PREDATORY PRICING, A CASE STUDY:
MATSUSHITA ELECTRIC INDUSTRIES CO. V. ZENITH RADIO CORPORATION

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INTRODUCTION

There is an abundance of predatory pricing theories. Scholars have created a barrage of rules and thresholds designed to detect unlawful predatory practices. The most influential work on predatory practice was written almost thirty years ago by John S. McGee. McGee showed that although it was widely believed that the Standard Oil Company used predatory pricing in its virtual monopolization of the oil refining market, there was no hard evidence to show that Standard Oil in fact employed such pricing.

Since McGee, many scholars have reviewed the theories of pricing, and recent literature on the law and economics of antitrust has devoted increasing attention to this issue. There has also been an outpouring of cost-based rules appearing in court opinions dealing with predatory pricing. These rules can essentially be attributed to

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the work of Areeda and Turner, and Koller. Although the existence of predatory pricing has long been questioned by many economists and lawyers, the new literature indicates a resurgence by some economists who believe that predatory pricing is indeed a credible threat that can lead to entry deterrence and market supremacy.

Some of the most intense recent debates regarding the kinds of conduct deemed anticompetitive under section 2 of the Sherman Act involve sales at low prices allegedly to injure competition. In 1975, Areeda and Turner published a work concerning a cost price test for determining predation. The test posited that if a price is higher than the marginal cost of producing the good or service sold, there should be no prohibition based on predatory pricing. The formulation of a test for predatory pricing which is capable of judicial administration has occupied center stage in "attempt to monopolize" cases since 1975. Low prices are an important goal of the antitrust laws. Thus, any test designed to make selling at low price illegal must be used with a great deal of caution, or else the antitrust laws will end up subverting the very ends they were designed to achieve. At the same time, however, few people have doubted that there are times when sellers attempt to create a monopoly by temporarily charging unreasonably low prices. Therefore, some middle ground between a universal prohibition of selling at low prices and a practical test of predicting predation must be found.

The first section of this Article presents a definition of predation and a brief overview and background of its theory. The next section expounds upon this definition and provides an in-depth look into predatory pricing theory. Finally this Article offers a case study of a recent Supreme Court decision, Matsushita Electric Industrial Co. v. Zenith Radio Corp., dealing with the alleged predatory practices of a Japanese electronics cartel. This case is important because it significantly alters the Supreme Court's only other recent decision on the subject and establishes case precedent based upon contemporary economic thought in this area. The last case reviewed by the Supreme Court regarding predatory price discrimination was Utah Pie Co. v.

4. See supra note 2.
Continental Baking Co., in which all of the defendants were found guilty of discriminatory pricing. Under Matsushita the Supreme Court has significantly altered its view (held since Utah Pie) on predatory pricing.10

This Article examines the Supreme Court's decision in Matsushita by applying various predatory pricing tests to the data in the case. Tying arrangements, predatory product innovation, predatory preannouncement and other non-price predatory tactics are examined in an appendix.

DEFINITION AND BRIEF ANALYSIS OF PRICING THEORY

A firm engages in predatory pricing when it threatens to lower the revenues of rival firms by setting its prices below costs.11 A firm operating in a competitive market sells at a price which equals its marginal cost. Setting a price at less than marginal cost, therefore, appears to be predatory.12 Presumably, the firm endures a short-term loss to achieve a long-term gain. In the short-term, the predator's target must either match the price cuts or lose its market share. In either case the result is a reduction of profits. The short term losses suffered by the target will benefit the predator in the long term if those losses drive the target firm out of business, force the target firm to accept market leadership of the predator, or discourage potential entrants from entering the market. In such instances, the predator can more than recoup its short-term losses by exerting its newly-acquired market power and reaping monopoly profits.

The United States Supreme Court has never addressed whether predatory pricing, by itself, is an illegal act. Instead, the Court has analyzed the activity by using an "attempt to monopolize" criterion. If the intent of the predatory practice is to preserve or create a monopoly, then it is analyzed under the antitrust laws as an illegal monopolization act (or attempt to monopolize) under section 2 of the Sherman Act.13 Congress enacted section 2 of the Clayton Act14 out of the same belief that predation is an effective tool of

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10. In Utah Pie, the Supreme Court applied the "recoupment theory" of predatory pricing. Under this theory, a firm, operating in two or more markets, engages in price competition in one market while recouping some of its losses in the unaffected market. See infra notes 106-12 and accompanying text.
11. See generally Yamey, Predatory Price Cutting: Notes and Comments, 15 J.L. & Econ. 129 (1972) (defining predation as selling below costs).
12. Areeda and Turner emphasize this reasoning as the basis of their approach, although they would permit courts to use average variable cost as a proxy for marginal cost. See 3 P. AREEDA & D. TURNER, ANTITRUST LAW ¶ 715b (1978).
13. Standard Oil Co. v. United States, 221 U.S. 1, 76 (1911).
monopolization.\textsuperscript{15}

The problem with any attempt to punish predation, however, is that it is terribly hard to distinguish "predatory" strategies from ordinary competition. In a perfectly competitive market, firms will come close to crossing the line between predation and ordinary competition (i.e., selling at marginal cost, building new plants of efficient size, or reducing costs through innovation).\textsuperscript{16} Hence, the easier it is for a target firm to bring a treble damages action by alleging predation,\textsuperscript{17} the greater will be the costs to firms that come close to the line of predation without crossing over it. While "the antitrust laws are designed to maximize consumer welfare by protecting competition rather than competitors," the availability of excessive damages (i.e., private treble damages suits) is guaranteed to reduce the amount of competitive behavior in an industry.\textsuperscript{18} A practice that injures competitors rather than consumer welfare should be of no antitrust concern.

A plaintiff claiming predation will allege that a reduction in price, an expansion in output, or the building of a new plant, prove the defendant's misconduct. The defendant, however, may find these practices necessary for purely competitive reasons. Stringent rules

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  \item The Supreme Court has not yet specifically accepted or rejected the Areeda and Turner AVC rule as the present rule governing alleged predatory pricing. See, e.g., Matsushita Elec. Indus. Co. Ltd. v. Zenith Radio Corp., 475 U.S. 574, 584-85 nn.8-9 (1986).
  \item See Lande, 34 Hastings L.J. at 65. There has been a great deal of discussion about the purpose of the antitrust laws. Robert Bork believes that whatever one makes of this history, the antitrust laws should be treated as if they served no goal other than economic efficiency. R. Bork, supra note 2, at 15-89. Any other result would produce incomprehensible rules. See also, 1 P Areeda & D. Turner, Antitrust Law ¶ 217 (1978). In a number of cases the Supreme Court has appeared to have adopted Bork's position. See, e.g., Matsushita, 475 U.S. at 583, (noting that non-price constraints, though harmful to competition, may actually benefit competitors); Reiter v. Sonotone Corp., 442 U.S. 330, 343 (1979) (stating that "Congress designed the Sherman Act as a 'consumer welfare prescription' " (quoting R. Bork, supra note 2, at 66)); Broadcast Music, Inc. v. Columbia Broadcasting Sys., 441 U.S. 1, 19-20 (1979) (noting that the Court's inquiry must focus on whether the practice will "increase economic efficiency and render markets more, rather than less, competitive"); National Soc'y of Professional Eng'rs v. United States, 435 U.S. 679, 691 (1978) (stating that the true test is "whether the restraint imposed is such as merely regulates and perhaps thereby promotes competition or whether it is such as may suppress or even destroy competition"); Continental T.V., Inc. v. GTE Sylvania, Inc., 433 U.S. 36, 53 n.21 (1977) (noting that "an antitrust policy divorced from market considerations would lack any objective benchmarks").
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prohibiting predation, therefore, will lead to frivolous litigation. Unless some method of distinguishing predation from fierce competition exists, any legal investigation may lead to more harm than good.\textsuperscript{19}

Predatory pricing practices may be classified according to the type of expectation created by the price cut. Simple predation occurs when predators use price cuts to drive rivals from the market. Predators may also discourage potential competitors from entering the market, a strategy known as limit pricing. Price leadership refers to a predator's attempts to persuade competitors that they should follow its pricing strategy. The threat of predatory pricing may also be used to discipline members of a cartel. Another purpose of predatory pricing may be the obtaining of a predatory reputation.\textsuperscript{20} The rationale behind this concept is that by practicing predation a firm attains the reputation of a predator. Potential entrants would anticipate that the reputed predatory firm will behave in a similar manner should the firm enter the market, and entry will thereby appear less attractive to that firm.

Increasingly, the courts are relying upon economic theory to examine alleged antitrust violations. The field of economics called industrial organization has two important functions in antitrust analysis. First, it can help the court decide whether competition is present in a particular market, and if it is not, what role for antitrust exists in that market. Second, industrial organization can help the court understand whether a particular firm's activities which affect market structure are efficient and should be encouraged, or inefficient and should be condemned.

In some markets, perfect competition, competition among a large number of incumbent firms producing undifferentiated products, is not the ideal market structure. The classical model of perfect competition is premised on the notion of a market containing many equally efficient firms, each indifferent to the output decisions of the other firms. Under such a model, production and distribution costs do not vary with size.

\textsuperscript{19} Easterbrook, 48 U. CHI. L. REV. at 267. As will be discussed infra, any legal rule which tolerates a large number of false positives, condemning as predatory practices which are merely competitive, will lead to a reduction in consumer welfare and should be avoided.

\textsuperscript{20} Reputation is believed to be the most common purpose for practicing predation. A prospective entrant observes the established firm's predatory price cutting tactics on another marginal firm, and, as a result of such reputation, may be inhibited from entering the market, expanding, or entering into another related market. See generally O. WILLIAMSON, supra note 2, at 376-77. Milgrom & Roberts, Predation, Reputation and Entry Deterrence, 27 J. ECON. THEORY 280 (1982); Dixit, Recent Developments in Oligopoly Theory, 72 AM. ECON. REV. 12, 12-15 (1982); Burns, Predatory Pricing and the Acquisition Cost of Competitors, 94 J. POL. ECON., 266, 275-90 (1986).
The largest factor tending to undermine perfect competition in real world markets is the presence of significant economies of scale. Economies of scale permit relatively large producers to manufacture and market their products at lower average cost than can relatively small producers. It is often impossible to determine the most efficient minimum size of a firm plant. The concept of minimum optimal scale refers to the smallest production unit a firm can use and still achieve all relevant economies of scale (i.e., the scale at which the firm attains minimum unit costs). When a firm operates at minimum optimal scale, no other firm can be more efficient due to its scale of operation.21

In antitrust law, the economies of scale concept suggests that much of the courts' earlier preoccupation with bigness per se was ill-advised. Firms become large because large firms are frequently more efficient than small firms. The resulting reduction in the large firm's output price will cause the small firms to either become large themselves or exit the market. Accordingly, the minimum optimal size of firms in a particular market dictates the maximum number of firms which can compete in that market. For example, if the minimum optimal size of a firm is twenty five percent of the market, then that market will only have room for four efficient firms. High market concentration, with its potential to lessen competition, is often a function of economies of scale.

Knowledge of economies of scale in a market can help courts evaluate the consequences of practices alleged to be monopolistic. Many condemned practices, such as vertical integration, may be attempts by a firm to obtain significant cost efficiencies. Similarly, knowledge of economies of scale may help predict the consequences of mergers.

Monopoly tends to carry with it a social cost. Social cost can result from either the occurrence of a non-optimum transaction or the failure of a beneficial transaction to occur. Traditionally, the existence of a monopoly creates social cost by forcing some people to forego transactions which would produce the largest social benefit and enter other transactions which produce a smaller social benefit.

Social welfare is conventionally defined as the sum of consumer and producer surplus. Consumer surplus is roughly the amount consumers would be willing to pay for a good, rather than do without it, over and above what they must actually pay. For example, a firm

may produce widgets at a cost of fifteen dollars. Some consumers may be willing to pay fifty dollars for one of the widgets although the market price is only thirty dollars. The difference between what these consumers would be willing to pay and the market price they must pay constitutes consumer surplus (twenty dollars).

Producer surplus is the mirror image of consumer surplus and is measured by the difference between the marginal costs to produce a product and the market price of the product. In our example the producer spent fifteen dollars on a product he was able to sell for thirty dollars. The difference between the marginal cost of that particular widget and the selling price represents the producer surplus for that widget (fifteen dollars).

Consumer and producer surplus can be illustrated in economic terms. A firm's marginal cost of production represents the social costs of allocating resources to the production of the particular good or service. Consumer satisfaction is an element of the price charged for the good or service.

A market clearing price occurs when consumer satisfaction equals the social and marginal costs of production. At a competitive market price, social surplus is present. Social surplus is present because at the market price many consumers are paying less than the price at which they actually value the good, and many sellers are receiving more than the cost to produce the good. The gain to consumers paying less than the benefits derived is called consumer surplus. The gain to a business selling for more than cost is called producer surplus.22

Social surplus is maximized when the sum of producer and consumer surplus is as great as possible. Policies which maximize either consumer or producer surplus may not maximize social surplus. A policy which increases consumer surplus, but simultaneously reduces producer surplus by a greater amount, reduces social surplus. Therefore, in order to properly analyze the social benefit of a given policy, its effect on both consumers and producers must be evaluated.

PREDATORY PRICING

Predatory pricing behavior involves a reduction of price in the short run so as to drive competing firms out of the market or to discourage entry of new firms in an effort to gain larger profits via higher prices in the long run that would not have been earned had the price reduction not occurred. The predator expects that its entry-

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22. Although adequate for the present discussion, this statement is not entirely correct. Producer surplus is partially earned by the factors of production, such as labor and capital.
Impeding or exit-inducing strategy will eventually enable it to either raise prices or maintain an existing market structure in which prices are above competitive levels for a longer period of time than would be possible had entry been allowed to occur immediately. The predator, in pursuing this strategy, hopes that long run profits will increase enough to compensate it for the sacrifice of short run profits.

For predatory price cutting to generate additional monopoly power and thereby violate the proposed rules against predation, a market must have several characteristics. First, the market must be horizontally concentrated. In an unconcentrated market, competitive discipline from rival firms will preclude a predator from gaining market power regardless of the exit of one firm.

Second, the market must have substantial entry barriers. These barriers will exist whenever the prospective entrant is at a relative cost disadvantage to incumbent firms simply because the entrant has not yet committed the requisite resources into which the incumbent firms' fixed costs are already sunk. If there are no market entry barriers, there can be no incentive to engage in predatory pricing because prospective market entrants will constrain the market power of the predator as effectively as existing market participants.

Third, the market must also have barriers to re-entry by rival firms. The argument of McGee, Bork, and Easterbrook that predation is impossible or unlikely depends to some extent on the implied assumption that the rivals of the predator do not face significant re-entry barriers. Re-entry barriers are fairly common, however, and exist to the extent that the capital formerly amassed by a firm has been dispersed before re-entry occurs. Salvaged equipment, dispersed labor force and management, discontinued advertising, and unmaintained reputation can only be replaced or re-adapted to their former uses at substantial costs. Such costs constitute re-entry barriers.

In 1958, predatory price cutting was first analyzed when McGee examined the alleged predatory practices of the Standard Oil Trust.

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24. Id. Baumol and Willig show that the need for an entrant to sink costs can be a barrier to entry. Incumbents, therefore, are permitted to hold prices above costs with little fear that such practices will encourage entry.
By tracing the history and case law, McGee established how Standard acquired its monopoly in the oil refining business from its humble beginning in the late nineteenth century. McGee noted that many believed Standard, wishing to eliminate competitors in a limited geographic market, cut prices below costs. Under that strategy, everyone would have suffered losses, including Standard. The losses incurred by Standard would, however, have been offset by profits earned in its other markets. Eventually the competitors would have left the market because they could not expect to cover their costs.

McGee argued that this technique would have been inferior to Standard buying out its competitors in an era when horizontal mergers were handled in a laissez-faire manner:

[If, instead of fighting, the would-be monopolist bought out his competitors directly, he could afford to pay them up to the discounted value of the expected monopoly profits to be gotten as a result of their extinction. Anything above the competitive value of their firms should be enough to buy them. In the purchase case, monopoly profits could begin at once; in the predatory case, large losses would first have to be incurred. Losses would have to be set off against the prospective monopoly profits, discounted appropriately. . . .] It is difficult to see why the [would-be] predator would be unwilling to take the amount that he would otherwise spend in price wars and pay it as a bonus.

For Standard, outright purchase would also have been more reliable than predation. Once Standard had purchased a refinery it could have dismantled the plant. The risk of predation is that a creditor will buy the victim's plant at a fraction of its fair market value and restart the competing business. This risk was even more likely once Standard began commanding a monopoly price for its product.

McGee, therefore, argued that because predatory pricing imposes a larger cost on the predator than on the victim, predatory price cutting would have been inferior to mergers as a monopolizing technique in an era in which mergers were permitted. The revenue losses during the campaign would be proportionally higher for the predator than for the victim because the predator faces the necessity of expanding its output at ever higher cost, while the victim will reduce its output in order to decrease its costs. In his analysis of the industry, McGee found no instance in which Standard used predatory price cutting to force a rival refiner to sell out, to reduce asset values

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28. Id. at 143-67.
29. Id. at 138.
30. Id. at 139-40.
31. Id. at 143.
in order to purchase at a lower price, or to drive a competitor out of business.\textsuperscript{32}

Bork wholly agrees with McGee's analysis.\textsuperscript{33} Looking at predation in the context of a modern occurrence, Bork found that the modern law prohibiting horizontal mergers makes it nearly impossible for the predator to end the war by purchasing his battle-weary victim.\textsuperscript{34} The price war must therefore continue until the victim's facilities are entirely driven from the industry without the possibility of return. Until the victim's facilities and organization are scattered, there is always the possibility that an outside purchaser may spring up and re-enter the market. The costly war of price cutting would then have been a wasted campaign.\textsuperscript{35}

Bork further points out that "ease of entry will be symmetrical with ease of exit."\textsuperscript{36} The easier it is to drive a competitor from the market, the easier it will be for that competitor or another to re-enter once the predator begins to accumulate monopoly profits. If, as is typical, predatory price cutting results in the victim being forced into bankruptcy, the victim's creditors can then buy the plant for a fraction of its fair market value and start up a competing plant. This would be the case especially where the incumbent begins charging monopoly prices. Conversely, the more difficult entry is, the more difficult it is to drive a rival out, and the easier it becomes to discourage entry once monopoly power is obtained.\textsuperscript{37} For example, because the incumbent has already committed resources to its enterprise, it has a cost advantage over any potential market entrant. The potential entrant must still sink substantial investments into the enterprise before it can successfully compete against the incumbent.

Finally, Bork contends that while costs are presently incurred, the anticipated monopoly return is in the future, and therefore must be discounted by a rate of interest.\textsuperscript{38} This factor adds to the poor expectations of a firm contemplating predatory pricing.\textsuperscript{39}

Bork believes that it is therefore unwise to construct elaborate rules governing a phenomenon that probably does not exist, or which, should it be found to exist in very rare cases, the courts would have serious difficulty distinguishing from competitive price behav-

\textsuperscript{32} Id. at 153.
\textsuperscript{33} R. Bork, supra note 2, at 144-48.
\textsuperscript{34} Id. at 153.
\textsuperscript{35} Id.
\textsuperscript{36} Id. at 149.
\textsuperscript{37} Id. at 153.
\textsuperscript{38} Id. at 153-54.
\textsuperscript{39} Id. at 154.
or. Bork feels that price reductions are neither rare nor generally pernicious in economic models or in the real world. One should not be alarmed if price momentarily falls below average total cost, or as low as marginal cost or average variable cost. If courts use an overly deterrent rule the result will be high prices due to less efficient firms staying in the market. Bork feels that courts should dismiss all predatory pricing complaints, at least when the plaintiff and defendant are competitors.

SUMMARY OF PREDATION

In markets in which structural factors permit it, predation can be used to accomplish two objectives. Predation may be used to either: (1) eliminate a competitor; or (2) persuade the competitor to merge with the predator or join a price fixing cartel or other collusive arrangement with the predator. Economic analysis assumes that the first alternative, driving the competitor out of the market, will not be attempted simply because it is the least profitable route for the predator to follow.

When a firm contemplates predation, it must be concerned about the large amount of revenue it will lose. The predator does not yet sell enough to control the market. If it wishes to depress the price below the competitive level, it must be prepared to sell increasing quantities. Since the mechanism of forcing a lower price compels the predator to lure customers away from competitors, the predator must be prepared to serve those customers itself. It, thus, finds itself in the position of selling more, and therefore losing more proportionately than its competitors.

If the predator attempts predatory price cutting and succeeds in eliminating a competitor, the competitor may go into bankruptcy. The competitor’s fixed assets will revert to its creditors, who will normally either operate them or sell them to the highest bidder. New owners may buy the plant of the bankrupt victim for far less than its market value. The new owners would be attracted back to the original market once the predator began charging monopoly prices. These new owners will have lower average costs than the

40. Id.
41. Id. at 155.
42. Id. at 155. But cf. Easterbrook, 48 U. Chi. L. Rev. at 331-33 (suggesting that suits by consumers forced to pay a higher price after successful predation should be permitted).
43. Predation may also be used to send a signal to other potential entrants that upon their entry, a price cut is certain. See infra notes 75-80 and accompanying text.
predator because their plant cost is less. Therefore, because the losses during the predatory period may be large, and the ability to collect a monopoly profit after knocking the victim out is small, the incumbent's strategy will be to avoid the predatory elimination of rivals.\textsuperscript{45}

If the incumbent does decide to engage in predatory pricing, then it will likely have as its objective convincing the rival competitor to "cooperate" with or accommodate the incumbent by either selling out to it, merging with it, or colluding (formally or tacitly) with the incumbent.\textsuperscript{46} If the incumbent fears future entry it may decide to practice predation at the first sign of entry in order to send a signal to potential future entrants.\textsuperscript{47}

\section*{Predatory Pricing Tests}

Fearful of predatory pricing, whether myth or reality, the courts began looking for ways to police the practice. The majority of courts now follow the Areeda-Turner or marginal-cost pricing test.\textsuperscript{48} When a firm considers whether to produce one additional unit, it weighs the additional revenues the sale will generate against the increased production and sale costs. Two typical characteristics of competitive markets are: (1) prices will tend to equal marginal costs, although in some markets prices may stabilize at a somewhat higher point; and (2) dropping a price below short-run marginal cost is not a reasonable way for a firm to increase profits — unless the increase equals the present value of future monopoly pricing or is used for promotional purposes.\textsuperscript{49}

Marginal-cost pricing, therefore, is consistent with competition on its merits. Areeda and Turner argue that a price lower than reasonably anticipated marginal cost is predatory, while a price higher than reasonably anticipated marginal cost is not predatory.\textsuperscript{50} However, since marginal cost is extraordinarily hard to compute, Areeda and Turner propose that average variable cost ("AVC") should be used in empirical testing as a substitute.\textsuperscript{51} The Areeda-Turner test holds that a price above AVC is presumed to be lawful. A price be-

\textsuperscript{46} Koller, The Myth of Predatory Pricing: An Empirical Study, 4 Antitrust L. & Econ. Rev. at 108.
\textsuperscript{47} See infra notes 75-80 and accompanying text.
\textsuperscript{49} E. Mansfield, Microeconomics: Theory and Applications 252-57 (4th ed. 1982). But note that a price below the marginal cost could be used for promotional reasons and, as such, is not violative of the Areeda-Turner test.
\textsuperscript{50} Areeda & Turner, 88 Harv. L. Rev. at 711.
\textsuperscript{51} 3 P Areeda & D. Turner, Antitrust Law § 711d (1978).
low AVC, if other prerequisites are met, is conclusively presumed to be illegal.\textsuperscript{52} Those prerequisites are: (1) a defendant may use AVC as a substitute for marginal cost only when it is not significantly below short-run marginal cost; and (2) reasonably disputed cost items must be treated as variable costs.\textsuperscript{53} Almost all recent cases have adopted the Areeda-Turner test or one of its variants.\textsuperscript{54}

Cost-based tests are difficult to use because they allow so many accounting variables to come into play. However, justification for a rule that prohibits pricing below cost can be found in the legislative history of the Sherman Act\textsuperscript{55} and in the social and political judgments embodied in that legislation. The legislative history establishes that Congress wished to advance several principles when enacting the Sherman Act. Congress wished to increase economic efficiency, curb the power of trusts, and protect small business from unfair business practices.\textsuperscript{56} It has been persuasively argued that this last goal included insuring that small firms would not be forced to compete against larger competitors selling their goods at prices below competitive levels.\textsuperscript{57} Essentially, Congress created and assigned to

\begin{itemize}
  \item \textsuperscript{52} Id.
  \item \textsuperscript{53} Id. at § 712.
  \item \textsuperscript{55} Representative Mason condemned the trusts despite their efficiencies:
  Some say that the trusts [Standard Oil] have made products cheaper, have reduced prices; but if the price of oil, for instance, were reduced to 1 cent a barrel it would not right the wrong done to the people of this country by the “trusts” which have destroyed legitimate competition and driven honest men from legitimate business enterprises.
  21 CONG. REC. 4100 (1890) (statement of Rep. Mason). Senator Edmunds, expressing the same sentiment, said:
  Although for the time being the sugar trust has perhaps reduced the price of sugar, and the oil trust certainly has reduced the price of oil immensely, that does not alter the wrong of the principle of any trust because in the long run, all human experience and all human philosophy have proved that [the trusts] are destructive of public welfare and come to be tyrannies, grinding tyrannies, that have sometimes in other countries produced riots and so on.
  Id. at 2726 (statement of Sen. Edmunds).
  \item \textsuperscript{56} Lande, Wealth Transfers as the Original and Primary Concern of Antitrust: The Efficiency Interpretation Challenged, 34 HASTINGS L.J. 65, 105-06 (1982). See also supra note 18.
  \item \textsuperscript{57} Lande, 34 HASTINGS L.J. at 106.
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business the "right" not to be forced to compete against firms setting prices at uncompetitive levels. Under this view, predation should not be condemned because it injures the competitive process, but rather because it stands outside the competitive process.

As with any rule, there will be enforcement errors when applying the Areeda-Turner test. Prosecutors and courts alike will be operating with less than full information concerning, for example, a firm's costs, its financial reserves, and barriers to re-entry or subsequent new entry. No rule, therefore, will ever be enforced perfectly because even well-intentioned enforcers will lack the knowledge to make accurate distinctions among situations that appear to be similar.

Among the critics of the Areeda-Turner test, Williamson and Easterbrook are the most outspoken. Judge Easterbrook argues that the practice of below cost pricing, unless it leads to the elimination of a rival from the market, is punishment enough and, therefore, there should be no enforcement under the antitrust laws. As most forcefully stated by Easterbrook, the loss caused by below cost pricing is automatically enforced on the unsuccessful predator. This loss:

is imposed automatically, by operation of the market. Perhaps the [predator's] shareholders should have a remedy, but that is not an antitrust problem. The [predator] bears costs far exceeding the optimal penalty for the offense. There is no need for an antitrust remedy, because the conduct is self-deterrent. The market imposes an ample penalty on any firm that tries to drive out a rival but fails. The costs of mobilizing the legal system and extracting a penalty would be a deadweight social loss, adding to the loss that has already been sustained.

Easterbrook, Bork, and others, therefore, believe that unless the

58. Joskow & Klevorick, A Framework for Analyzing Predatory Pricing Policy, 39 YALE L.J. 213, 223 (1979) (analyzing the costs of mislabeling predatory and non-predatory pricing strategies). With any given rule against predation, two types of errors can arise. With no rule or a relatively loose rule against predation, there is the risk that some instances of undesirable predation will go unprosecuted (a type II error). This situation results in the continuance of monopolies and the kind of deadweight loss from resource misallocation typically associated with monopoly pricing. With a strict rule against predation, however, there is the risk that genuinely desirable behavior will be prosecuted or deterred (a type I error). Id.


61. Id. at 280. See also, Williamson, 88 YALE L.J. at 1184-86.

62. R. Bork, supra note 2, at 144-68; McGee, Predatory Pricing Revisited, 23 J.L. & ECON. 239 (1980). These authorities question the need for any rule. Their analyses are less in-depth than the Williamson and Easterbrook studies.
Predatory practice concludes in the expulsion of the victim, the antitrust laws should maintain a hands-off attitude. Williamson offers an output reduction rule to counter the Areeda-Turner test. Williamson believes that it should be unlawful for a dominant firm to increase output during the eighteen-month period immediately after the appearance of an entrant.\(^6\)

If the below-cost pricing practice does not end in a monopoly profit for the firm, there is no antitrust problem even if rivals are driven from the market. Therefore, strict and careful adherence to the Areeda-Turner test will often lead to the enforcement error of finding predatory practices where none exist.

Suppose, for example, a manufacturer of microprocessors has costs of $100 per chip for the first thousand units, but that if it makes more it can produce each one for less. The manufacturer therefore makes the rational decision to sell the chips at $20 each in the first year of production with the expectation of making a huge return in the second year when it sells its chips at $10 each but after the per unit cost has dropped to $5. This is a perfect example of deliberately selling below cost. Other firms may be driven from the market by this practice. An antitrust damage remedy would be unavoidable by strict adherence to the Areeda-Turner test. A court, however, should hold this practice lawful without regard to the Areeda-Turner test because the firm plans to make money not by raising price and reducing output, but rather by raising output and reducing cost.

Time, Inc. lost money for ten years on its *Sports Illustrated* magazine before it became profitable.\(^6^4\) Application of the Areeda-Turner test would again be misleading in this example. Time sold *Sports Illustrated* below cost, but the practice was not likely to be anti-competitive because Time did not expect its profits to come from monopoly. Rather, Time expected to realize profits from increased readership which in turn would make its magazine more attractive to advertisers. *Sports Illustrated* may have driven out some rivals and, thus, its pricing practice may have looked predatory. Antitrust courts, however, should ask whether its profits were dependent on monopoly. If not, then there is no need for antitrust litigation. Blind adherence to a price-cost rule would lead to a misuse of the antitrust laws and a deadweight loss to society.\(^6^5\)

Predatory pricing typically occurs in oligopolistic markets. Oligopolistic markets can be divided into two classes. The first class consists of markets in which there is substantial competition and in  

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which price is only slightly higher than the competitive market price. The second class is a market which is a tight oligopoly or a market where there is only slight competition. Consumers may benefit from predatory pricing in substantially competitive oligopoly markets regardless of whether firms are ousted from the market. However, at the time the price is actually slashed, the price cut will create deadweight social loss because the gain in consumer surplus will be more than offset by the loss in producer surplus. But if public policy favors increasing consumer surplus at the expense of producer and social surplus, then predatory price cuts should not be condemned.

Predatory price cuts in tight oligopoly markets produce a very different result than similar cuts in substantially competitive markets. The dominant firm in an oligopolistic market will typically initiate a price cut to force the smaller firms to accept the dominant firm's price leadership. During the price cutting period, the cuts may increase social welfare by creating a price that more closely approximates marginal cost. This will typically lead to an increase in social surplus lasting for at least the duration of the price cutting period.

If, after the price cutting period, the price cut fails to discipline competitors, the price will return to its initial level. However, if the price cut ultimately results in prices higher than the initial level, social and consumer surplus will decrease. The size of the loss will depend upon how much the predator succeeds in raising the price above the level that would have prevailed had predatory pricing not occurred.

An important point to consider is that even if a price cut reduces competition and causes prices to increase, the social loss brought about by the price rise may be less than the social gain created by the initial price cut. Viewed as a whole, therefore, predatory pricing may be preferred to the original oligopolistic market even when it succeeds in forcing rivals from the marketplace or in forcing them to accept price leadership.

A Predatory Pricing Model

The economic costs facing a firm may be classified as fixed or va-

66. F. Scherer, supra note 21, at 41-44.
67. See R. Bork, supra note 2, at 146-60. The issue discussed by Judge Bork is whether, as a matter of public policy, efficient firms should have a vested right in seeking antitrust protection from predatory practices. Bork feels there should be no such antitrust policy.
68. The price will return to its initial level because neither party can afford a prolonged price war. If the price cut failed to discipline the competitors and the dominant firm raises its price above the initial level the firm will lose market share.
riable. Fixed costs do not vary with changes in output and would continue even if a firm produced no output. Variable costs are those which vary with levels of production. They typically include such items as materials, fuel, labor, utilities, repairs, and maintenance. Average variable cost is the sum of all variable costs divided by output.

Marginal cost is the increment to total cost that results from producing an additional unit of output. Marginal cost is solely a function of variable costs, since fixed costs, by definition, are costs unaffected by changes in output. Marginal cost usually decreases or remains constant over low levels of output and increases as production approaches plant capacity.

Average cost is the sum of fixed cost and total variable cost, divided by output. It is, by definition, higher than average variable cost at all levels of output, but will typically fall below marginal cost at very high levels of output when the plant is expanded beyond efficient operating capacity. Marginal cost ("MC") will equal AVC when AVC is at a minimum. Marginal cost will equal average cost ("AC") when AC is at a minimum.

Whether costs are fixed or variable (and hence marginal) is a function of both: (1) the magnitude of any contemplated change in output; and (2) time. To determine which variable costs are relevant to predatory (below cost) price cutting, one must first ask what costs are relevant to the firm which is seeking to maximize profits or minimize losses, since a firm which seeks to do so is normally responding to accepted economic incentives and, thus, is not engaging in predatory behavior. The profit-maximizing or loss-minimizing output for any firm, whether competitive or monopolistic, occurs at that point where any increase in output would add more to costs than to revenues or any decrease in output would reduce revenues more than costs.69

Under conditions of perfect competition, a firm maximizes profits (or minimizes losses) by producing that output at which its MC equals the market price. The firm must produce at that level because it is too small to affect market price by varying its output. A firm with monopoly power, however, has captured a sufficiently large part of a market and can determine market price by varying its output.

Because the monopolist can affect market price by varying its output, it faces a downward sloping demand curve, (D in figure 1).70 The monopolist maximizes profits when marginal revenue ("MR") is equal to MC. Thus, in Figure 1, the profit-maximizing monopolist

69. R. Bork, supra note 2, at 701.
70. Id. at 703.
will produce quantity $Q_m$ and sell at price $P_m$, which is higher than MC. The incremental revenue to the monopolist from selling an additional unit is the lower price received for that unit, minus the revenue lost from selling all other units at the lower price.

A competitive firm will maximize profits or minimize losses by producing at that level where MC equals price. A monopolist will produce where MC equals MR. A firm that is selling at a short run profit-maximizing (or loss-minimizing) price is clearly not a predator. A necessary, but insufficient, condition of predation is the sacrifice of short run profits.

A firm producing at an output where MC exceeds price is selling at least part of that output at a loss. The firm could eliminate that loss by reducing its output or, where the highest obtainable price is below AVC at all levels of output, by ceasing operations altogether.

By pricing below MC, the dominant firm is not only incurring private losses but is wasting social resources as well. When pricing below MC, the would be monopolist increases the possibility that competition will be extinguished or prevented for reasons unrelated to the dominant firm's efficiency. Therefore, a monopolist pricing be-
low MC should be presumed to have practiced predatory pricing.\textsuperscript{71}

Because MC is extremely difficult to measure, the Areeda-Turner MC test has been criticized as impractical. To alleviate this criticism, Areeda and Turner recommend that the firm's AVC be used as a substitute for MC.\textsuperscript{72} The consequences of substituting AVC for MC depend upon the relationship between the two cost measurements. Marginal cost will be equal to AVC when the latter is constant, less when AVC is declining, and greater when AVC is rising. Thus, when AVC is rising, it will be a poor measurement for MC. When the AVC rule is applied, the predator relying on the defense that its price was not less than AVC should be required to prove that its MC at that level of output did not significantly exceed AVC.

The greatest criticism of the MC rule comes from Easterbrook.\textsuperscript{73} If the MC of producing one widget is one dollar, the price in a competitive market would also be one dollar. If widget manufacturers reduced the price to seventy cents, then persons who valued widgets at more than seventy cents but less than one dollar would start buying widgets. This would reduce welfare, because these consumers would receive less than one dollar of benefit from widgets whose manufacture consumed one dollar in resources. Although a rule prohibiting sales below MC would prevent the loss, it should be noted that the firms which sell the items at prices below MC bear the entire welfare loss as private costs.

This can easily be explained by using an illustration. Figure 2\textsuperscript{74} depicts the situation of sales below MC, which is assumed to be equal to AC as well. If widget manufacturers sold widgets at one dollar, consumers would purchase quantity $q$. Only then would consumers who valued widgets at one dollar or more purchase widgets. Manufacturers would exactly recover their costs. Consumers would realize a surplus indicated by area D, which represents the value consumers place on the widgets less the purchase price. If manufacturers cut the price to seventy cents, then consumers would purchase quantity $q'$ of widgets. There would be a welfare loss equal to area C, which represents the value lost in purchases by consumers who would be unwilling to pay what it cost to produce the widgets.

\textsuperscript{71} Id. at 712. Areeda and Turner would create an exception to this rule only when the firm prices below marginal cost as a promotional campaign and the campaign is temporary or in order to meet a competitor's own low price. See supra note 49 and accompanying text. For more on the Areeda-Turner test, see infra notes 114-18 and accompanying text.


\textsuperscript{74} Id. at 279.
Notice that consumers themselves experience no loss. They are in fact considerably better off than they were when the price was one dollar and the surplus was only area D. When the price is set at seventy cents, consumer surplus is equal to areas A + B + D. The welfare loss falls entirely on the shareholders of the widget manufacturers, who lose thirty cents times $q'$ widgets. The manufacturers lose a sum equal to A + B + C. They lose A on the price reduction for existing sales, and they lose B + C on the incremental sales.

The manufacturers' losses are several times greater than the welfare loss. This loss is imposed automatically, by operation of the market. The firms' shareholders should perhaps have a remedy at law, but this should not be a concern of the antitrust laws.

Reputation

Most economists argue that predation is insignificant and self-policing. They believe that due to its self-deterring (unprofitable) nature it will not be practiced. A new theory, however, is currently being expounded that predation can indeed be utilized as an effective entry-deterring strategy.75

The model developed by Dixit, Milgrom and Roberts, William-

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75. See, e.g., O. Williamson, supra note 2, at 376-78; Burns, Predatory Pricing and the Acquisition Cost of Competitors, 94 J. POL. ECON. 266 (1986); Dixit, Imperfect Competition and Public Policy Recent Developments in Oligopoly Theory, 72 AMER. ECON. REV. 12 (1982); Kreps & Wilson, Reputation and Imperfect Information, 27 J. ECON. THEORY 253-79 (1982); Milgrom & Roberts, Predation, Reputation and Entry De-
PREDATORY PRICING

son, Burns and others is typically one of a large established firm, operating in several separate markets, which is threatened with the entry of competitors into one or more of those markets.\footnote{See supra note 75.} Once entry occurs the incumbent must make a choice between fighting the new entrant or sharing the market. If the choice is to fight, the incumbent will typically incur a greater economic loss before expelling the rival than had the incumbent shared the market. The choice to fight, therefore, is irrational. However, although the incumbent knows that it may not directly be profitable to eliminate that particular rival, it may decide to employ predation to deter other potential entrants. This deterrent effect is a direct result of the reputation the predator attains as a consequence of fighting the earlier entrant. These potential entrants may anticipate that the incumbent firm will behave similarly if they should enter the market, and thus, entry may appear less attractive.\footnote{Milgrom & Roberts, 27 J. ECON. THEORY at 281. But see F Easterbrook, supra note 45, at 665. Easterbrook states:}

The threat of predation will be effective in preventing marketing entry only if potential entrants find the threat credible. In models involving only a single market, for example, if the entrant calls the incumbent’s bluff by entering despite the threat, the incumbent would have to share the market as it would be irrational for the incumbent to engage in predation.\footnote{Dixit, Recent Developments in Oligopoly Theory, 72 AM. ECON. REV. 12 (1982).} In contrast, the incumbent in the Dixit model operates in many markets and could benefit by carrying out its threat in one market because it would gain the reputation as a predator in all its markets. It is this reputation which keeps the other potential entrants from coming in.

The viability of this predatory strategy does not depend on being able to induce exit. Rather, the predator need only be able to drive the rival’s post-entry return below the returns available to the rival elsewhere. It is irrelevant whether the incumbent can recoup its

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\footnote{See supra note 75.}

\footnote{Milgrom & Roberts, 27 J. ECON. THEORY at 281. But see F. Easterbrook, supra note 45, at 665. Easterbrook states:}

The promise to lose a great deal of money in Market 1, probably much more money than your new entrant is losing in Market 1, in order to convey the message that you will be willing to do the same thing in Market 2 and Market 3 and Market 4, is incredible. The message you convey is, you have a strategy that can succeed if and only if you never again have to carry it out. Once you have conveyed the message, and rivals know that the strategy can succeed only if not executed, you have also conveyed the message to someone else that now is the right time to enter Market 2. Everybody knows that your predatory threat is profitable only if not carried out. [Therefore], that is the perfect time to enter.

\footnote{Id. at 655.}

\footnote{Dixit, Recent Developments in Oligopoly Theory, 72 AM. ECON. REV. 12 (1982).}
losses caused by predatory pricing in that market. The act need only result in a predatory reputation for the incumbent.

Previous studies have overlooked the value of reputation in their historical analyses of predatory practices. For example, when horizontal mergers were lawful predatory reputation had a very beneficial consequence to the predator. Once the reputation was perceived as credible, competitors would have a legitimate fear of becoming the next victim of price warfare — unless, of course, the predator's merger offer was accepted. Such intimidation would induce the firm to sell out for less than its true market value. The evidence, therefore, supports the belief that previous studies have underestimated the costs of a peaceful merger strategy, as well as the ability of predatory price cutting to establish a credible predatory reputation, thereby allowing the aspiring monopolist the ability to reduce the acquisition costs of competitors.

Early studies found that predatory price cutting was an ineffective tool at eliminating smaller competitors. As a result, most authors were hard pressed to find that there should be a rule against eliminating small competitors. This direction has reversed. Many economists now theorize that when a dominant firm is operating in several distinct and separate markets, predation may be a viable alternative to sharing that market because of the message being sent to potential entrants in the remaining markets dominated by that firm. Practicing predation, therefore, can give a firm the reputation as a predator, which is valuable in deterring entry. Thus, if entry occurs at an early stage, it will meet a predatory response, because any other response will encourage entry. Recognizing this, potential entrants will enter only if the market is so lucrative that they are willing to face certain predation.

No predatory analysis would be complete without discussing non-price predatory strategies. Due to its breadth and non-applicability to the facts of Matsushita Electric Industrial v. Zenith Radio, this analysis has been allocated to an appendix. For a thorough analysis of predatory innovations, tie-ins, predatory preannouncements, and predatory patent abuse (and how they affect the antitrust laws) refer to Appendix A.

SUMMARY

Predatory pricing, the pricing of output below cost so as to injure
or discipline one's rival, has been analyzed extensively. The proper rule and role for the courts are subjects scholars will continue to debate. Reputation theory aside, predation appears to be an irrational strategy for attempting to gain or maintain a monopoly position and is therefore unlikely to be utilized in practice. This observation rests on arguments that predation is costly to the predator and is unlikely to succeed in driving out a rival who understands price cutting is temporary. Further, it is felt that even if the rival is eliminated, any attempt to raise prices so as to reap the benefits of the monopoly may attract new entrants.82

However, because frontal assaults on existing firms are suicidal, much of the recent literature has addressed the question of whether other, less costly, strategies might aid in reducing competition for the dominant firm. For example, a firm operating in several markets could cut prices in one market in order to send a message to potential entrants in the rest of its markets. The second part of this Article dealt with various tests used in detecting predation. With this background, an empirical examination will now be undertaken by applying the various tests for predation to Matsushita.83

MATSUSHITA ELECTRIC INDUSTRIAL v. ZENITH RADIO

On March 26, 1986, the United States Supreme Court rendered its decision in a sixteen-year-old civil case involving alleged predatory pricing, price discrimination, and attempts to monopolize the American consumer electronic products ("CEP") industry by a foreign cartel. A discussion of this case is of interest because the evidence was consistent with some of the analytical ideas expressed by McGee, Easterbrook, Bork, Scherer, Areeda and Turner, and others. It has set the stage for further use of contemporary economic analysis in the courts.

THE PRINCIPALS IN THE CASE

Zenith Radio Corporation ("Zenith") and National Union Electric Corporation ("NUE") filed their suit in 1974. Zenith and NUE claimed that the defendants, Matsushita and twenty-one other Japanese corporations that manufacture or sell consumer electronic products, had illegally conspired to drive them from the American CEP market. Zenith and NUE alleged that the conspiracy was essentially a scheme to raise, fix, and maintain artificially high prices for televi-

nion receivers sold by the Japanese firms in Japan, while concurrently fixing and maintaining low prices for television receivers exported to and sold in the United States.

NUE further alleged that it could no longer profitably manufacture television receivers. NUE claimed that it was forced from the market by the unlawful activities of the Japanese firms. Zenith, still a major manufacturer of television receivers, contended that it incurred operating losses and lost profits because of the unlawful activities of the Japanese firms.84

THE LITIGATION

The particular offenses charged in the complaints span the range of the antitrust laws. The major allegation was that the Japanese firms' conspiracy violated sections 1 and 2 of the Sherman Act.85 Zenith and NUE also alleged actual and attempted monopolization and conspiracy to monopolize under section 2 of the Sherman Act. The Japanese firms were also charged with violating the Robinson-Patman Act86 by discriminating in price among American purchasers. Zenith and NUE finally alleged that the Japanese firms violated section 801 of the Revenue Act of 1916 (the “Antidumping Act”)87 by selling their products in the United States market for prices below their actual Japan market value or wholesale price.

At the core of the case was Zenith’s and NUE’s allegation that the Japanese firms participated in a twenty year “unitary” conspiracy to drive United States manufacturers of consumer electronic products (primarily television receivers) out of business. This was to be accomplished by selling television receivers and other CEPs at artificially high prices in Japan for the purpose of creating a “warchest” which would fund an agreement among the Japanese firms to sell the same products at artificially low prices in the United States.88

The district court found no evidence of a connection between the Japanese firms' home market behavior and their export sales which

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84. The 10 principal defendants included seven Japanese manufacturers of CEPs: Matsushita Electric Industrial Co., Ltd., Toshiba Corporation; Hitachi, Ltd., Sharp Corporation; Sanyo Electronic Co., Ltd., Sony Corporation; and Mitsubishi Electric Corporation, a Japanese trading corporation. The other three principal defendants were Mitsubishi Corporation and two American companies: Sears Roebuck and Co., and Motorola, Inc. Fourteen other defendants were subsidiaries of the principal Japanese defendants.
would support the "unitary" conspiracy theory. The district court further held that no agreement to charge artificially low prices could be inferred from the Japanese firms' participation in the Japanese government mandated export control arrangements. Those arrangements prohibited the Japanese firms from selling below specified minimum prices in the United States market (check price agreement), and established the five company rule, which limited the number of export customers to five. Finding nothing in the record which made the Japanese firms' "parallel" business more consistent with an inference of alleged conspiracy than with an inference of independent action, the district court granted summary judgment in favor of the Japanese firms on all of the antitrust claims.

On appeal the United States Court of Appeals for the Third Circuit reversed the district court and held that, because there was direct evidence of some concerted action (i.e., two years of alleged price stabilization in Japan and the Japanese-government-mandated export control arrangements), the export side of the alleged "unitary" conspiracy could be inferred from the Japanese firms' "parallel" behavior and other circumstantial evidence. The Court, however, overlooked the fact that the Japanese firms' United States market behavior was completely consistent with rational independent action, and far more consistent with an inference of competition than with an inference of conspiracy.

From this adverse ruling, Matsushita petitioned the Supreme Court and was granted a writ of certiorari. The Court found significant entry barriers in the Japanese market. Due to these entry barriers, the Japanese firms could maintain their monopoly profits in that market without fear of encroachment. These significant entry barriers include "high tariff rates, discriminatory ocean freight rates, the Japanese commodity tax, import deposits, limitations on foreign investment in Japan, safety and design standards involving cumbersome inspection and testing procedures, and Japanese government procurement practices." In addition to these government-erected barriers to entry, there was evidence of structural barriers arising from traditional methods of organization of Japanese businesses in keiretsu as well.

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89. *Id.*
90. *The defendants, by agreement with the Japanese Ministry of International Trade and Industry, fixed minimum prices for CEPs exported to the American market. Matsushita, 475 U.S. at 581.*
91. *An order by the Supreme Court or other appellate court which is used when it has discretion on whether or not to hear an appeal.*
92. *In re Japanese Electronic Products Antitrust Litigation, 723 F.2d 238, 307 (3d Cir. 1983).*
93. *A keiretsu is a tightly organized Japanese trade association in which only*
These ketretsus effectively control channels of distribution in the Japanese market. Because many Japanese firms share cost information, the Japanese electronic market can be described as a small number of dominant firms which belong to industry trade associations that freely exchange information about plant capacity, inventories, and pricing. It was through the concerted action of these trade associations that the firms agreed to stabilize the Japanese market prices.

Zenith and NUE alleged that, because of the horizontal price fixing conspiracy in the Japanese market, the natural tendency of any Japanese firm with excess capacity would be to look for export markets to absorb that capacity. The stabilized prices in the Japanese market were claimed to support sales at low prices in the United States, the only major electronically compatible export market.\(^{94}\) Zenith and NUE asserted that the Japanese firms' prices in Japan were more than fifty percent higher than the prices the cartel established for the same products imported and sold in the United States.\(^{94}\)

The Japanese firms' aggregate share of the U.S. market gradually increased for black and white televisions from 21% in 1969 to 49.2% in 1977. Similar market share increases for color televisions were recorded.\(^{95}\)

members of the association are permitted to enter into the particular trade or business. In other words, the Japanese market is a closed shop.

94. The German, French, and Soviet Union television systems are significantly different from the encoding system used in Japan and the United States. Japan has adopted the encoding system approved by the National Television Standards Committee which is compatible with that used in the United States. *Japanese Electronic Products*, 723 F.2d at 305.

95. The question of whether the defendants' aggregate share of the American television receiver market was enough, as a matter of law, to survive the summary judgment stage was addressed by the district court. *Zenith Radio*, 513 F. Supp. at 1320-21. In order to substantiate actual monopolization, defendants must have a significant market share. In American Tobacco Co. v. United States, 328 U.S. 781 (1946), an aggregate 68% of the domestic cigarette market was held to be a sufficient share. *Id.* at 796. The Fifth Circuit has noted: "It appears that something more than 50% of the market is a prerequisite to a finding of monopoly." *Cliff Food Stores, Inc. v. Kroger, Inc.*, 417 F.2d 203, 207 n.2 (5th Cir. 1969). In *United States v. Aluminum Co. of America*, 148 F.2d 416 (2nd Cir. 1945), the Second Circuit held that 90% of the market was a monopoly, but commented that it is doubtful whether 60% or 64% would be enough to constitute a monopoly. *Id.* at 424.

In *Matsushita*, Zenith and NUE had shown that the defendants' market share was, at most, 49.2% for monochrome television receivers and 44.2% for color television receivers. Specifically, figures showed that defendants' share in monochrome receivers grew from 21.8% in 1969 to 49.2% in 1977. Defendants' market share for color television receivers grew from 12.2% in 1969 to 44.2% in 1977. *Zenith Radio*, 513 F. Supp. at 1322.

According to these figures, defendants' aggregate market share for television receivers never exceeded 50% and for most years was far less. The district court held that the plaintiffs' evidence of defendants' U.S. market share of television receivers,
Zenith and NUE asserted that the Japanese firms sold their goods in the United States below cost. These practices were claimed to have resulted in the sharp lowering of "pricing points" in the United States, rendering NUE unable to compete in its lower-price market niche. It was further alleged that these practices resulted in the elimination of NUE and other American CEP manufacturers, and the reduction in the profitability levels of the remaining American manufacturers, including Zenith. Zenith and NUE sketched their Japanese high price - United States low price conspiracy as a unitary conspiracy, with home market and export features, the aim of which was to effect a complete takeover of the American CEP market, thereby destroying the American CEP industry. The connection between the home market and export aspects of the unitary conspiracy, according to Zenith and NUE, was the funds obtained in the high price Japanese market that were used to finance the predatory export raid on the American market.

The Japanese firms, on the other hand, claimed that the allegations were groundless. They alleged that there was no substantial evidence to support Zenith's and NUE's "export side" conspiracy. Relying on the fact that the district court found no evidence that the Japanese firms had acted contrary to their independent economic interests, they contended that there were no grounds to support the allegation that a rational motivation was reached by the Japanese firms to enter into a unique "low price" export conspiracy to sell CEPs in the United States at a particular low price. While Zenith and NUE contended that their only motivation was to sell at whatever low price was "necessary to make the sale," the Japanese firms claimed, and the district court agreed, that this was exactly the individual motivation and result one would expect from free unfettered competition without any agreement.

The Japanese firms asserted that the alleged "low price" conspiracy was the very type of pro-competitive "parallel" behavior that the antitrust laws were designed to encourage rather than condemn.

even if aggregated according to the plaintiffs' theory of monopolization, was insufficient to meet the legal standards of proof under § 2 of the Sherman Act. Id. at 1322-23.

96. Pricing points are a percentage of profit, a noneconomic analysis of how changes in volume of production affect costs and profit. In the CEP industry, NUE was a price-taker, a firm whose size is sufficiently insignificant in relation to the size of the market so that its activities have no influence on the prevailing market price.


98. Matsushita, 475 U.S. at 579. The district court also found that there was no evidence to support a rational motivation by petitioners to enter into a conspiracy to attempt to monopolize the United States television receiver market. It was plain from the record that any such conspiracy would have been recognized as futile. Zenith Radio, 513 F. Supp. at 1320-1323.

99. That is, low prices, secret rebates, etc.
After all, they contended, competition resulting in sales at "low prices" is the ultimate goal of antitrust policy. Basing their arguments on the doctrine of McGee, Bork, and Easterbrook, they successfully argued that claims of conspiracies to sell at "low prices" require thorough review by the courts. Unlike price-elevating schemes, which confer direct and immediate benefits upon sellers, punitive "predatory" pricing schemes, which impose substantial costs upon sellers, provide no such immediate benefits.  

The Supreme Court found that Zenith and NUE relied on an expert study which suggested that the Japanese firms sold their products in the American markets at significant losses. The study, however, was not based on actual cost data, but rather upon expert opinion using mathematical reconstruction. The Court found these cost figures implausible and inconsistent with other evidence. The Court further held that the Japanese oligopolistic price fixing agreement in the Japanese market had little, if any, relevance to the alleged predatory pricing conspiracy in the American market.

The Court noted that Zenith and NUE were basically complaining that they had been injured by the "low" pricing practices of foreign manufacturers seeking to enter the American market. In such circumstances, there was no rational basis for inferring a conspiracy from so-called "parallel" acts of each Japanese competitor in charging lower prices in the United States than in Japan. Moreover, the Supreme Court found that this was precisely the action any new entrant would be expected to take in establishing itself in a new market.

The Supreme Court reasoned that if predation was occurring for over twenty years, the likelihood of the Japanese firms recouping their losses would be very small. The Court also did not overlook the fact that each of the Japanese firms cheated on their minimum pricing agreement by setting prices even lower. The undercutting of this minimum price meant that they were still selling above their individual costs.

The alleged conspiracy's failure to achieve its ends in the two decades of its asserted operation is strong evidence that the conspiracy does not in fact exist. Since the losses in such a conspiracy accrue before the gains, they must be "repaid" with interest. And because the alleged losses have accrued over the course of two decades, the conspirators could well require a correspondingly long time to recoup. Maintaining supracompetitive prices in turn depends on the continued co-

100. *Matsushita*, 475 U.S. at 589.
101. *Id.* at 579.
operation of the conspirators, on the inability of other would-be competitors to enter the market, and (not incidentally) on the conspirators' ability to escape antitrust liability for their \textit{minimum} price-fixing cartel. Each of these factors weighs more heavily as the time needed to recoup losses grows. If the losses have been substantial — as would be necessary in order to drive out the competition — petitioners would have to sustain their cartel for years simply to break even.\footnote{102}

The Supreme Court also observed that RCA and Zenith, two American firms, continued to enjoy the largest shares of the American retail market in color televisions. Furthermore, the Court found no evidence to suggest any relationship between the Japanese firms' profits in Japan and the amount they could expect to gain from the conspiracy to monopolize the American market.

Agreeing with the Japanese firms, the Supreme Court reversed the decision of the Third Circuit. This conclusion accorded with the views of the Antitrust Division of the Department of Justice, which at Zenith's and NUE's request, spent six months reviewing their "best evidence," only to conclude that there was "no evidence of concerted predatory conduct [by the Japanese firms] intended to destroy and supplant the United States color television industry, either at an earlier period or at the present time."\footnote{103}

\textbf{SIGNIFICANCE}

The \textit{Matsushita} case is significant because for the first time the United States Supreme Court has accepted the recent views adopted by lawyers and economists on the theory of predatory pricing, specifically, that predation is difficult to detect and any \textit{per se} rules prohibiting it in every instance should not be implemented.\footnote{104} This is a complete turnabout from the Supreme Court's decision in \textit{Utah Pie Co. v. Continental Baking Co.} which was the last case dealing with the issue.\footnote{105}

In 1967, the Supreme Court in \textit{Utah Pie} had still found favor

\footnote{102. \textit{Id.} at 592-93.}
\footnote{103. Statement by John H. Shenefield, Assistant Attorney General, Antitrust Division, before the Senate Judiciary Committee (April 12, 1978).}
\footnote{104. This Article attempts to thoroughly examine the Supreme Court's current policy toward predatory pricing. It is, however, an attenuated analysis because it can in no way explain the Court's apparent retreat in \textit{Cargill, Inc. v. Monfort of Colorado, Inc.}, 107 S. Ct. 484, 495 (1986) (stating that "while firms may engage in predatory pricing only infrequently, there is ample evidence suggesting that the practice does occur").}
\footnote{105. 386 U.S. 685, \textit{reh'y demed}, 387 U.S. 949 (1967).}
with the "recoupment" theory of predatory pricing. The plaintiff, Utah Pie, sold frozen pies in only one regional market where it had at one time captured over sixty-five percent of the market. Three national firms entered that market, where there was also a number of smaller regional firms. One of the national firms began to cut its prices and over a period of several years (during which the national firms consistently sold their pies at lower prices in the Utah market than in their other regional markets) prices went down considerably. Utah Pie's market share was reduced to roughly one-half of the market. It then sued the national firms under the Robinson-Patman Act, alleging geographic price discrimination. There was some evidence from which the jury could have inferred predation: each of the national firms had, at one time or another, sold below cost in the heat of the price wars, one of them with some frequency; and one of the nationals had used industrial spies. During the four-year period covering the price war, Utah Pie's sales and profits actually increased and, although its market share was reduced to roughly one-half, it remained the largest firm in the market. The Supreme Court nevertheless affirmed a jury verdict for Utah Pie and held that the national firms had engaged in unlawful price discrimination.

The Court's opinion indicates that the crucial facts which warranted the verdict were: (1) the differences in price between markets; and (2) a general and lasting decline in the local price structure. The result, it would seem, is that under Utah Pie a national firm would be inhibited in seeking to enter a market through price cutting for fear that a competitor might successfully bring an action for price discrimination against the national firm. The decision in Matsushita will apparently allow pricing differences between regional markets without fear of antitrust litigation.

The Court in Utah Pie did not base its holding on any below cost sales test or on any general assessment of evidence of predatory intent. The essence of the case is that a firm operating in two or more markets cannot engage (except perhaps sporadically) in price competition in only one of those markets. It may only do so in all of its

106. The theory that a large seller who operates in two or more geographic markets can use price discrimination to finance predatory pricing is what is commonly described as the recoupment theory. Under this theory a predator sells its product at a high price in a market in which it already has a monopoly. The predator then uses these monopoly profits to finance its predatory, below-cost pricing campaign in the market in which the predator wants to eliminate or discipline rival firms. See, e.g., L. Sullivan, E. Thomas & H. Hovenkamp, Antitrust Law Policy and Procedure 503-04, 709 (1984); Utah Pie, 386 U.S. at 702.


108. Utah Pie, 386 U.S. at 703.

In *Utah Pie*, the Supreme Court almost certainly used the Robinson-Patman Act to condemn hard competition rather than predatory price cutting. The decision effectively protected Utah Pie's monopoly position and forced consumers to pay higher prices. *Utah Pie* has been criticized because it may be used to protect oligopolistic price structures against erosion. Whenever any multi-market firm cheats on the cartel or undercuts the market price, the other firms in that market may sue to recover their lost monopoly profits.

The *Matsushita* case is, therefore, very helpful in correcting the Supreme Court's misdirection in the area of predatory pricing theory. The Supreme Court applied modern economic analysis in *Matsushita* and arrived at a solution which clears the way for lower courts in examining alleged predatory pricing schemes. In countermanding its decision in *Utah Pie*, the Supreme Court in *Matsushita*, for the first time, indicated that it may approve the use of a cost-based test. More importantly, the Court applied the logic of McGee in holding that predation is unlikely to ever occur.

The Supreme Court accordingly upheld the view of McGee, Bork, Easterbrook, and others, that predatory pricing, if unsuccessful at commanding monopoly profits once the campaign is completed, has no anticompetitive consequences. The Court has adopted the position that predatory pricing schemes are inherently uncertain and that the gain to be attained by successfully eliminating competitors is highly speculative. *Matsushita* is also important because it adds weighty precedent to an area of antitrust law which presently has a sparse case history.

By utilizing the Areeda-Turner test, the Bork-Easterbrook *per se* legal test, the Joskow-Klevorick average total cost test, and the Williamson structural preconditions-reputation effects rule, this Article will now analyze the data of the *Matsushita* case to determine whether: (1) predatory pricing was present; and (2) if so, the harm, if any, it may have caused to Zenith and NUE.


112. L. SULLIVAN, supra note 110, at 687. There were still sizable profits being earned in the Utah market after entry by the national firms. Subsequent analysis seems to indicate that entry merely squeezed out some of the monopoly profits being earned in the oligopolistic market.

113. The Supreme Court in *Matsushita* indicated in a footnote their passive acceptance of a cost-based test. *Matsushita*, 475 U.S. at 585 n.9.
THE AREEDA-TURNER TEST

Under the Areeda-Turner test, if a firm's price is set below the firm's AVC, a proxy for the firm's short run MC, that price would be per se predatory unless the price is promotional or meets an equally low price of a competitor. The issue, therefore, is whether the Japanese combination in Matsushita set prices below AVC. Once this element of the test is answered affirmatively, the next question is whether this action was taken with predatory intent. If this is answered affirmatively the final issue is whether the price cutting activity was successful in either eliminating a competitor, precipitating a merger, or improving market discipline.

The Areeda-Turner test was not satisfied in Matsushita. Although there was fierce price competition in the American CEP market, the Japanese combination was pricing competitively rather than predatorily. The proof, although circumstantial, shows that the Japanese combination did not sell below its costs. If the firms had been selling below costs, each would have had an incentive to "cheat" by reducing its share of sales and forcing the other cartel members to bear the loss. But instead, the firms each tried to expand their output by "cheating" in just the opposite manner on the check price agreement and by offering secret rebates to each of their American distributors. Such behavior would be illogical if the firms had been operating below their MC. The only solution, therefore, is that each unit sold recouped more than its MC. Since price was above MC, the Areeda-Turner test was not satisfied. The Japanese cartel may have driven some American manufacturers out of business, but they did so through hard competition, not by below-cost pricing.

Because the Japanese firms did not price below cost, one need not speculate further about the intent of the pricing activity nor about its success. The data irrefutably suggests that there was no below-cost pricing. A court making the same analysis need look no further.

The Areeda-Turner test has been subjected to two criticisms: (1) even assuming MC is the proper benchmark for predation, AVC can be a poor substitute for MC; and (2) short-run MC is not an appropriate benchmark for identifying predation. In other words, although few prices below short-run MC are non-predatory, a price higher than short-run MC can also be predatory.

Perhaps the greatest problem of the Areeda-Turner test is its substitution of AVC for MC. At high levels of output (and predatory

114. See supra notes 50-54 and accompanying text.
115. 3 P AREEDA & D. TURNER, supra note 12, at ¶ 711d.
PREDATORY PRICING

Pricing generally occurs at high levels of output), MC and AVC generally tend to diverge, with MC increasing more than AVC. The result is that the Areeda-Turner test may excuse many instances of actual price predation.\footnote{117} Under the Areeda-Turner AVC test, a predator is able to compute its AVC and set its sales price one cent higher, thereby effectively engaging in legal nonpredatory pricing. A predator under the Areeda-Turner test has considerable room for maneuvering.\footnote{118}

BORK-EASTERBROOK PER SE LEGAL TEST

Judge Easterbrook adopts and elaborates on Judge Bork's assertion that predatory pricing should not be held to violate the antitrust laws.\footnote{119} Basing his assertion on game theory\footnote{120} and utilizing a welfare analysis,\footnote{121} Easterbrook argues that predatory pricing will not occur because it is not a rational business objective. Even if predatory pricing does occur, it can only benefit consumers.\footnote{122} Easterbrook argues that the social welfare costs of an anti-predation rule are too great, and that all price cuts should therefore be \emph{per se} legal.\footnote{123} Easterbrook focuses on identifying the central problem with rules against predation, specifically, the difficulty in distinguishing between predatory and competitive behavior.\footnote{124} Easterbrook states that:

\begin{itemize}
\item \footnote{117} A false negative or Type II error occurs when the standard does not label as predatory behavior that which is, in fact, predatory. Such an error causes a loss in economic efficiency. \emph{See supra} note 58; Joskow & Klevorick, \emph{A Framework for Analyzing Predatory Pricing Policy}, 89 YALE L.J. 213, 223-24 (1979).
\item \footnote{118} \emph{See generally} L. SULLIVAN, E. THOMAS, AND H. HOVENKAMP, \emph{ANTITRUST LAW POLICY AND PROCEDURE} 524-27 (1984).
\item \footnote{120} Game theory is a theory of individual rational decisions taken under conditions of less than full information concerning the outcome of those decisions. The theory examines the interaction of individual decisions given certain assumptions concerning decisions made under risk, the general environment, and the cooperative or noncooperative behavior of other individuals. Whereas conventional microeconomic theory provides us with a theory of decisions under conditions of certainty, it is by no means obvious what decisions a \emph{rational} individual should make under conditions of uncertainty and interaction. Games are often described as "zero sum," where one person's gain is another's loss; "nonzero sum," where all players may gain from an individual decision; "cooperative," where collusion is possible; and "noncooperative," where apathy is the rule. \emph{See} VON NEUMANN \& MORGENSTERN, \emph{THE THEORY OF GAMES AND ECONOMIC BEHAVIOR} (1944).
\item \footnote{121} \emph{See supra} notes 73-74 and accompanying text.
\item \footnote{122} Easterbrook, 48 U. CHI. L. REV. at 330-31.
\item \footnote{123} \emph{Id.} at 263-65.
\item \footnote{124} \emph{Id.} at 336. "Conduct that might be predatory \emph{always} involves lower prices, greater output, innovation, or other features that usually increase consumers' welfare. Any attempt to administer a rule against predation entails a significant risk of condemning the outcome of hard competition." \emph{Id.}.
\end{itemize}
The current rule of decision in antitrust cases, . . . coupled with a substantive rule of uncertain scope, tolerates a significant number of false positives. The greater investment in litigation, when combined with such a rule, will impose substantial costs on firms that come close to the line of predation but do not cross it. Because coming close to the line (that is, selling at marginal cost, building new plants, or reducing costs through innovation) is exactly what firms should be doing in perfect competition, the availability of excessive damages is bound to reduce . . . the amount of competitive behavior.\(^\text{125}\)

Easterbrook, therefore, argues that when a plaintiff and a defendant are competitors, antitrust suits should not be permitted.\(^\text{126}\) He would permit suits only by consumers forced to pay a higher price after a predatory exploit was successful.\(^\text{127}\)

The Bork-Easterbrook analysis is based upon an assumption that both the plaintiff-entrant and other potential entrants are perfectly informed about their prospective returns and the degree of competition or tacit collusion that will occur post-entry. In the absence of such perfect information, however, the logical consistency of the Bork-Easterbrook theory breaks down. In a world of imperfect knowledge, price predation can become a rational strategy even for firms which are less efficient or possess no financial advantage over the incumbent.

In *Matsushita*, the Bork-Easterbrook test would treat any harm to Zenith and NUE as being caused by hard luck. It should be no concern of the antitrust laws that NUE was driven out of the television manufacturing industry.

The Court, basing its analysis on the Bork-Easterbrook theory, argued that the conspiracy had been occurring for two decades and that the cartel was still many years from achieving its goals. The Court, agreeing with Easterbrook, found that even if the combination achieved its alleged objective and drove Zenith and NUE from the market, the entry barriers were so low that once monopoly profits were attained, there would be entry by Korean firms, other foreign competitors, and resurgent American firms.\(^\text{128}\) Such a result would make recoupment of the profits lost during the alleged twenty-year price war impossible.\(^\text{129}\)

In diagnosing the effect of the alleged predatory behavior on so-

\(^{125}\) Id. at 330. See also R. BORK, *supra* note 2, at 149-55.

\(^{126}\) Easterbrook, 48 U. CHI. L. REV. at 331.

\(^{127}\) Id. at 331-33.

\(^{128}\) Id. at 591 n.15.

\(^{129}\) Id. at 592.
cial welfare, Easterbrook makes the argument that if there was indeed true predation the losses borne by the predator would be several times greater than the welfare loss.\textsuperscript{130} Such loss would far exceed the antitrust penalty associated with predatory practices, thus, making such conduct self-deterring.\textsuperscript{131} Hence, even if there was predatory behavior in \textit{Matsushita}, and even if social welfare was reduced, any loss was borne entirely by the combination. It is true that the purpose of the antitrust laws should be the promotion of economic efficiency,\textsuperscript{132} but the economic losses borne by the alleged predator are enough of a punitive measure that the antitrust damage remedy should be ignored. Any reduction in social welfare will be remedied by the market.

Although Easterbrook’s position has merit and deserves review, his \textit{per se} legal rule neglects the fact that predatory pricing can harm social welfare. Easterbrook fails to demonstrate that predatory pricing will not injure the economy. He does not demonstrate that predatory pricing cannot occur or will always fail, nor does he consider that even when predation fails, the welfare consequences could be negative. Additionally, since predatory pricing can cause economic injury (i.e. negative consequences to social welfare, reduced competition), it is inadequate to claim that because predatory pricing will not injure the economy in most cases these consequences should be ignored.

Easterbrook’s views in this area may result from a restricted outlook on predatory pricing. Predatory pricing should encompass simple predation, price leadership, and price discipline. Easterbrook bases his analysis only on simple predation, ignoring price leadership and price discipline, which are the two types of predation most likely to occur. In all fairness, however, these are probably the two types of predation hardest to detect.

\textbf{THE JOSKOW-KLEVORICK AVERAGE TOTAL COST RULE}

Professors Joskow and Klevorick propose a two-tier test for predatory pricing, advocating first a rule of reason analysis that first evaluates market structure, and then behavioral considerations.\textsuperscript{133} The

\begin{footnotesize}
\begin{itemize}
\item \textsuperscript{130} Easterbrook, 48 U. CHI. L. REV. at 280. \textit{But see} Zerbe & Cooper, \textit{An Empirical and Theoretical Comparison of Alternative Predation Rules}, 61 TEX. L. REV. 655, 668 n.19 (1982) (adopting the view that deadweight social loss is passed on to other markets, particularly markets with monopolies and other externalities and, as a result will not be borne entirely by the predator).
\item \textsuperscript{131} Easterbrook, 48 U. CHI. L. REV. at 280.
\item \textsuperscript{132} R. BORK, \textit{supra} note 2, at 15-89.
\end{itemize}
\end{footnotesize}
Joskow-Klevorick test finds predation only when certain market and firm structural conditions (e.g., market share, firm size) are met. If the conditions are met, an average total cost ("ATC") rule is imposed, and the firm is prohibited from employing any price cuts of less than two years' duration.

In the first tier of the Joskow-Klevorick test, the court should examine market characteristics to determine whether predation can cause significant injury. Specifically, the court should dismiss cases in which any of the following representative traits are absent: (1) firms in the industry possess short run monopoly power; (2) entry is difficult, sizable and risky; (3) industry demand is inelastic; (4) firms in the industry have specialized assets which cannot easily be sold; (5) firms entering the market must do so through sequential sub-markets; and (6) the dominant firm is not a major innovator. In this first stage of the Joskow-Klevorick test the court should not be attempting to find antitrust liability. Rather, the Court should merely be determining whether, on the basis of examining these structural factors, there appears to be enough of a monopoly problem that a further investigation of firm behavior (tier two) is warranted.

If these characteristics are present, the Joskow-Klevorick second tier examination of the firm's behavioral characteristics is applied. The standards are: (1) prices below AVC are predatory per se; (2) prices below ATC are presumed predatory unless the dominant firm can show that this price maximizes short-run profits and that the firm did not follow this strategy of carrying excess capacity for the purpose of discouraging entry; and (3) prices cut to a point above ATC are presumed legal unless the price cut is reversed to a significant degree within a specific period, perhaps two years. The second tier analysis hopes to find, not the random indication that some firm at some time intended to crush its competitors, but rather the systematic construction of a long-run plan to gain power by reducing the number of competitors in the market and by substantially increasing the barriers to entry.

In Matsushita, without additional cost and structural data, a thorough application of the Joskow-Klevorick test is difficult. Although on a more theoretical level the Joskow-Klevorick approach

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134. Id. 246-49.
135. These second-tier characteristics are essentially the imposition of an average total cost rule along with a restriction on any price cuts of less than two years' duration. However, the ATC rule is not imposed unless certain market and firm structural conditions are first detected.
137. Id. at 253.
138. Id. at 255.
seems accessible, that approach commits the courts to the impossible
task of determining AVC, average fixed cost, industry demand elas-
ticities, and short-run monopoly situations. Additionally, the Joskow-
Klevorick test discourages price competition by chilling the price cut-
ting decisions of a dominant firm because that firm may not wish to
lower its price for two years.\textsuperscript{139} This effect is counterproductive be-
cause the goal of the antitrust laws is to encourage, not discourage,
competitive pricing.

It is known from data in the \textit{Matsushita} case that the electronics
industry has no significant barriers to entry. This contention is sup-
ported by the proliferation of audio and computer firms in recent
years. These insignificant market barriers substantially undermine a
predatory pricing claim against the Japanese combination. A success-
ful Japanese monopolization of the American television market to-
gether with higher prices would attract competition from resurgent
American firms and other foreign firms.\textsuperscript{140} This market characteris-
tic leads to the conclusion that there was no predatory pricing uti-
lized by the Japanese combination. As a result, the conditions of the
first tier of the Joskow-Klevorick test are not met, and there is no
need to analyze the firm's behavioral characteristics.

Should the court choose to continue and analyze these behavioral
characteristics, it would find that the Japanese combination did not
price below AVC.\textsuperscript{141} Neither does it appear that the Japanese combi-
nation priced below ATC.

If the Japanese combination actually had excess capacity, as al-
leged by Zenith and NUE, then it could still withstand the scrutiny
of a price-cost test. If a firm is already operating at full capacity, any
enlargement of output would require additional capacity, which
would then have to be considered a variable cost.\textsuperscript{142} The result
would be an increase in AVC. Such an increase in AVC could cause
the firm to charge a price below AVC, which would be a \textit{per se}
violation of the Areeda-Turner test.

A firm that operates at far less than full capacity, however, may
be able to increase output substantially with relatively little addi-
tional variable cost. Such a firm could increase output and not affect
its AVC by any perceptible amount. For example, in \textit{Matsushita}, the
individual firms had very large plant size in order to benefit from

\textsuperscript{139} See \textit{supra} notes 88-103 and accompanying text.
\textsuperscript{140} Easterbrook, The Limits of Antitrust, 63 TEX. L. REV. 1, 27 (1984).
\textsuperscript{141} See \textit{supra} notes 48-68 and accompanying text discussing the Bork-Easterbrook
and Areeda-Turner analyses.
\textsuperscript{142} H. HOVENKAMP, ECONOMICS AND FEDERAL ANTITRUST LAW 183 (1985).
economies of scale. There was evidence in *Matsushita* to suggest that each firm did have substantial excess capacity.

The effect of excess capacity in each of these firms was to decrease the number of costs considered variable and increase the number of costs considered fixed. The result makes it more difficult for Zenith and NUE to prove predatory pricing under the Areeda-Turner and other AVC tests.\textsuperscript{143}

In *Matsushita*, the Supreme Court addressed the issue of excess capacity.\textsuperscript{144} The Court found no evidence to suggest a relationship between the monopoly profits earned in the Japanese market and any “excess production capacity” the Japanese combination may have possessed.\textsuperscript{145} The Court held that the existence of excess capacity did tend to establish the ability of the Japanese combination to sell products in the United States.\textsuperscript{146} But, the Court held that the excess capacity did not establish a motive for selling at prices lower than necessary to make the sales. Nor did excess capacity explain why the Japanese combination would be willing to lose money in the United States without some realistic prospect of recouping their losses.\textsuperscript{147} Refusing to find the nexus between each firm’s excess capacity and the alleged predatory pricing conspiracy in the American market, the Court held that Zenith and NUE did not sustain their burden of proving their claim of conspiracy to monopolize.\textsuperscript{148}

Even had the Joskow-Klevorick test been applied, Zenith and NUE would have failed to sustain their burden of proof under that test and Matsushita’s motion for summary judgment would have been granted. Hence, social welfare would have been enhanced because society would have been saved the undue burden and expense of a prolonged antitrust action when the outcome was readily foreseeable from the outset.

THE WILLIAMSON STRUCTURAL AND REPUTATION EFFECTS ANALYSIS

Although not actually a rule, Professor Williamson has established an analysis for determining whether predatory pricing exists.\textsuperscript{149} First, he believes that two structural preconditions must exist before an antitrust action will lie. Those two structural preconditions

\textsuperscript{143} Id.
\textsuperscript{145} Id.
\textsuperscript{146} Id.
\textsuperscript{147} Id.
\textsuperscript{148} Id. at 595-96.
are high market concentration and significant barriers to entry.\textsuperscript{150} The second element of Williamson's analysis is the recent theory of reputation as a predation-motivating concept. Predation is an entry-deterrence strategy not because it promotes the elimination of rivals (there will always be other entrants waiting in the wings if the incumbent earns excess profits), but rather, because it has an entry-inhibiting effect.\textsuperscript{151}

This theory adds little to the case analysis. In \textit{Matsushita}, Zenith and NUE were long-established rivals in the industry. Thus, predatory pricing could not practically be used to establish a reputation to inhibit their entry. On the other hand, Williamson's structural preconditions analysis may easily be used to determine a theoretical outcome to the case.

The Williamson rule prohibits a dominant firm from increasing output for eighteen months after entry. Focusing attention on oligopolistic markets as the likely context of predation, Williamson proposes that firms be prohibited from practicing predation in two situations. The first situation exists when the dominant firm wishes to expand output after entry. The Williamson analysis would not allow output expansion in the face of new entry, particularly if the market price is in excess of the dominant firm's AVC. Additionally, prices during the post-entry period cannot fall below AVC.\textsuperscript{152} The second instance when firms should be prohibited from practicing predation also occurs after entry. This rule, however, applies to both incumbents and new entrants. Dominant firms or new entrants should be prevented from sustaining production levels that do not fully recover their long-run costs.\textsuperscript{153}

By focusing on output as a means of avoiding the cost and price ambiguities which are produced by cost rules, Williamson nevertheless fails to carry off a credible welfare analysis. Under a welfare analysis, Williamson's output limitation rule will be inferior to a price-cost rule because under the latter the selling price would be lower and the output greater, resulting in increased consumer surplus. By furthering the interest of a new entrant, the Williamson analysis appears to sacrifice consumer and social welfare.\textsuperscript{154}

The Williamson analysis, by not allowing the dominant firm to

\textsuperscript{150} Williamson, 87 YALE L.J. at 292-93; O. Williamson, \textit{supra} note 2, at 374.
\textsuperscript{151} O. Williamson, \textit{supra} note 2, at 370. \textit{See supra} notes 75-81 and accompanying text.
\textsuperscript{152} Williamson, 87 YALE L.J. at 334-35.
\textsuperscript{153} \textit{Id.} at 337.
\textsuperscript{154} This may not be totally correct, however, because such a strategy may be the optimal tactic for maximizing social welfare in the long run by promoting competitive markets. Nevertheless, it is a factor.
expand output after entry, results in a decrease in social welfare. Simple competitive pressures will force a dominant firm into expanding production after a new competitor has entered the market.\footnote{155} This occurs because the residual demand curve facing the dominant firm after entry may be more elastic than the pre-entry demand curve. With demand more elastic, the dominant firm may achieve higher profits by expanding output and lowering price.\footnote{156} By not allowing the firm to do this, Williamson’s analysis can create a deadweight welfare loss.

None of the Williamson tests apply in \textit{Matsushita} because there was no new entry. Instead, what happened in \textit{Matsushita} was merely an expansion of output by firms already present and competing in the American CEP market.

Williamson based his analysis on a model with two players, a dominant firm and a potential entrant. RCA and Zenith could be characterized as the dominant “firm,” but there was no entry. This is precisely the opposite of what Zenith was trying to persuade the courts to assume. Zenith, however, did have a larger market share than any of the Japanese “dominant” firms. Zenith, therefore, could be characterized as the “dominant” firm. The Japanese firms were already established players in the market prior to the alleged predatory period. However, they could be characterized as the potential entrant.

If this situation was adaptable to the Williamson output limitation rule, however, the result would prove to substantially damage social welfare. By not allowing Zenith and RCA (the “dominant” firms) to expand output and lower their price in the wake of the flood of Japanese televisions, application of the Williamson analysis would have been catastrophic to the competitive essence of those two American manufacturers. An eighteen-month restriction on Zenith’s and NUE’s ability to expand output would have caused a serious decline in their market shares. In this sense, the output limitation aspect of the Williamson analysis is the worst of the modern rules analyzed. It is too restrictive on the marketplace, and it favors entrants over consumers.

The Williamson structural preconditions rule, however, withstands more severe criticism. In the CEP industry the market is highly concentrated. The situation resembles a competitive oligopolistic market. However, as mentioned in the Joskow-Klevorick and earlier sections, there are low entry barriers in this industry, so the


case fails a structural precondition requisite. *Matsushita*, having failed this Williamson structural precondition analysis, cannot be considered a Sherman Act section 2 intent-to-monopolize antitrust cause of action.

Social welfare, therefore, can be improved because the courts will not have tied up their time and assets on a case which was meritless at the beginning. A strategy of employing market structure preconditions before an antitrust cause of action is given standing will, therefore, enhance consumer and social welfare.

**CONCLUSION**

This Article has attempted to examine predatory pricing and its perceived role in antitrust law. The nature and potential of a number of predatory strategies has been analyzed. McGee, Bork, Easterbrook, and others argue that, except in the unusual case when a predator has superior access to financial resources, a firm cannot use below-cost pricing to permanently drive an equally efficient and sophisticated competitor from the market. A sophisticated competitor will realize that the predator's losses caused by the predatory strategy will exceed its own as long as its market share is smaller and it is equally efficient. Faced with this realization, a rational incumbent will conclude that a duopoly share of the market is more desirable than following a predatory strategy.

Strategic behavior, efforts by established firms to take up predatory strategies long before entry occurs, has only recently been analyzed. Studies concerning reputational effects have led some authorities to rethink the rationality of predatory pricing and find that predatory pricing may be an effective entry-deterring strategy. If an incumbent facing entry in only one of its many markets fights that entry, it will gain the reputation as a fighter and, through that reputation, it may be able to avoid rival entry in its other markets.

*Matsushita Electric Industrial v. Zenith Radio*, was decided correctly because the antitrust damage, if any, was entirely borne by the predators, a Japanese electronics cartel, to the benefit of consumers in the American television market. Thus, punitive legal action against the Japanese firms would have been irrational, counterproductive, and a detriment to social welfare.

Application of the Areeda-Turner price-cost test, the Bork-Easterbrook *per se* legal test, the Joskow-Klevorick ATC test, and the Williamson structural reputation analysis to the *Matsushita* facts reveals that predatory pricing was not present in *Matsushita*. The re-

sults, therefore, indicate that if predation did occur, it went unpunished as a false negative error (i.e. the test failed to label as predatory behavior that which was in fact predatory). This type of error, however, is preferable to a more restrictive rule, which would prohibit competitive behavior, thereby straining social welfare.
APPENDIX

NON-PRICE PREDATORY STRATEGIES

Price is not the only way in which firms compete. It is just one component of the package a consumer considers in deciding whether to buy a product. It is usually convenient, however, for economists to hold factors such as product quality constant while discussing the effect of price changes on competition.

Nonetheless, firms also compete for customers on the basis of non-price attributes such as product design, pre-and post-sale services, and delivery speed. Contractual provisions, such as two-tier pricing systems, tie-ins, and exclusive dealing may have important competitive implications. Other economic variables which are neither purchased nor valued directly by consumers may have important strategic ramifications. For example, a firm's scale economies, capital intensity, research and development program, and patent licensing over input production processes of its competitor may not directly affect consumer choice in the market place, but will still generally affect the speed of entry, future prices and product mix in the industry.¹⁵⁸ In practice, a firm could choose to vary any element of the price-product mix. A product quality increase with price held constant is as much a price reduction as a price decrease with product quality held constant. If predatory pricing is possible, analogous predatory product quality changes are also possible.

Innovations, then, apparently should be treated no differently then predatory pricing because innovation is simply a way of either producing a higher quality good or reducing the marginal cost of producing the same good. The former would allow predatory quality changes; the latter would create the possibility of conventional predatory pricing.

A monopolizing firm might deter new entry by spending part of its monopoly profits in research and development and thereby keep an innovative lead over the rest of the industry. During the 1970s for example, IBM retained a dominant position in the computer market through aggressive innovation.¹⁵⁹ Research and development may reduce the net deadweight loss of monopoly if society values the resultant innovations by an amount in excess of its costs plus the increased social costs of any monopoly power that the research and development will create. In all likelihood successful research and de-

¹⁵⁸. S. Salop, Strategic Predation and Antitrust Analysis 22 (1982).
velopment expenditures will make new entry by competitors more difficult.

The exact breadth of the relationship between research and development expenditures and monopoly is unknown. Joseph Schumpeter argued that since research is both expensive and risky, firms in competition will not be able to afford the expenditure. Schumpeter wrote that large firms can engage in research more economically than small firms because large firms are able to distribute the costs of research and development over a much higher rate of production. Larger market shares enable firms to recover a large part of their investment in information and thus support innovation.

All new investment entails risk. Some research investment is justifiable. To a small firm in a competitive market, the consequences of falling behind other competitors are just as serious as the consequences of spending research money unprofitably. Competitive firms invest in research and development to attempt to gain market power through the use of patented product innovation. If a firm can somehow distinguish its product and make it more attractive than the product offered by the firm's rivals, the distinction may result in monopoly profits.

A monopolist threatened by competitive entry is likely to spend a great deal on innovation, both because it wants to preserve its market share and because it has the funds available to do so. A concept related to limit pricing is "predatory innovation." A monopolist may invest in inefficient innovation, innovation designed solely to preserve the monopolist's dominance but whose efficiency losses will exceed any efficiency gains that result from the innovation itself. IBM, for example, has been accused of announcing new products and improvements long before they would be available, with the purpose and effect of discouraging potential buying of non-IBM equipment.

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161. The counterargument to Schumpeter is that thousands of small firms engage daily and profitably in relatively sophisticated types of research and development. The microprocessing chip that revolutionized the computer industry was developed by one such small firm.


Sometimes such preannouncements may be deemed fraudulent. Many experts believe, however, that fraudulent preannouncement should be left alone by the antitrust laws and should instead be redressed through tort and contract law. Economists should not be concerned with the harm done to other firms. Consumer welfare is the core concern; damage to other firms is troublesome only if it harms consumers in the end. If a firm alleges that it was damaged because a rival had fraudulently announced a product that would (in the near future) be of better quality or lower price and that consumers stayed with the rival based on that fraud, the difference in damages between an antitrust remedy and a tort or contract remedy is non-existent. In either case, after the plaintiff firm showed that consumers stayed with the rival due only to fraud the plaintiff’s damages would equal the difference in value.

Courts and economists need to understand the goals and objectives of the antitrust laws and apply the rules uniformly and consistently. Because technological progress is desirable and should not be stifled by the antitrust laws, it may be tempting to follow the view that if a new product is superior to the product it replaces, the antitrust inquiry should end. But a profitable new product may not be socially beneficial if its research and development costs are defrayed only through the additional monopoly profit gained by a rival’s exit. Perhaps, then, the antitrust inquiry should continue.

Another way a dominant firm may induce its rivals to exit an industry is by raising their costs. To a predator, raising rivals’ costs has many advantages over inducing exit through predatory pricing. The most obvious advantage is that it is easier to compete against high cost firms than low cost ones.

One way of raising rivals’ costs is by controlling the supply of one or more of the rivals’ production inputs. If the dominant firm integrates upstream to control a factor of production, it may be able to raise downstream input prices to its rivals. The upstream profits may be sacrificed, but these will be more than offset if the dominant firm’s downstream profits rise disproportionately.

Another way a dominant firm may raise rivals’ cost is by control-

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165. See generally Ordover and Willig, 91 Yale L.J. at 29-30.
166. Salop and Scheffman, Raising Rivals’ Costs in AER PAPERS AND PROCEEDINGS 267 (May 1983).
167. A predator practicing predatory pricing must lower price and increase output. By raising rivals’ costs, the predator does not have to sacrifice short run profits for indeterminate and speculative long-run profits.
168. S. Salop, supra note 158, at 268.
ling the demand for necessary production inputs which are limited in amount, such as certain skilled labor or a scarce natural resource, and thereby affect the price of these inputs. Small fringe firms produce until price equals marginal cost. If the cost of some limited resource is raised, then these fringe firms would have to raise their prices which would lead to a reduction in the demand for their product. If the fringe firms' sales output falls and their prices rise, then they may be forced to exit the industry. This result is often the same goal set by a dominant firm which practices predatory pricing although there is no short run profit loss by pursuing the alternative of raising rivals' costs.\footnote{169}

The difficulty of separating the predatory from the innocent in the judicial process is illustrated by In Re IBM Peripheral EDP Devices.\footnote{170} In In re IBM the court did not attempt to evaluate research and development costs to determine whether they involved too much sacrifice or whether the innovation led to excessive concentration. Rather, the court concluded that if a monopolist introduces a new product that has a serious adverse effect on the monopolist's rivals in the production of complementary goods, the innovation will be deemed predatory unless the product change was reasonable.\footnote{171} In In re IBM, the court's open-ended reasonableness tests apparently meant that a technologically regressive product could be unlawful, but that an "improvement" would be lawful no matter what effect it had on competitors or competition.\footnote{172} This rule simplifies the task in litigation, but it does not make clear why technological improvements could not be predatory within the court's definition when they enable a monopolist of one product to control the market for a complementary good as well.\footnote{173} A requirement that the innovation not "unreasonably" restrict competition simply begs the question of what is a reasonable restriction.

The key issue in the assertion that innovations can be predatory is not, however, the difficulty in implementing a legal rule. The issue is, instead, the lack of a convincing explanation of how innovations could reduce consumers' welfare. Most of the recent cases pertaining to predatory product innovations deal with the phenomenon of systems rivalry. Typically, the defendant is a firm that had been offering systems components which were compatible with the components produced by a rival, as well as offering their own components that

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\begin{itemize}
  \item \footnote{169. } Id.
  \item \footnote{170. } 481 F Supp. 965 (N.D. Cal. 1979).
  \item \footnote{171. } Id. at 1002-08.
  \item \footnote{172. } Id. at 1004.
\end{itemize}
}
were competitive with the components produced by the rival. The defendant would then introduce a new system of components that were incompatible with those of the rival thereby threatening the rival's viability.\textsuperscript{174}

In analyzing the systems rivalry problem, it should be noted that predatory innovations resemble tie-ins.\textsuperscript{175} The innovator, starting with a monopoly of good X, contrives (through changes in its product) to induce consumers to purchase good Y as well. IBM allegedly used changes in the multiplexing systems of its computers to induce consumers to purchase IBM peripherals as well.\textsuperscript{176} Kodak supposedly invented new cameras, the "Instamatic" and the "Pocket Instamatic," in order to obtain an advantage in the film market.\textsuperscript{177} The only objection to this outcome is the same one advanced against tie-ins; that the monopolist has used its monopoly "leverage" to obtain a second monopoly.\textsuperscript{178}

This argument however is meritless. "There is no clear motive for predatory systems rivalry if the dominant firm can earn all of the monopoly profits obtainable in the market by charging an elevated price for the component of the system over which the dominant firm already possesses monopoly power."\textsuperscript{179} A monopolist can secure only a single monopoly return among complementary goods. For example, if the monopolist's product change reduces the value of competitors' complementary goods, customers would treat this as an increase in the price of the monopolist's "improved" product and buy fewer of them. Other suppliers would continue to furnish the non-compatible complementary good using the old technology if necessary. The monopolist could not both collect the full monopoly profit in its improved product and force customers to purchase its tied good as well. If the monopolist used the innovation to secure a monopoly of the complementary good, it would suffer a decrease in demand for its tying good.

The purpose of an innovation-induced tie, therefore, must be

\textsuperscript{174} See California Computer Prod., 613 F.2d at 727; Berkey Photo, Inc. v. Eastman Kodak, Co., 603 F.2d 263 (2d Cir. 1979).

\textsuperscript{175} This is not a true tie arrangement. The monopolist here must use pricing incentives to make the two complementary goods attractive to the consumer before they will be purchased together.

\textsuperscript{176} California Computer Prod., 613 F.2d 727.

\textsuperscript{177} Berkey Photo, 603 F.2d at 263.

\textsuperscript{178} See United States Steel Corp. v. Fortner Enter., 429 U.S. 610, 617-22 (1977).

\textsuperscript{179} Ordover & Willig, 91 YALE L.J. at 31. Ordover and Willig believe, however, that "monopoly power over one component of a system is not always sufficient for a dominant firm to extract all the monopoly profits obtainable in the systems market. In such instances, the dominant firm can increase its profit by inducing the exit of a rival and thereby extending its monopoly power to other systems components." Id. at 31.
other than simply obtaining a second monopoly. The innovation may enable the firm to take advantage of the different elasticities of demand of customers that use the two products in different ratios. The innovative change in the monopolist's price-product mix may also be an effective way to drive less efficient rivals from the market.\textsuperscript{180} If this is the function of the innovation, then the innovation is desirable because ousting an inefficient producer always improves social welfare.\textsuperscript{181}

Some products are complementary inputs into final goods assembled by someone else. Central processors, memory units, and input-output devices, for example, are inputs into information retrieval and storage products. The price and availability of these input products affects the demand for and price of the final product. For example, there would be a tremendous surge in the demand for computers if peripheral equipment were free.

The existence of complementary products makes it possible, at least in principle, to use innovations to prey even if predatory pricing might be unsuccessful.\textsuperscript{182} For example, if a firm is the market innovator and its new products only complement its own existing product, consumers wishing to use the new innovations would buy no other brand.

In the Berkey\textsuperscript{183} or IBM\textsuperscript{184} cases, the important question would pertain to the prices that Kodak or IBM charged on components their competitors needed to conduct their business. In such cases the competitors have no right to charge that the courts should give them more time to develop a new camera or central processing unit in order to more effectively compete. Such a result would make the innovator's recoupment of its research and development investment impossible. The courts' only concern in predatory product innovation cases should be the refusal of the innovator to sell complementary components to the makers of the old model at compensatory prices.\textsuperscript{185}

Innovations cannot be called predatory merely because they enable a firm to control the market for complementary products or even because they lead to a reduction in output. The innovator's initial control of these markets benefits consumers because it makes in-

\textsuperscript{182} Easterbrook, 48 U. CHI. L. REV. at 304 (1981).
\textsuperscript{183} 603 F.2d 263 (3d Cir. 1979).
\textsuperscript{184} 613 F.2d 727 (9th Cir. 1979). See supra note 3.
\textsuperscript{185} See generally Ordover and Willig, 91 YALE L.J. at 8.
novation less risky, gives firms the incentive to undertake additional research, and enables consumers to evaluate product quality accurately. Any market power created by an innovation will erode as time passes. Informal tie-ins imposed through particular product introduction strategies may be more costly than straightforward tie-ins. If this is the case, the rule against tie-ins is the source of the cost. Predatory innovation, therefore, can be capsulized by the proposition that if antitrust law bans one device (such as explicit tie-ins), firms will find a replacement that is more costly.\textsuperscript{186}

**PATENTS**

Another non-price predatory practice is the overzealous use of patents. The refusal to license a competitor forecloses potential competition and causes social welfare to decline. The conventional objective of the antitrust laws is to promote vigorous competition. The patent laws, however, have as their objective the fostering and promoting of the incentive to make public disclosures of inventions via the seventeen year right to exclude others from making, selling or using the patented invention. In promoting this policy, the patent system grants a limited (in duration) monopoly to the inventor or patentee. It is not difficult to see that these two policies are at odds with each other. Tensions between these two objectives arise principally from the manner in which patent rights are exploited and the manner in which patent rights are accumulated.\textsuperscript{187} Decision makers must recognize this inherent conflict in order to develop laws which minimize the tension between these two socially desirable policies.

Cost-based standards, such as the Areeda-Turner test, do not always directly apply to non-price predatory strategies. Many kinds of predation are not directed at the output market, although product market prices are ultimately affected.\textsuperscript{188} Input markets can also be a strategic arena when rivals compete in both the input and output markets. For example, by accumulating patents, an integrated firm can sometimes deprive an entrant access to the most efficient technologies, thereby requiring the entrant to use a more costly production process. Placing the entrant at such a cost disadvantage may deter its entry into the market, induce its exit from the downstream


\textsuperscript{187} E. KINTER & L. LAHR, *AN INTELLECTUAL PROPERTY LAW PRIMER* 107-11 (2d ed. 1982).

\textsuperscript{188} See R. BORK, *THE ANTITRUST PARADOX* 156-59 (1978).
A firm may also use exclusive licensing agreements to help preserve its market share. Suppose that E and F are patents for products or processes which can be used interchangeably and thus compete for the same market. If firm X, which has a monopoly in the market by use of patent E in its manufacturing process, allows another firm access to patent F, firm X would lose its monopoly. Firm X's strategy, therefore, would be to either purchase the patent outright or obtain an exclusive license from the owner of the patent. Firm X could then put process F on the shelf or, if it is more efficient than process E, employ process F in producing its output. Such a strategy would close the market to efficient entrants until firm X's original patent for process E or the exclusive license for progress F expired, whichever came first. Although this situation has antitrust implications, exclusive licensing agreements are perfectly allowable under today's patent laws.

Predatory strategies that employ non-price instruments such as advertising, refusals to deal, patents, and innovation, have been analyzed above. Many non-price strategies bring other markets into the analysis. Many of these markets can be characterized as input markets. Predatory use of vertically directed practices such as downstream incorporation, refusals to deal, tie-ins, and other arrangements which tend to increase a competitor's cost of essential inputs are further examples of non-price predation. Non-price methods are often more cost-effective and more likely to succeed than simple predation.

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