opportunity costs much more realistically in the *Spirit Airlines* decision.¹⁶

As for the recoupment requirement, its real impact has been to require courts to take two factors much more seriously. The first is the cost of a predation scheme, focusing particularly on its duration. The second is the responsiveness of actual and potential rivals, which necessitates inquiries into the height of entry barriers, the disposition of victims' assets,¹⁷ and the ability of existing rivals to increase output quickly in response to higher prices.

As presently formulated, the recoupment requirement makes sense when firms are attempting to create a monopoly or leverage up a dominant position by cutting prices. Predation is costly. The more costly it is, the greater the payoff must be if predation is to be a rational investment. Given our very poor abilities to identify predatory pricing strategies, the recoupment requirement serves to limit predatory pricing liability to those cases where predatory pricing is not a self-detering strategy. If recoupment is not in the cards, judicial intervention, with its propensity to error, is unnecessary.

Ironically, the poorest case for insisting on a strong recoupment requirement is *Brooke Group* itself, where the U.S. Supreme Court developed the concept. *Brooke Group* did not involve monopoly predatory pricing, but rather predation that was intended to discipline a fairly durable oligopoly that had shown some signs of instability. An important difference between monopoly and oligopoly predatory pricing is that in the monopoly case the predator is bent mainly on destroying its victims, while in the oligopoly case it is intent mainly on bringing them back into the fold. As a result, the alternatives facing the victim of oligopoly pricing are much more attractive than those facing the victim of a monopolization scheme. In the oligopoly case, the firm can either face predatory losses (or returns that are no better than competitive), or else it can rejoin the oligopoly equilibrium and earn high profits. For this reason, disciplinary pricing in an oligopoly is much more likely to be a rational strategy than it is in the monopoly situation. In that case, an overly lenient predatory pricing rule can serve to sta-

16 See *supra* note 2.

17 For example, sometimes victims' assets are auctioned off to competitors in bankruptcy proceedings at very low prices, giving the competitors increased capacity and a lower fixed cost base. See 3 ANTITRUST LAW ¶ 729f (2d ed. 2002); and see *Cargill v. Monfort*, 479 U.S. 104, 119 n. 15 (1986), which noted the problem.

bilize oligopolies. Once again, coming up with an administrable rule is extraordinarily difficult. We certainly do not want to condemn price cuts to the competitive level even though these may be all that is necessary to discipline a maverick in an oligopoly market.¹⁸ In the *Brooke Group* case, however, prices were cut to levels well below variable costs.

II. The New Frontiers of Price Predation Claims

The new antitrust challenges to unilateral pricing practices have focused on strategies that are perhaps best characterized as purchases of exclusionary rights. They are sometimes referred to as quasi-exclusive dealing, or quasi-tying. In a quasi-exclusive dealing situation, the dominant firm might offer a lower price in exchange for a purchaser's agreement to:

- (a) purchase all of the covered goods from the defendant;
- (b) purchase a specified quantity from the defendant; or
- (c) purchase a specified minimum share of its total purchases from the defendant.

In the quasi-tying practices, the defendant might:

- (a) offer a discount in exchange for an agreement to purchase two products jointly; or
- (b) offer a discount that is aggregated across multiple products, typically by pegging the discount to gross sales of a list of products, rather than on each product individually.

In yet another scenario, a supplier makes up front payments to a retailer for exclusive access to a specified amount of shelf space—so-called “slotting” fees.

The migration in the case law from older, head-on challenges to single-product prices as predatory is not difficult to understand. Given the general lack of success experienced by post-*Brooke* predatory pricing plaintiffs, a new approach was needed. Some of the new challenges take advantage of the fact that certain vertical practices, particularly tying, have been treated under more aggressive legal tests than have been applied to simple price cutting. Tying is still nominally covered by an aggressive, but misconceived, per se rule.¹⁹ Exclusive dealing is addressed under the rule of reason and proving illegality is difficult enough for

18 See Ian Ayres, *How Cartels Punish: A Structural Theory of Self-Enforcing Collusion*, 87 *COL. L. REV.* 295, 302 (1987).

19 On this odd per se rule, see 9 PHILLIP E. AREEDA & HERBERT HOVENKAMP, *ANTITRUST LAW* ¶ 1720 (2d ed. 2004).

plaintiffs; however, it does not require a showing of prices below cost or recoupment, and plaintiffs do continue to win a few cases.²⁰

But are these various discounting practices sufficiently unlike conventional predatory pricing to warrant departure from *Brooke Group* standards? Traditional tying and exclusive dealing are typically long-term contractual arrangements or offerings. The buyer can purchase the good subject to the exclusive agreement only by breaching its contract or else by giving up something else in which it has made a significant investment. For example, a franchise tying or exclusive dealing agreement typically requires the franchisee or dealer to purchase the supplier's good exclusively. The buyer can purchase the good from rivals only by giving up its franchise or dealership, which may be far more valuable to the dealer than the value of any savings from an alternative purchase, particularly if the dealer has significant sunk costs invested in its dealership.²¹ The result is that an equally efficient producer of the excluded product cannot steal the sale simply by offering a somewhat lower price. For example, the pizza franchisees in *Queen City* or the tooth product dealers in *Dentsply* could not profit by purchasing cheaper pizza dough or tooth filling materials from a rival seller because any gains from lower prices would almost certainly not be enough to compensate them for the loss of their dealerships.²²

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By contrast, the discount conditioned on exclusivity places the buyer in a much different position: when it purchases from a rival it loses the discount, but not its dealership or franchise. If Domino's merely offered its franchisees a 10 percent discount if they committed to purchasing all of their pizza dough from their franchisor, then any rival would have been able to steal the franchisees' trade simply by meeting or beating the discounted price. Because the franchise itself is not at risk, an equally efficient rival should be able to steal the sale as long as the fully discounted price is above cost. Further, because the strategy excludes only if the prices are predatory, *Brooke Group*'s recoupment requirement applies as well.

20 *E.g.*, *United States v. Dentsply Int'l, Inc.*, 399 F.3d 181 (3d Cir. 2005), *cert. denied*, 126 S.Ct. 1023 (2006) [hereinafter *Dentsply*].

21 *See, e.g.*, ROGER D. BLAIR & DAVID KASERMAN, *LAW AND ECONOMICS OF VERTICAL INTEGRATION AND CONTROL* (1983); Paul Joskow, *Asset Specificity and the Structure of Vertical Relationships: Empirical Evidence*, 4 J.L., ECON. & ORG. 95 (1988); Ian MacNeil, *Contracts: Adjustment of Long(Term Economic Relations Under Classical, Neoclassical, and Relational Contract Law*, 72 Nw. U. L. REV. 854 (1978).

22 *Queen City Pizza, Inc. v. Domino's Pizza, Inc.*, 124 F.3d 430 (3d Cir. 1997), *cert. denied*, 523 U.S. 1059 (1998) (refusing to condemn franchisor's requirement that franchisees purchase its own pizza dough exclusively) [hereinafter *Queen City*]; *Dentsply, supra* note 20 (condemning manufacturer's requirement that dealers purchase its artificial tooth material exclusively).

This analysis applies to all situations in which the discount applies to a single product, or where the discount applies to multiple products but at least one significant rival makes the same set of products. In all such cases, an equally efficient rival could steal the sale. It necessarily also applies to quantity and market-share discounts.²³ A fortiori, a discount that requires the purchaser to take less than 100 percent of its product from the seller excludes less than a discount conditioned on exclusivity.

III. Package Discounts

A package discount is one that is aggregated across two or more distinct goods.²⁴ In order to have the effects associated with package discounts, the discount must not merely apply to two or more goods; it must also be aggregated across them. For example, if a seller sells widgets (A) and gadgets (B) and gives the buyer a 10 percent discount for taking at least 10,000 units of either, that is not a package discount. Failing to meet the quota on one does not impact the price of the other. A package discount would be an offer of a 10 percent discount if the buyer took 20,000 units of any combination of A and B; or alternatively, if it took at least 80 percent of its total needs of A and B from this particular seller.

Package discounts can exclude even equally efficient rivals who do not sell all of the goods in the package. For example, suppose that the dominant seller has costs of $c_A = 10$ and $c_B = 6$. It offers individual prices of $p_A = 14$ and $p_B = 8$. The seller also offers a discounted price of 19 to a buyer who takes one A and one B. Note first that the price of the package, 19, is well above the seller's costs of 16. However, while an equally efficient rival could sell B alone for 6, undercutting the seller's undiscounted price, it would not be profitable for the buyer to purchase B at 6 from the rival. The buyer would have to pay 14 for the dominant firm's product A, and the combined $p_A + p_B$ price would be 20. Indeed, the only way the rival could make the customer an attractive offer would be to sell B at a price under 5, which would be less than its costs.

While this practice could exclude particular rivals, it would be exclusionary in the antitrust sense only if no substantial rival offered the same AB package that the dominant firm did. That is, if two or more equally efficient firms offered the AB package, then a package discount to 19 would be easily met. So the strategy

23 *E.g.*, *Concord Boat Co. v. Brunswick Corp.*, 207 F.3d 1039 (8th Cir.), *cert. denied*, 531 U.S. 979 (2000) (refusing to condemn above cost market share discounts because purchasers were free to walk away at any time and purchase from a rival).

24 See *LePage's, Inc. v. 3M Corp.*, 324 F.3d 141 (3d Cir. 2003) (en banc), *cert. denied*, 540 U.S. 807 (2003) (condemning package discounts without requiring below-cost pricing) [hereinafter *LePage's*]; accord *SmithKline Corp. v. Eli Lilly & Co.*, 575 F.2d 1056 (3d Cir.), *cert. denied*, 439 U.S. 838 (1978); cf. *Virgin Atlantic Airways Ltd. v. British Airways PLC*, 69 F.Supp.2d 571, 580 n. 8 (S.D.N.Y. 1999), *aff'd on other grounds*, 257 F.3d 256 (2d Cir. 2001) (refusing to condemn).

requires as a minimum condition that all significant rivals offer either item A or item B, but not both.

The legal debate over package discounts has focused mainly on whether they should be analogized to predatory pricing or to tying. Defendants have generally preferred a test likening the practices to predatory pricing, which typically means proof that the price of the bundle is below the seller's marginal or average variable cost for the goods contained in the bundle, and that the defendant will be able to recoup its predation investment with higher prices once rivals are excluded from the market. By contrast, plaintiffs have likened bundled discounts to tying arrangements, which require proof that two different goods are tied together, but do not require either below-cost prices or recoupment.

The tying analogy is the better one, but a cost test is necessary to establish that the two products are indeed tied. Tying law requires that the tying and tied product be tied together, which means that the buyer has a strong incentive to take both products from the seller, thus excluding rivals in the tied product market. The most explicit tie is the contract requiring the buyer to purchase both goods, as when a fast food franchisor requires franchisees to purchase all of a certain ingredient from the franchisor or else forfeit its franchise. Some contractual tying requirements can be implicit rather than explicit, and tying must then be proven from the circumstances.²⁵ In other cases, the tie is "technological," as when the maker of a camera designs it in such a way that it will accept only its own film cartridges.²⁶ Finally, package discounts are ties when the pricing strategy makes it unprofitable for rivals to match the package discount.

Two products are said to be "tied together" by means of a package discount if one attributes the total discount to the particular good for which exclusion is claimed and the resulting price is below that good's marginal or average variable cost. In that case, a purchase of the goods separately will be more costly than purchasing them in the bundle.²⁷

25 *E.g.*, *Cia. Petrolera Caribe v. Avis Rental Car Corp.*, 735 F.2d 636, 637-638 (1st Cir. 1984) (tying or rental cars and gasoline could not be inferred merely from fact that large proportion of defendant's rental car customers also purchased gasoline from defendant); *American Mfrs. Mut. Ins. Co. v. American Broadcasting-Paramount Theatres*, 446 F.2d 1131 (2d Cir. 1971), *cert. denied*, 404 U.S. 1063 (1972) (simple hard bargaining where seller preferred tie and buyer acquiesced without making a counteroffer did not constitute tying); *Unijax v. Champion Int'l*, 683 F.2d 678, 686 (2d Cir. 1982) (mere fact that plaintiff purchased the two products together as offered did not constitute tying absent evidence that the defendant would have refused a request to sell them separately).

26 For all these variations of the requirement that two products be "tied" together, see 10 ANTITRUST LAW ¶¶ 1752-1758 (2d ed. 2004). See *Berkey Photo v. Eastman Kodak Co.*, 603 F.2d 263, 287 (2d Cir. 1979), *cert. denied*, 444 U.S. 1093 (1980) (design required user's of new Kodak camera to use its cartridge film as well). See also *United States v. Microsoft*, 253 F.2d 34, 66-67 (D.C. Cir. 2001), *cert. denied*, 534 U.S. 952 (2001) (Microsoft's "commingling" of Windows and Internet Explorer code made it impossible for a buyer to purchase one without the other).

27 To be sure, a rival who sold both items could match the offer, but it would still be a tied offer. So while the goods are tied together, a buyer in that case could purchase from alternative sellers.

This discount attribution test establishes that two goods are tied together. Even when tying exists, however, most such arrangements are lawful because they occur in competitive markets or have perfectly innocent explanations. Package discounts are competitively harmless if they do not exclude rivals sufficiently to facilitate the exercise of market power, if they are cost justified because joint provision is less expensive than single provision, or if joint provision improves product quality or pleases customers in other ways.²⁸

Joint provision can also be a means of price discrimination. For example, suppose that the dominant seller sells A and B with costs $c_A = 6$ and $c_B = 8$. Buyers X and Y both value A and B, but by different amounts:

X's reservation prices are $p_A = 7$; $p_B = 12$

Y's reservation prices are $p_A = 10$; $p_B = 9$

If the seller sold the goods separately it could set prices of $p_A = 7$ and $p_B = 9$, selling two of each A and B and earning total profits of 4. Alternatively, it could sell 1 A at $p_A = 10$ and 1 B at $p_B = 12$, earning total profits of 8. The seller's best alternative would be to sell one of each at the higher prices. However, if the seller charged $p_{AB} = 19$ for the package, both buyers would purchase both products, and the seller would earn profits of 10.

While this illustration can be written an infinite number of ways, it shows that bundling can be output-increasing even though it results in higher economic profits to the seller. In the above illustration, the seller who is prohibited from offering a bundled discount would sell individually at prices of $p_A = 10$ and $p_B = 12$, and output would be half as high as with a bundled discount price of $p_{AB} = 19$.

No good rationale exists for condemning output increasing practices under the antitrust laws. More significantly, the profitability of bundling used to achieve price discrimination does not depend on the exclusion of any rival. The only objection to the practice under these circumstances is that it extracts more consumers' surplus than single product pricing would, or perhaps that the transaction costs of a price discrimination scheme exceed any gains that price discrimination might produce. But these are certainly not warrants for condemning a practice as exclusionary under Section 2 of the Sherman Act.

The case law on bundled discounts has just begun to scratch the surface of these issues. Although the opinion is unclear, the *LePage's* case condemned bundled discounts without a showing that an equally efficient rival could not match the discounts. Several district court decisions have assessed the basic require-

28 See, e.g., David S. Evans & Michael Salinger, *Why Do Firms Bundle and Tie? Evidence from Competitive Markets and Implications for Tying Law*, 22 YALE J. ON REG. 37 (2005). They can also be efficient under the same general conditions that tying or exclusive dealing are efficient. On tying, see 9 ANTITRUST LAW ¶¶ 1711-1718 (2d ed. 2004); on exclusive dealing, see 11 ANTITRUST LAW ¶¶ 1810-1814 (2d ed. 2005).

ment that when the discount is fully attributed to the exclusion product the price of that product must fall below cost.²⁹ In general, however, the decisions have not reached beyond this to analyze why even bundled discounts that meet this test might be beneficial or competitively benign.

A sensible legal test for unlawful package discounts would proceed in this way. If the defendant had one or more rivals that produced the same goods as are included in the package discount, then the package would be unlawful only if the package as a whole was sold at a price less than the relevant measure of cost—that is, the general test for predatory pricing would apply. By contrast, if the defendant was the only firm that offered the discounted package, the analysis would proceed in two steps. First, a price/cost analysis would have to be used to establish that the products in the bundle are actually tied together. Tying would occur if, when all discounts are attributed to the product upon which exclusion is claimed, the price of that product falls below the relevant measure of cost. If the overall price of the bundle exceeds cost, however, then all the defenses normally applied in tying arrangement cases would apply here as well. Bundling is generally pro-competitive if it reduces transaction costs, results in improved products or services, or enables quality control.³⁰

BUNDLING IS GENERALLY PRO-COMPETITIVE IF IT REDUCES TRANSACTION COSTS, RESULTS IN IMPROVED PRODUCTS OR SERVICES, OR ENABLES QUALITY CONTROL.

Even this test would have to be qualified in a market in which some rivals produced only the A product and others produced only the B product. In that case, a pair of rivals could join together and match the dominant firm's package discount.³¹ This could also happen if a broker or other intermediary assembled goods from numerous sellers and was able to offer a package on terms equivalent to those being offered by the defendant.

29 See *Information Resources, Inc. (IRI) v. Dun & Bradstreet Corp.*, 359 F.Supp.2d 307, 307-308 (S.D.N.Y. 2004), which concluded:

When price discounts in one market are bundled with the price charged in a second market, the discounts must be applied to the price in the second market in determining whether that price is below that product's average variable cost.

At this writing, this decision is on appeal to the Second Circuit. *Accord Virgin Atlantic Airways Ltd. v. British Airways PLC*, 69 F.Supp.2d 571, 580 n. 8 (S.D.N.Y. 1999), *aff'd on other grds*, 257 F.3d 256 (2d Cir. 2001).

30 These and other pro-competitive rationales for tying are discussed in 9 ANTITRUST LAW ¶¶ 1711-1718 (2d ed. 2004).

31 See Thomas A. Lambert, *Evaluating Bundled Discounts*, 89 MINN. L. REV. 1688, 1742, 1746-1748 (2005).

Indeed, in a well-functioning market containing equally efficient rivals producing each of the two goods, explicit coordination between makers of product A and product B is unnecessary. The rival seller of product A would realize that its viability depends on its charging a price for A that is low enough so that B can also be viable, and vice versa. As a result, each would cut its price so as to accommodate the other. To illustrate, suppose that the dominant firm produces good A, with costs of $c_A = 10$ and a price of $p_A = 13$; and good B, with costs of $c_B = 5$ and a price of $p_B = 8$. It offers a package discount price of $p_{AB} = 17$. An equally efficient rival in product A cannot match the discount, because its cost price of $c_A = 10$ and the dominant firm's price of $p_B = 8$ for B would be too high. An equally efficient rival in B cannot match the discount because its cost of $c_B = 5$ for B and A's price of $p_A = 13$ would also be too high. However, it would be feasible for the buyer to purchase product A from a rival at a price of $p_A = 10$, and product B from a different rival at a price of $p_B = 8$. It would be in both of these sellers' best interest to cut their prices sufficiently to enable the buyer to do this.

IV. Predatory Purchasing

Exclusionary purchasing occurs when a dominant firm pursues a strategy of buying up so much of some input that rival firms cannot obtain adequate access. The classic form of such strategies was the output contract. For example, American Can contracted with all of the then existing makers of patent can making machinery to sell their total output of machinery to American Can.³² Assuming that such agreements were anticompetitive, the machine makers would agree to such contracts only if they were compensated, perhaps with higher prices.³³ Of course, most output contracts have competitively benign explanations. Most occur in competitive markets and are mechanisms by which firms assure themselves of a reliable source of supply.³⁴

Two forms of predatory purchasing that the case law has analogized to predatory pricing are slotting fees and "predatory spending," which refers to a group of strategies of overinvesting in productive capacity, or else buying up scarce inputs at a high price in order to deny market access to rivals.

32 United States v. American Can Co., 230 F. 859 (D. Md. 1916), *appeal dismissed*, 256 U.S. 706 (1921). See 11 ANTITRUST LAW ¶ 1801a (2d ed. 2005).

33 See Eric B. Rasmusen, J. Mark Ramseyer, & John S. Wiley, Jr., *Naked Exclusion*, 81 AM. ECON. REV. 1137 (1991); Thomas G. Krattenmaker & Steven Salop, *Anticompetitive Exclusion: Raising Rivals' Costs To Achieve Power over Price*, 96 YALE L.J. 209, 236-238 (1986).

34 See 11 ANTITRUST LAW ¶¶ 1810-1814 (2d ed. 2005).

A. SLOTTING FEES

A “slotting fee” is a payment made by a manufacturer to a dealer, typically a retailer, in exchange for guaranteed display space or some other preferential treatment of the manufacturer’s product. For example, a seller of spices might give a retailer \$1,000 up front in exchange for a year’s access to five linear feet of retail shelf space. Given that shelf space in desirable stores is in fiercely short supply, such fees can be exclusionary in the sense that the retailer stocks the payor’s product to the exclusion of someone else’s. Indeed, if there were plenty of empty shelf space, slotting fees would not exist.

The main function of slotting fees is to transfer a portion of the risk of poor sales from the retailer to the supplier. The slotting fee, which is fixed, operates as a discount whose size varies inversely with the volume of goods that the retailer sells in that space. For example, if spices sell for \$1.39 per bottle and the retailer sells only 1,000 bottles per year in the allocated space, the \$1,000 slotting fee operates as a prohibitively high \$1.00 per bottle discount on the price. However, if the retailer sells 100,000 bottles in that space, the discount is only \$.01 per bottle, but the retailer is more than happy because of the high sales volume. Thus, the willingness to pay slotting fees operates as a signal to the retailer that the supplier has confidence in its product. Alternatively, the fee compensates the retailer if the product ends up not doing very well. In sum, slotting fees have strong pro-competitive benefits and the economic case against them is very weak.³⁵

Slotting fees cannot exclude an equally efficient rival unless they are so high that they drive the product price below cost.³⁶ The relevant measure is reasonably anticipated cost at the time the slotting fee is negotiated. Firms should not offer such efficiency enhancing arrangements at their peril if it later turns out that sales did not materialize as the manufacturer hoped. Indeed, the purpose of the slotting fee is to shift the risk of poor sales to the manufacture, and the fact that the fee is required is good evidence that there is, in fact, some risk. The real question is whether the manufacturer had a reasonable, objectively measurable expectation *ex ante* that the product would produce sufficient sales so that the price net of the slotting fee would be profitable to the manufacturer.

35 See 11 ANTITRUST LAW ¶ 1807c (2d ed. 2005); see also REPORT ON THE FTC WORKSHOP ON SLOTTING ALLOWANCES AND OTHER MARKETING PRACTICES IN THE GROCERY INDUSTRY (U.S. Federal Trade Commission, Washington, DC, 2001); Mary W. Sullivan, *Slotting Allowances and the Market for New Products*, 40 J.L. & ECON. 461 (1997).

36 See *El Aguila Food Products, Inc. v. Gruma Corp.*, 301 F.Supp.2d 612, (S.D.Tex. 2003), *aff’d mem.*, 131 Fed.Appx. 450, 2005-1 Trade Cas. ¶ 74788 (5th Cir. May 17, 2005) (refusing to condemn slotting fees as monopolistic when prices were above any relevant measure of cost).

B. PREDATORY SPENDING

Predatory spending is the inverse of predatory pricing. The defendant monopolist, who may or may not have market power in the output market, pays a high price for some scarce input with the result that rivals are unable to obtain it and are driven from business. Anticompetitive predatory spending has welfare effects similar to predatory pricing. The risks of overdeterrence and false positives are equivalent to those in predatory pricing cases. Further, the claims are even harder to evaluate, magnifying the possibility of error.

The decisions can be roughly grouped into two types—although there is considerable overlap between them. One type is best termed predatory investment, and refers to situations in which the defendant allegedly overbuilds or overinvests in facilities in order to deny market access to rivals. These cases themselves have come in numerous varieties, including claims that the defendant invested in a larger plant than it needed,³⁷ that it built excessive retail facilities, setting them up in such a way as to deny rivals adequate market access,³⁸ or similarly, that an airline responded to a rival's entry by flooding the market with additional aircraft.³⁹ The second type of case, which is much more analogous to conventional predatory pricing, claims that the defendant engaged in overbuying of some variable cost input into its production process.⁴⁰

The predatory investment cases are not as easily classified or characterized as the traditional predatory pricing cases. In some, such as *DuPont*, the excess investment in a production facility may have been a form of strategic entry deter-

37 *DuPont (Titanium-Dioxide)*, 96 F.T.C. 653 (1980) [hereinafter *DuPont*]. See 3 ANTITRUST LAW ¶ 737d (2d ed. 2002).

38 *Photovest Corp. v. Fotomat Corp.*, 606 F.2d 704 (7th Cir. 1979), *cert. denied*, 445 U.S. 917 (1980) (defendant overbuilt retail outlets in excess of the number its own studies indicated were necessary).

39 *Spirit Airlines*, *supra* note 2 (separate portion of opinion denying summary judgment on claim of predatory transfer of aircraft into the plaintiff's routes, without requiring prices below cost).

40 *E.g.*, *Confederated Tribes of Siletz Indians of Oregon v. Weyerhaeuser Co.*, 411 F.3d 1030 (9th Cir. 2005), *pet. for cert. filed*, ___ S.Ct. ___ (2005) [hereinafter *Weyerhaeuser*]; *Reid Bros. Logging Co. v. Ketchikan Pulp Co.*, 699 F.2d 1292, 1298 n. 5 (9th Cir. 1983). See also *Am. Tobacco Co. v. United States*, 328 U.S. 781, 801-04 (1946) (defendants conspired to buy up cheaper tobacco at high prices in order to deny access to rivals who were making lower cost cigarettes); *United States v. Aluminum Co. (Alcoa)*, 148 F.2d 416, 432-433 (2d Cir. 1945) (referring to claims that Alcoa had bought up bauxite and electric power in order to deny access to rivals). Cf. *Syufy Enters. v. American Multicinema*, 793 F.2d 990 (9th Cir. 1986), *cert. denied*, 479 U.S. 1031 (1987) (defendant purchased excessive exclusive licenses for exhibiting films, thus denying access to rival exhibitors; affirming judgment for plaintiff); *contrast Houser v. Fox Theatres Management Corp.*, 845 F.2d 1225 (3d Cir. 1988) (rejecting claim that defendant exhibitor overbought exclusive bookings on films in order to deny access to rivals); *Potters Med. Center v. City Hosp. Assn.*, 800 F.2d 568 (6th Cir. 1986) (denying summary judgment on claim that defendant used salary guarantees and other perks to induce physicians to accept exclusive privileges at its hospital).

rence. By building a very large plant with well publicized excess capacity, the dominant firm could threaten new entrants with an immediate output increase and price reduction, thus inducing them not to enter in the first place. As a dominant firm, it could still set price significantly above its costs, including the costs of carrying the additional capacity.

As the outcome exonerating the defendant in the *DuPont* case suggests, taking long-run concerns into account in predatory investment cases is just as difficult as it is in orthodox predatory pricing cases. With respect to sale prices, long-run concerns arise mainly with respect to claims that prices above average total cost are predatory. Even though such prices produce short-run profits, the claim is that an even higher price would be more profitable over a longer run—or more specifically, that the price is profitable mainly as an entry deterrence device. In *Brooke Group*, the U.S. Supreme Court categorically rejected such claims. As a result, prices below cost are an essential element of a predatory pricing case.

Long-run concerns become relevant in predatory spending situations when it is claimed, for example, that the firm invested in a much larger plant than it needed in order to deter entry; that it intentionally targeted markets occupied by weak rivals in deciding where to deploy assets, and the like. The prices are presumably sustainable and the defendant is earning a profit; however, it has overbuilt its capacity in some way that excludes rivals and thus permits a longer stream of monopoly profits sufficient to offset the additional development costs.

Long-run concerns can blend into short-run when durable assets are readily transferable. In the *Spirit Airlines* case, the U.S. Court of Appeals for the Sixth Circuit accepted the plaintiff's argument that the defendant, Northwest Airlines, shifted aircraft into the plaintiff's markets, dropping the price precipitously, only to shift the aircraft back once the plaintiff had been forced out.⁴¹ The court permitted this claim to go to trial even when there was no showing that the result of the shift was to drive the defendant's selling prices below its costs. Assuming the fact finder properly considered the opportunity cost of the lost revenue on the routes from which the aircraft were transferred, the claim must have been that the defendant shifted aircraft from more profitable to less profitable routes and that this strategy made sense only because of its value in knocking a rival out of the market so that the defendant could thereafter raise price in the targeted routes and recover its investment.

Shifting of aircraft is a more aggressive and more costly act than cutting a price. As a result, a court might be more comfortable condemning a two-way shift (“in” when in response to new entry and “out” after the rival has been excluded) without a showing of prices below cost. But the shift would still have to be costly in the short run. Otherwise, it would be perfectly rational conduct without regard to exclusion of rivals. Thus, proof of recoupment seems essential, unless perfectly

⁴¹ See *Spirit Airlines*, *supra* note 2.

appropriate competitive behavior is to be condemned. While the Sixth Circuit did not require proof of below-cost prices, it did require proof of recoupment.⁴²

The purest short-run predatory spending strategy involves the dominant firm that purchases variable cost inputs at a predatorily high price, thus making them unavailable to weaker rivals. The U.S. Court of Appeals for the Ninth Circuit's recent *Weyerhaeuser* decision involved a defendant who was dominant in the purchasing market for Alder logs, but which sold lumber made from the logs in

THE JURY INSTRUCTION THAT
THE NINTH CIRCUIT APPROVED
IS AN ANTITRUST DISASTER
OF ENORMOUS PROPORTIONS.

a competitive market.⁴³ The logs themselves were the principal input into the lumber. Approximately 75 percent of the finished lumber's cost consisted of the price paid for the logs. The defendant allegedly engaged in "overbuying," that is purchasing all the logs that it could at unreasonably high prices with the result that

rival sawmills were unable to purchase enough logs or to make enough margin on the logs that they processed, thus driving them out of business.

The Ninth Circuit upheld a judgment for the plaintiff based on an instruction entitling the jury to find a Sherman Section 2 violation if the defendant paid "too much," or "more than necessary," for the logs. The court held that such a standard was sufficient, and it did not require the plaintiff to show either that the purchase price was so high as to drive the defendant's resale price for finished lumber below its cost, or that the defendant would be able to recoup its investment in high priced logs by paying lower prices after rival sawmills were excluded from the market.

Three observations seem relevant. First, the jury instruction that the Ninth Circuit approved is an antitrust disaster of enormous proportions. Short-run supply bottlenecks are relatively common, and price is the principal rationing device for scarce inputs. Large buyers subject to Ninth Circuit law now operate under the threat that if they bid too aggressively for some scarce input a jury will find that they paid "more than necessary" and subject them to treble damage liability. There is no obvious reason for thinking this will be a rare occurrence. Some kind of standard with more substance is essential.

42 *Id.*, at para. 32:

... [E]ven if the jury were to find that Northwest's prices exceeded an appropriate measure of average variable costs, the jury must also consider the market structure in this controversy to determine if Northwest's deep price discounts in response to Spirit's entry and the accompanying expansion of its capacity on these routes injured competition by causing Spirit's departure from this market and allowing Northwest to recoup its losses and to enjoy monopoly power as a result.

43 See *Weyerhaeuser*, *supra* note 40.

Second, the Ninth Circuit's refusal to require proof that the defendant's sales were below a relevant measure of cost is incorrect in a market where costs are easily defined and make up a significant portion of the purchase price—in this particular case, some 75 percent of the cost of the finished lumber. In such a situation, it should be quite easy to conclude that an input purchase price is not “too high” unless a firm is unable to make a profit on its sales. That seems doubly true in a case such as *Weyerhaeuser*, where the defendant sold lumber in a competitive market and had no pricing discretion. In such circumstances, it is economically impossible to say that a defendant is paying too much for an input if it is earning a competitive return on what it sells.

On administrative grounds, a price/cost test is more difficult to defend if the input in question constitutes only a small percentage of the cost of the finished product. For example, suppose that hardwood saw blades were in short supply and *Weyerhaeuser* acquired them by bidding up the price. Suppose that a saw blade is a variable cost item because it wears out and its cost amortizes out at less than $\frac{1}{2}$ percent of the total cost of the finished lumber. Even if the defendant paid double the market price for saw blades, the difference is likely to be within its margins. It would be almost impossible to show that overpaying for saw blades drove the defendant's prices below its costs. In such cases, courts might need to look for other hard evidence of exclusionary behavior. For example, the defendant might have purchased saw blades and stockpiled them for very long periods or even destroyed them, simply to deny access to rival sawmills. However, even here the courts must be careful. For example, stockpiling of inventories in times of anticipated shortages is perfectly pro-competitive behavior. A firm that has a reasonable expectation at the time of purchase that it actually will use an input in its own production should never be condemned for behaving predatorily. In any event, the fact findings here were that *Weyerhaeuser* was reselling the finished lumber in a competitive market.⁴⁴ In that case, it could have sold all it wanted at the competitive price. For the same reason, such a firm would have no incentive to overbuy and destroy the excess—in a competitive resale market there would be no excess.

Third, proof of recoupment seems essential in all cases of predatory spending. Whether or not the defendant's costs are pushed higher than its prices, an anti-competitive strategy of overbuying will not be profitable unless its payoff is greater than the investment. In the great majority of cases what appears to be overbuying will be nothing more than hedging against an uncertain future. For example, the computer manufacturer that stockpiles RAM chips in contemplation of a possible future shortage is simply engaging in self protection.

44 The most likely explanation for significant power in the buying market and lack of power in the selling market in this case was that the economies of buying and shipping raw logs limited the geographic market on the purchasing side to a fairly small range. All of the sawmills were located close to the producing forests. However, the finished lumber was sold in a market that was nationwide or even larger. See, e.g., *Mandeville Island Farms v. Am. Crystal Sugar Co.*, 334 U.S. 219 (1948) (seller purchased sugar beets in small geographic area but sold refined sugar in national market); 12 HERBERT HOVENKAMP, *ANTITRUST LAW* ¶ 2011b (2d ed. 2006)

V. Conclusion

While success in conventional predatory pricing cases has been elusive for plaintiffs since the U.S. Supreme Court's *Brooke Group* decision in 1993, they have had better luck with variant predatory pricing or spending practices. It is hard to avoid the conclusion, however, that the relatively greater success results from the fact that these practices are not very well understood. When judges do not understand practices very well, they tend to give them to juries, and juries often find for plaintiffs, particularly if the defendant's intentions seemed to be anti-competitive. As a result, one can predict that as variant predatory pricing practices are understood more fully, plaintiffs' success rates will decline in these areas as well. This is not to say that the set of legitimate anticompetitive pricing claims is empty, but that the existence of predation that is within the competence of courts to evaluate remains very rare. ▼