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Oligopoly Shared Monopoly and Antitrust Law

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INTRODUCTION

For the past fifty years, an incomplete and somewhat unsatisfactory relationship has existed between the economic theory of oligopoly[1] and the legal doctrine of liability under the federal antitrust laws.[2] Each relates to the same phenomenon: the ability of a group of firms to avoid rigorous competition and thus achieve some noncompetitive end, typically higher-than-competitive prices or other favorable terms of sale that could not be achieved in a fully competitive market.[3] Yet because of the fundamentally different conceptual approaches of the two disciplines, economic theory has contributed relatively little to the development of the corresponding legal doctrine.[4] Indeed, it would not be unreasonable to argue that the efforts to incorporate economic concepts such as "tacit collusion," "oligopolistic interdependence," and, most recently, "shared monopoly" into the legal doctrine have been counter-productive, in view of the confusion and inconsistencies that have resulted.

The legal doctrine of liability under section 1 of the Sherman Act focuses on the concept of "agreement" among otherwise competing entities. The clearest example is when there is direct evidence of face-to-face

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1 An oligopoly is an industry in which a relatively small number of firms account collectively for most or all of the industry's total output.

2 Section 1 of the Sherman Act and section 5 of the Federal Trade Commission Act are the relevant statutes. Section 1 of the Sherman Act provides: "Every contract, combination in the form of trust or otherwise, or conspiracy, in restraint of trade or commerce among the several States, or with foreign nations, is declared to be illegal." 15 U.S.C. § 1 (1976). Section 5 of the Federal Trade Commission Act states that "[u]nfair methods of competition in or affecting commerce . . . are declared unlawful." 15 U.S.C. § 45 (1976). Section 5 does not contain an explicit requirement of agreement. Its coverage, therefore, may extend beyond the scope of the Sherman Act. *See* text accompanying note 145 *infra*.

3 The commentators differ over whether prevention of monopolistic pricing should be the exclusive goal of antitrust policy. *See generally* ANTITRUST LAW AND ECONOMICS (O. Williamson ed. 1980).

4 Academicians and policy makers have discussed oligopoly theory and antitrust law. *See* INDUSTRIAL CONCENTRATION: THE NEW LEARNING (H. Goldschmid, H. Mann & J. Weston eds. 1974). This discussion has centered primarily on the actual incidence of oligopolistic pricing, the methods by which it is achieved, and the appropriate policy response to oligopolistic pricing. *See, e.g.,* Bain, *Relation of Profit Rate to Industry Concentration: American Manufacturing 1936-40,* 65 Q.J. ECON. 293 (1951); Brozen, *Bain's Concentration and Rates of Return Revisited,* 14 J.L. & ECON. 351 (1971); Demsetz, *Industry Structure, Market Rivalry, and Public Policy*, 16 J.L. & ECON. 1 (1973); Posner, *Oligopoly and the Antitrust Laws: A Suggested Approach,* 21 STAN. L. REV. 1562 (1969); Turner, *The Definition of Agreement Under the Sherman Act: Conscious Parallelism and Refusals to Deal,* 75 HARV. L. REV. 655 (1962).

communication among competitors in which they pledge to eschew rivalry and agree to a price that is presumably more profitable than that which would be achieved absent the cooperation.[5]

The traditional economic analysis of oligopoly, on the other hand, portrays the process of achieving a noncompetitive end as involving separate, albeit interdependent, decisions by each firm. Because the number of firms in an oligopolistic industry is small, each firm recognizes that its own actions will have a substantial impact on the economic well-being of its rivals and will probably provoke some reaction from them. If one firm cuts prices in an effort to boost sales, rivals may be compelled to match the price cut, not only rendering the initial effort to secure additional volume unsuccessful, but making all firms worse off than before. When all firms anticipate this chain of events and recognize that a price reduction is against their self-interest, no price cutting will occur and they can achieve and maintain a noncompetitive price.[6]

The economic theory of oligopoly is not incompatible with the possibility that firms will attempt to secure noncompetitive prices by the kind of face-to-face communication that constitutes a standard Sherman Act violation. The theory, however, suggests that the same noncompetitive price might be achieved without any formal agreement; it could emerge from each firm's recognition of its interdependence with its rivals and the resultant individually rational pricing strategy.

This possibility poses two dilemmas for traditional notions of Sherman Act liability. First, it is difficult to apply the notion of agreement, the doctrinal heart of antitrust liability, to behavior based on individual calculations of profit maximization. Second, liability, at least in the antitrust context, normally requires some form of culpable behavior. Under the economic theory of oligopoly, however, the individual firm has done nothing more than to conclude that it would be foolish to charge less than a "monopoly" price.[7]

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5 Independent of Sherman Act prohibitions, these agreements are void at common law as restraints of trade and unenforceable in court. *See* P. AREEDA, ANTITRUST ANALYSIS: PROBLEMS, TEXT, CASES ¶ 139 (3d ed. 1981). These agreements may nonetheless achieve a noncompetitive outcome. *See* notes 34-38 and accompanying text *infra*.

6 Oligopoly models differ in their assumptions about rivals' reactions. In the model developed by Edward Chamberlin, the oligopolistic firm assumes that rivals will match precisely its output. Where the firms have identical costs, the result is that each firm chooses a level of output that, when summed across all the firms, yields the same output and price that a monopolist with the same costs would have chosen. *See* E. CHAMBERLIN, THE THEORY OF MONOPOLISTIC COMPETITION 30-32 (8th ed. 1962). Other models predict results that range between the pure monopoly price and the competitive price, depending on the assumed reactions of the firms and the number of firms in the industry. *See* notes 8-12 and accompanying text *infra*.

7 A similar problem arises with respect to remedies because it is difficult to tell the firm how to change its behavior in the future. It is implausible to require firms to pretend that they have 50 rivals rather than only two or three.

Proposals have been made to eliminate the requirement of culpable conduct and to al-

This Article presents an alternative economic model of oligopoly and uses that model to explore the desirability of preventing certain types of oligopolistic behavior under existing antitrust law. This approach rejects the economist's traditional dichotomy in which noncompetitive performance results either from formal agreement or from individual profit-maximizing behavior in an oligopolistic context. The policy dilemma associated with the textbook case of oligopolistic interdependence remains conceptually troublesome under the suggested approach. The practical consequences of that dilemma, however, are substantially diminished because oligopolistic behavior frequently can be characterized to suggest culpable behavior and allow for effective relief.

The first section of this Article presents the model, highlighting three components of the process by which firms in an oligopolistic setting avoid the rigors of competition. The first component outlines the two fundamental tasks that firms in any oligopolistic industry must accomplish to achieve and maintain noncompetitive performance. The second component outlines the structural or environmental factors that make it more or less difficult to accomplish those tasks. The third component of the process outlines specific means used to accomplish the tasks under any particular set of structural conditions.

The second section of this Article applies the model to two approaches that courts have used to analyze situations in which oligopolists apparently have succeeded in achieving a noncompetitive end, but where direct evidence of a formal agreement is lacking. The first approach is used when an agreement not to compete may have been made, but the evidence is largely circumstantial and the plaintiff asks the court to infer a formal conspiracy. The second approach is applied when there is evidence of an agreement but the agreement is not a "naked" restraint, *i.e.,* a convenant not to compete. Rather, the terms of the agreement are facially neutral or even procompetitive, such as an exchange of information on prices or production levels. The court must determine whether, given the structural context, the agreement may lead to anticompetitive effects that outweigh any competitive benefits. In both situations, the economic model helps to clarify the issues and provides a more secure basis for deciding when liability is appropriate.

The third section uses the economic model to develop a standard of liability for situations in which there is neither direct evidence nor even

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low structural relief, typically dissolution of the largest firms, when consistently poor performance can be demonstrated. *See, e.g.,* C. KAYSEN & D. TURNER, ANTITRUST POLICY: AN ECONOMIC AND LEGAL ANALYSIS 111-18 (1959). The Industrial Reorganization Act, S. 3832, 92d Cong., 2d Sess. (1972), would have established a special commission to consider procedures for eliminating economic concentration, including dissolution. *See* 118 CONG. REC. 24925-35 (1972); NATIONAL COMMISSION FOR THE REVIEW OF ANTITRUST LAWS AND PROCEDURES, REPORT TO THE PRESIDENT AND THE ATTORNEY GENERAL 151-62 (1979).

an implication of any conventional agreement. Rather, an undesirable outcome, such as identical higher-than-competitive prices, is traced to certain practices undertaken by one or more firms. These "facilitating practices" form the basis of antitrust liability, particularly under the so-called "shared monopoly" theories of the Department of Justice and the Federal Trade Commission and the recent prosecutorial efforts made under that label.

I

ECONOMIC ANALYSIS OF OLICOPOLY BEHAVIOR

A. *The Classic Theory of Oligopoly*

The classic economic theory of the firm rests on the premise that individual firms attempt to maximize profits in the context of certain specific assumptions about demand and unit costs. For example, the key characteristic of a perfectly competitive industry is the assumption that the demand curve facing each firm is perfectly elastic (horizontal) at the competitive price. The firm can sell all that it wishes at that price. Should it attempt to charge a higher price, however, it would sell nothing at all.

Each firm thus perceives itself as a price taker, because it cannot profitably influence the market price by its own output decisions. Accordingly, the rational, profit-maximizing strategy is to expand output until the incremental cost of an additional unit would equal or exceed the market price. When all firms act in this way, the market price is determined at a level just sufficient to cover the costs of production; firms do not earn supra-competitive profits.[8]

A monopolistic industry differs from a competitive industry in the traditional literature by virtue of a different assumption about demand.[9] Because a monopolist is by definition the only firm producing a particular product, it can elevate price above a level that just covers its costs without losing customers to rival firms.[10] As a result of this different assumption, a profit-maximizing monopolist will charge a price above the competitive level.

The classic theory of oligopoly is premised on the same kind of indi-

8 More precisely, price exactly covers each firm's incremental costs. So long as entry into and exit from the industry are without cost and no firm has lower costs than its rivals, price will also just cover average costs; no firm will earn monopoly profits.

9 Differing assumptions about costs also may be necessary to explain why the industry has only a single firm. When unit costs decline as a function of a firm's rate of output, for example, the industry will normally degenerate into a single firm.

10 The monopolist will lose some customers because of the economist's law of downward sloping demand. At higher prices, fewer units will be sold. The profit-maximizing strategy for the monopolist is to find that level of production at which any further reduction in output (caused by raising price) will reduce total revenues by an amount greater than the reduction in total costs, causing total profits (revenues minus costs) to diminish.

vidual profit-maximizing calculus as that embodied in the perfect competition and monopoly models. In contrast to the monopolist, the individual oligopolist has rivals. In calculating its most profitable price and output, the oligopolist cannot ignore the fact that if it chooses a price higher than the competitive level, rivals can undercut its price and encroach upon its market share, thereby rendering the initial price increase unprofitable.

In contrast to the firm in a perfectly competitive market, however, the oligopolist does not expect its rivals to behave in this aggressive manner. Rather, it assumes that rivals will not expand their output at all, and under the most favorable assumption, that rivals will follow its move by matching its price and similarly reducing output.[11] This assumption results from the belief that when the number of rivals is small, each will realize that their fortunes are interdependent. Any one firm's aggressive action will, because of its perceptible impact on its rivals' sales volume, inevitably be self-defeating; such action induces retaliation that ultimately renders all rivals worse off.[12]

If this characterization of oligopoly is accurate, a policy dilemma clearly exists. No specific element of any firm's behavior appears culpable. Each firm is proceeding rationally on the basis of assumptions about how rivals will behave. These assumptions are derived not from any formal commitment by rivals to behave in a specific way, but from the fact that the small number of firms makes it rational for rivals not to attempt to take advantage of each other. A firm is hardly likely to be ignorant of such obvious datum as the number of firms in the industry; nor can it reasonably be expected to ignore the implications of that information. Thus, any behavior-related theory of antitrust liability necessarily fails to prevent the noncompetitive price that results from this kind of "pure" oligopoly behavior.[13]

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11 The most favorable assumption comes from the Chamberlin model. *See* E. CHAMBERLIN, *supra* note 6, at 30-32. The most widely cited of the original models is that of Augustin Cournot. According to Cournot's model, each firm naively expects that its rivals will maintain the same level of output as it reduces its own output and raises price. As each firm behaves symmetrically, thereby rendering the original expectation overly pessimistic, the price that emerges will be above the competitive level. It will, however, deviate from the pure monopoly price in direct relation to the number of firms.

12 As the number of firms increases, the aggressive actions of any one firm have less of a perceptible impact on each of its rivals and, consequently, are less likely to provoke retaliation. When each firm sees an opportunity to take advantage of its rivals, cooperation breaks down. When the number of firms is infinitely large, the market yields the competitive price. *See generally* F. SCHERER, INDUSTRIAL MARKET STRUCTURE AND ECONOMIC PERFORMANCE 151-68 (2d ed. 1980).

13 This dilemma has given rise to frequent efforts to fashion a kind of "no-fault" antitrust law for oligopoly in which dissolution of large firms into several smaller entities would be the appropriate form of relief. *See* note 7 *supra*. However, Judge Richard Posner takes a different view of the feasibility of attacking "pure" oligopoly behavior under the current antitrust laws. *See* R. POSNER, ANTITRUST LAW: AN ECONOMIC PERSPECTIVE 39-77 (1976).

B. *An Alternative Model of Oligopoly*

Although the policy dilemma posed by pure oligopoly may be troublesome, the dilemma may be more theoretical than practical. The kind of classic oligopolistic interdependence that, *by itself*, suffices to produce seriously noncompetitive performance is likely to be rare. The alternative approach developed in this Article focuses on the tasks that an industry must accomplish to enjoy reasonably stable noncompetitive prices, the structural conditions that may make the accomplishment of those tasks more or less difficult, and the specific means for accomplishing the tasks in a given structural setting.

1. *Oligopoly Tasks*

A successful oligopoly must accomplish two main tasks: (1) establish a mutual understanding or consensus regarding the correct price and division of output, and (2) promote mutual confidence that there will be adherence to these decisions. The first is straightforward. If an industry optimal price is to be established, some consensus must be reached on that price. This may involve the resolution of any disagreement among the firms as to the correct price, and the communication of the ultimate "decision" to all concerned parties so that rivals are able to implement the same price.

The second task stresses the degree of confidence regarding adherence. Absent such confidence, there is less incentive for individual firms to adopt the consensus decision. Firms may fear aggressive competition by rivals and will defend themselves by deviating from the consensus at the start. The existence of monitoring and enforcement mechanisms such as information exchanges may be an important ingredient in establishing this mutual confidence.[14]

The analytical value of characterizing the two tasks in this way is that both involve achieving a certain state of mind among the oligopolists. Each firm is aware of the price that, on balance, is the best attainable,[15] and each knows that others are similarly aware. Furthermore, each firm has confidence that its rivals will not deviate from this consensus price. With this achieved, each can charge the consensus price without fear that it will be victimized by others' ignorance of the right price or by unwillingness to adhere to that price.[16]

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14 G. STIGLER, THE ORGANIZATION OF INDUSTRY 41-45 (1968).

15 Although the consensus price might not be the "absolutely best" price for particular firms, these firms may prefer to accept the consensus price rather than face the alternative chaos, *i.e.*, competition.

16 This common state of mind might be characterized as agreement. As will be demonstrated, however, this state of mind can arise in many ways, and the distinctions suggested below between lawful and unlawful conduct will depend less on the fact of the "agreement," defined in this way, than on the means of reaching this agreement. *See* notes 49-52 and accompanying text *infra*.

2. *Accomplishing the Oligopoly Tasks*

The exact process of achieving a consensus price will depend on the context in which the product is sold. In a sealed bid auction, for example (or more generally, in any setting in which one seller's price is not routinely made known to its rivals), each firm must independently calculate what it perceives to be the optimal industry price, given its estimates of demand in relation to the costs of other firms in the industry. Each firm, however, must also plan for the possibility that its rivals' calculations will yield a different desired price—not because rivals are behaving strategically, *i.e.,* deliberately trying to undercut, but simply because of differing perceptions about demand or cost conditions, or disagreement about the implications of those factors for the desired price. Given that typically no firm wishes to quote a substantially higher price than its rivals, it is possible that each firm may need to consider an adjustment, usually downward, from its own estimate of the optimal price.

A more favorable context exists where firms can routinely observe rivals' prices. Although each firm may still have its own ideas about what price is best for the industry, less uncertainty exists as to what price rivals have calculated. One firm, a "price leader," initiates a higher price. A rival can match the price leader or post its own price. The leader and other rivals can then decide whether to match. Depending on the industry, this process can go on for several rounds before a consensus is reached. Absent the opportunity for more direct communication, however, it is far from obvious that the industry will typically achieve the optimal price.[17]

For the second task—instilling a mutual sense of confidence in adherence to any consensus—the basic difficulty is the incentive for an individual firm to undercut any consensus price to procure additional business. The classic theory of oligopoly relies on the small number of firms to ensure that, in fact, no additional business can be secured.[18] This theory postulates that with only a few firms, rivals would notice additional sales made by one price-cutting competitor and feel compelled to respond with comparable price cuts. The initial price cutter, therefore, would not wind up with a permanently greater volume of sales, and the price would be less than the original consensus price.

The would-be price cutter, anticipating this chain of events, will, according to the theory, resist the temptation and adhere to the consensus price. Moreover, each firm believes that its rivals will make the same calculation. Therefore, no firm that either initiates or follows another's price increase need worry that cheating will take place, and the requisite

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[17] *See* notes 41-43 and accompanying text *infra*.

[18] Professor Stigler first developed this theory rigorously. *See* Stigler, *A Theory of Oligopoly,* 72 J. POL. ECON. 44 (1964).

state of confidence is reached—not as the result of any formal commitment by rivals, but simply as the natural result of a highly concentrated industry structure.

3. *Complicating Factors*

Whether firms can achieve a stable noncompetitive price depends on the centrifugal forces or "complicating factors" that interfere with the accomplishment of the two oligopoly tasks. Three broad categories of complicating factors are most significant: industry structure, the nature of the product, and the nature of sales.[19] Other factors exist, some of which might be peculiar to a single industry or specific situation, but most factors of any significance can fit under these headings.

a. *Industry Structure*. The number and size distribution of firms in an industry affects the difficulty of accomplishing the oligopoly tasks.[20] In general, the greater the number of firms and the greater the difference in firm sizes, the more difficult it is to accomplish the oligopolists' tasks. The larger the number of firms and the greater their variance in size, the more likely that nontrivial cost differences among firms will exist, thereby complicating the problem of calculating the optimal industry price. Moreover, significant cost differences enhance the possibility of disagreement among firms; the best industry price may be too low for the high-cost firm and too high for the low-cost firm.[21] Finally, there is the coordination problem of orchestrating the costs and preferences of a large number of firms into a united front; a maverick may enter the market, unwilling to participate in any agreement, lawful or unlawful.

The number and size distribution of firms also affects the likelihood of adherence to any initial consensus on price. Any firm contemplating a price reduction must calculate the additional revenue it expects to gain.[22] Assuming that the price-cutting firm must cut prices for all of its

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19 Similar lists appear in discussions of cartels. *See, e.g.,* F. SCHERER, *supra* note 11, at 199-227; Hay & Kelley, *An Empirical Survey of Price Fixing Conspiracies,* 17 J.L. & ECON. 13, 14-17 (1974).

20 Considerable debate persists as to the single best summary statistic. While the four-firm concentration ratio has commonly been used, the newly issued Justice Department Merger Guidelines emphasize an alternative measure, called the Herfindahl Index. For a discussion of the Herfindahl Index and its relation to the concentration ratio, see F. SCHERER, *supra* note 12, at 56-59.

21 It might appear that the low-cost firm can always get its own way by simply charging the price it prefers, and the high-cost firm has no choice but to accept the relatively low price selected by the group. However, if the high-cost firm loses money, even at the conspiracy price, it may cut price in a desperate attempt to win a larger share of the business. This possibility may induce more efficient rivals to select a higher price than they might otherwise prefer.

22 The larger volume normally resulting from lower prices must be weighed against the possibility that rivals will discover and quickly match the price cut, leaving the initiator with lower prices but little or no additional volume. The ability to get away with secret price cuts is itself linked to the size distribution of firms. *See* note 16 and accompanying text *supra*. In

customers, not just the marginal business that it hopes to pick up, the firm will reduce prices only if the expected increase in volume[23] is sufficiently large to compensate for the profits foregone on those sales that could have been made at the higher price.

In general, the smaller any single firm's market share, the greater is the incentive for that firm to deviate from the consensus price. Where the prospective price cutter is one of ten equally-sized firms, for example, the profits to be gained from additional volume may dwarf any profits foregone on sales at the original price. Thus, even if an initial consensus is established, one firm may immediately attempt to charge a lower price in the hopes of increasing its profits. Alternatively, where a given firm already enjoys half the market, it may require a more extreme set of circumstances to make the trade-off attractive. Not only is the potential gain in volume limited to the portion of the market that the oligopolist does not already control, but the likelihood that a secret price cut will be detected is greater. Therefore, rivals will have some measure of confidence that the larger firm is less likely to initiate a price cut, and rivals' willingness to adhere to the original consensus is thereby enhanced.[24]

In summary, the less concentrated the industry, especially if costs are unequal, the less likely it is that the simple recognition of some oligopolistic interdependence will be enough to attain the consensus price and maintain confidence about adherence to that price. Put differently, if a stable noncompetitive price is to be achieved, some additional steps will probably have to be taken to supplement the basic oligopolistic forces.

b. *The Nature of the Product*. The characteristics of the product can complicate any effort aimed at achieving and maintaining a noncompetitive price. One distinguishing characteristic, for example, is whether the product is a single item or actually an entire product line.[25] The broader the product line, the greater the number of individual prices to determine and maintain. Setting and maintaining an array of prices compounds the problems previously discussed. Moreover, when a full

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general, an increase in the number of firms decreases the likelihood of detection. *See* Stigler, *supra* note 18, at 59.

23 The firm must also consider its ability to expand its production without sharply increasing costs. Decreasing the elasticity of individual firms' short-run supply curves at the consensus price decreases the incentive of an individual firm to attempt to increase its market share through price cutting and reduces the cheating problems faced by a less concentrated industry.

24 This does not protect the large oligopolist from efforts by smaller rivals to expand market shares. Hence, less cheating can be expected where the remaining half of the market is more concentrated.

25 For example, referring to "the price" of steel is somewhat misleading. In reality there are dozens of different items in the product line of steel and each item may have "extra" characteristics that are at least nominally priced separately from the base product.

product line exists, cheating can take the subtle and less detectable form of giving a customer a "top-of-the-line" item when he has paid only for a "middle-of-the-line" item.[26]

Another potentially distinguishing characteristic is the interchangeability of the sellers' product—either in fact, or perhaps only in the mind of the buyer. If products are differentiated, no single price will create equilibrium in the market. This complicates the problem of choosing the consensus "price," because an array of prices, one for each seller, may be necessary.[27] In addition, the selected price structure is likely to be fragile. Shifts in either the actual characteristics of any firm's product or in consumers' preferences for one seller's product over another's can upset the market shares associated with any given price structure and thereby cause the consensus to collapse. On the other hand, price cutting may be reduced where products are differentiated, because one seller's volume may be less sensitive to another's price reductions than where the products are fungible. If so, there is less motive to cheat and less risk of a rival cheating.

One important dimension of product differentiation is that associated with location. For a steel customer in Detroit, the steel from a seller in Gary, Indiana, and the steel from a seller in Pittsburgh may not be perfect substitutes if the buyer must pay the freight from the seller's plant. Moreover, even if equilibrating differentials can be worked out at a particular time, changes in freight rates that disproportionately affect different locations will complicate the maintenance of a noncompetitive price structure.

Products custom-made to the buyer's specifications introduce a further complication, because each sale represents a distinct product with its own price. Even where there is a collective will to avoid price competition, it will be difficult for firms to sense what price the group should offer to a particular customer.

Another important product characteristic is the degree to which a product is subject to technological change. This is a complicating factor for two reasons. First, even where the technological change is largely the result of exogenous forces affecting all firms in the oligopoly more or less equally, the optimal product price may change over time, periodically requiring a new consensus.[28] Second, the possibility of firm-specific technological change raises a new dimension to the problem of cheating,

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26 Heflebower, *Toward a Theory of Industrial Markets and Prices,* 44 AM. ECON. REV. 121, 132-33 (1954).

27 Product differentiation may exist solely because prices have been fixed at super-competitive levels. *See* Posner, *supra* note 4, at 1579-80.

28 A variant of the technological change phenomenon is inflation. Where inflation is significant, prices must change periodically or today's optimal price may become unacceptably low. Frequent revision complicates the problem of setting a price by creating more chances for the consensus to break down.

one that may be particularly serious where the improvement cannot promptly be matched by rivals. If an innovating firm can be guaranteed a substantial lead time over its rivals, the usual disincentive to cheat arising from the prospect of rapid retaliation will be absent.

Finally, the ratio of fixed to total costs is also an important product characteristic. When fixed costs are high relative to total costs, the incentive to shade price is large because the margin between price and variable cost is considerable.[29] In addition, in a business downturn the pressure to gain additional volume grows with the increased threat that large losses will lead to stockholder unrest and, possibly, to bankruptcy. With a substantial incentive to shade prices, there is less likelihood of achieving the mutual confidence necessary to establish the consensus price with any degree of permanence.

c. *The Nature of Sales*. A variety of different characteristics of the way sales are made either diminish or complicate the problem of maintaining a noncompetitive price. The present focus, however, will be on the two characteristics that appear most important: lumpiness and secrecy.

Lumpy sales occur when firms make relatively few sales per year, with each sale accounting for a sizable portion of annual income. Major weapons systems, large commercial aircraft, and turbine generators are characterized by relatively lumpy sales. Toothpaste, cereals, and automobiles, on the other hand, enjoy relatively continuous sales. Any product for which the number of customers is small can become lumpy, even where consumption occurs in many small, discrete units, if long-term contracts are feasible.

Lumpy sales are a complicating factor because they may create significantly higher incentives for cheating. By lowering price for one or two transactions, a firm can substantially increase its annual sales volume; by the same token, the opportunity for effective retaliation is correspondingly diminished, at least in the short term. With continuous sales, on the other hand, cheating may increase business by only a small percentage before it is discovered, with the result that the price cutter may face quick and effective retaliation.

Secret sales are those in which rivals do not naturally learn the actual price that any given seller received for a particular transaction. In contrast, with open sales the price routinely appears on the item, or the same mechanism that informs the customer of the price similarly informs rivals.[30] The practice of open sales may allow one firm to act as a price leader and take the initial responsibility for posting a price in-

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29 *See* Hay & Kelley, *supra* note 19, at 17.

30 Continuity reinforces the information value of open sales. The rival has confidence that the walk-in customer, representing only a trivial potential for adding to the firm's volume, is actually paying the posted price; it seems unlikely that an individual supermarket

crease. This gives all firms an opportunity to observe the degree to which rivals are following. Depending on the individual industry, a succession of price moves may be possible within a brief period of time, permitting the industry-optimal price to be approached incrementally in a trial-and-error fashion.[31] By contrast, when sales are secret, the inability to observe rivals' responses and the risk of posting a price that is substantially higher than its rivals' may make any one firm substantially more timid about initiating an increase.

Another aspect of open sales is that noncompetitive behavior such as price cutting can be discovered fairly rapidly. For example, supermarkets can learn reasonably quickly when another supermarket has reduced the price of one of its products.[32] Similarly, the U.S. Government's opening sealed bids to all interested parties makes price cutting instantly detectable. Were most government purchases not extremely lumpy, and were the product less frequently made to order (such as a weapons system), successful oligopoly pricing might occur even more frequently on such purchases.

In contrast, secret sales serve to disguise discounts. Although a firm that adheres to the original consensus price might eventually infer from its own loss of sales that a rival had been discounting, any attempt at retaliation might come too late to deter the prospective cheater. Faced with this prospect, even the firm that does not seek additional volume may initiate price cuts as a defensive measure against the threat of rivals' price cuts.

4. *Measures to Overcome Complicating Factors*

An oligopolistic industry might still achieve and maintain a noncompetitive price solely by virtue of oligopolistic interdependence—the mutual recognition that adherence to a common noncompetitive price is in the individual self-interest of all firms. The previous discussion suggests, however, that such an oligopoly model is based upon certain implicit assumptions about the structure of the industry, the nature of the product, and the marketing process. If these implicit assumptions are not satisfied as the result of the presence of significant "complicating factors," it seems unlikely that an oligopoly will achieve joint profit maximization absent certain compensating measures. These compensating measures, which permit firms to overcome or mitigate the significance of the complicating factors, fall into two general categories: the familiar notion of formal overt collusion, and a less familiar category

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shopper, for example, could bargain for a discount from the marked price of canned tomatoes.

31 *See* text accompanying note 17 *supra*.

32 Some insulation, however, may result from the large array of prices to be compared.

labeled "indirect collusion."[33]

a. *Formal Collusion*. Direct communication between business rivals is the distinguishing characteristic of formal collusion. The prototype of formal collusion is the smoke-filled room in which all the rivals engage in face-to-face communication, although in an era of conference calls and computers that can talk to one another, less dramatic settings can be employed to the same end. Formal collusion serves a number of purposes in the context of the tasks and complicating factors related to achieving a noncompetitive price. First and foremost, formal collusion is ideally suited to working out the industry price. Firms can compare demand estimates and discuss relative costs and production capacity. If disagreement exists, the firms have the opportunity to talk and possibly reach a compromise. Side payments are also a possibility, perhaps through allocating the burden of any necessary production cutbacks. Upon reaching a consensus, all participants know the right price.

Formal collusion also communicates each firm's intention to adhere to the consensus price. Perhaps because some honor among thieves exists, these professions of intent may help establish the mutual confidence necessary to initiate the noncompetitive pricing. Furthermore, formal collusion can be used to set up a monitoring or enforcement mechanism and, perhaps, a mechanism for resolving subsequent problems arising out of uncertainty or miscalculation.

The actual mechanics of the collusion will differ depending on the complicating factors encountered.[34] For standard shelf items sold from a relatively narrow product line, the price may be set. For a broader product line, such as different grades or thicknesses of plywood, or a product whose relevant attributes are not fixed, such as coal of differing BTU content, a price formula may be more appropriate. For a product that can be sold with tailored characteristics, such as steel, a method for treating "extras" is necessary. For products with a large shipping cost, firms may establish a plan of uniform delivered or zoned pricing.[35] For unique products, such as building construction, some form of standardization may be necessary before an effort to coordinate prices can even begin. Finally, for complicated products that defy any effort to coordinate prices directly, firms may allocate customers or territories, with each firm free to determine prices for its "own" customers.[36]

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33 This category is closely related to what other commentators have called "facilitating practices." *See, e.g.,* Blechman, *Conscious Parallelism, Signalling and Facilitating Devices: The Problem of Tacit Collusion Under the Antitrust Laws,* 24 N.Y.L. SCH. L. REV. 881, 903 (1979).

34 *See* notes 19-32 and accompanying text *supra*.

35 *See* notes 46-47 and accompanying text *infra*.

36 This method also may be efficient for products characterized by lumpy sales, where identical prices are no guarantee of a predictably fair division of market shares. Allocation of customers or territories, however, would be impractical for products experiencing rapid but uneven growth in demand or rapid customer turnover.

The agreement emerging from the smoke-filled room is not a legally enforceable contract. Rather, through the process of direct communication, each party becomes aware of the consensus price and of its rivals' intentions to adhere to that price. With that state of mind established, each firm leaves the room and only later actually performs the profit calculus that determines whether it adheres to the consensus price or charges some other price. Obviously, the process may not be successful;[37] one can have direct communication without developing mutual understanding and confidence.[38]

b. *Indirect Collusion*. Were formal collusion not clearly illegal under the antitrust laws, it would be the preferred method of achieving a noncompetitive price. It provides the greatest opportunity for exchange of information, resolution of disagreement, and communication of intentions.[39] Complicating factors may make the achievement of a noncompetitive price impossible without formal collusion.[40] However, practices that fall short of formal collusion may be adequate substitutes in some cases. These practices are referred to as "facilitating practices," and their use in achieving a noncompetitive outcome is referred to as "indirect collusion."

The practices described below fall short of formal collusion, yet each appears to go beyond what is contemplated in the model of "pure" oligopoly. While the list is not exhaustive, it reveals how the practices may facilitate the necessary tasks.

(i) *Augmented Price Leadership*. The most basic kind of price leadership, in an oligopolistic industry where sales are open, has already been discussed.[41] The primary feature of price leadership in that context is for one firm to make the initial effort to establish a noncompetitive price. Other firms can observe the price directly and decide whether to match the first firm's price or to post some other price. At the same time, the first firm can observe and react to its rivals' actions.[42]

This kind of simple price leadership may be ineffective in some contexts. For example, prices may not routinely be posted in such a way

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37 Even formal collusion may not work in the presence of sufficient complicating factors. For some examples of characteristics conducive to long-lasting cartels, see Hay & Kelley, *supra* note 19, at 14-17.

38 Correspondingly, as in the case of pure oligopoly, one can have mutual understanding and confidence without direct communication. *See* notes 49-52 and accompanying text *infra*.

39 Formal collusion still occurs occasionally, despite the legal deterrent.

40 *See* note 37 and accompanying text *supra*.

41 *See* note 17 and accompanying text *supra*.

42 Each firm's confidence about the outcome of such a process may be heightened if the process takes place in a historical context in which the tradition of leadership is well established. Although some risk that the process may break down always exists, a fair degree of assurance can exist without a formal "renewal of vows." Possible explanations of how a tradition of price leadership gets started include trial and error, or a previous episode of formal collusion.

that rivals have access to them. Where simple price leadership will not work, more elaborate versions may be observed. Firms may make public announcements about pending price increases, often well in advance of their effective date. This allows time for several rounds of counterproposals in achieving a consensus. Where mutual confidence does not flow naturally from the structure of the industry, perhaps because there are too many firms, it can be shored up if the leader has the ability and willingness to discipline price cutters by substantially lowering prices for a period.[43]

This kind of "augmented price leadership" can be deliberate, and it can have effects comparable to, if not quite as effective as, the effects of face-to-face discussions. Rivals can become aware of the consensus price and know, partly from reference to the historical context, that all other rivals are similarly aware. Confidence in adherence may come partly from the tradition of following the leader, but may be reinforced by deliberate disciplinary actions.

(ii) *Information Exchange*. Exchanges of information on recent prices, sales, operating rates, and other data among competitors[44] may help accomplish the oligopoly tasks. Where sales are not open and public announcements are impractical, information about a particular firm's recent prices can be a pointer toward a new optimal price level for the industry. In addition, firms can use information about sales volume, which would indicate an unusual increase in one firm's sales (presumably associated with secret discounts), to monitor adherence to consensus prices. For purposes of accomplishing the oligopoly tasks, the exchange of information need not be symmetrical. That is, the oligopolists may benefit as a group even if only some firms unilaterally provide information about their own activities.

One important note of caution must be sounded on the competitive significance of information exchanges. Where market structure and other complicating factors are not conducive to oligopoly pricing, each firm's knowledge of the others' prices can improve the market. Perfect information on behalf of sellers as well as buyers is a condition for the economist's ideal of perfect competition; thus, information exchanges are not necessarily undesirable.[45]

(iii) *Geographic Pricing Formulas*. Complications arise when custom-

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43 For a description of one such episode, see F. SCHERER, *supra* note 12, at 177-78.

44 A data exchange probably develops because the information is not otherwise available. An exchange, however, could develop as a more efficient mechanism for obtaining data that could be obtained independently. For example, supermarket chains may exchange computer printouts, perhaps through an intermediary, that contain the week's actual prices for every item in each chain's stores. Presumably, each firm could independently obtain the information, although at greater cost and possibly greater risk of error.

45 *See* Posner, *Information and Antitrust: Reflections on the* Gypsum *and* Engineers *Decisions*, 67 GEO. L.J. 1187, 1193-97 (1979).

ers and suppliers are geographically dispersed and shipping costs are a nontrivial percentage of production costs. The buyer is interested in the delivered price regardless of who, buyer or seller, actually pays for shipping. This creates two fundamental problems for an oligopoly seeking to avoid price competition. First, even if one firm is aware of another's announced price at the factory door, it would not know the rival's delivered price to a given customer unless it also knew the applicable shipping charges. Therefore, matching a rival's delivered price would be difficult. Second, in general, the rival's delivered price would be different for each customer. Thus, the first firm would need to make not one adjustment in its own effective price, but one for each customer, to match its rivals' prices across the board.

Both these problems can be ameliorated if each rival adopts some form of a delivered price system in which the announced price includes shipping.[46] The delivered price system could be simplified further by establishing a small number of delivery zones or, in the extreme, only a single nationwide zone within which the delivered price is uniform. In the latter case, each firm has only a single delivered price for all customers, and matching prices is relatively easy for rivals.[47]

(iv) *Price Protection or Most-Favored-Customer Clause.* A customer with a price protection or most-favored-customer clause typically is guaranteed that it will receive the lowest price granted to any customer. This provision may even be retroactive; a customer who pays list price today may receive a rebate if another customer is offered a lower price within a specified future period. Risk-averse buyers may seek such clauses because they protect such firms from their inability to bargain as effectively as their own rivals. The clause might also benefit regulated public utilities because it may reduce the prospect of a confrontation with a rate commission that has learned that another utility has obtained a piece of equipment at a better price. Hence, it is not surprising to find that in bargaining between customer and supplier a most-favored-customer clause sometimes emerges as part of the contract.

Most-favored-customer clauses also penalize the firm that cuts prices, thereby reducing the incentive to cut prices. This explains why *sellers* like to see most-favored-customer clauses established as an industry-wide practice. A firm contemplating a selective secret price cut aimed at picking up additional sales would accept a price somewhat lower than the "industry optimal" price, but would expect to profit from the margin on the additional sales made as a result of the cut. If retaliation is not expected to be forthcoming quickly, the temptation may be irresistable. With a most-favored-customer clause, however, the

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46 *See* Note, *Conscious Parallelism in the Use of Delivered Pricing Systems: A Modified Per Se Standard of Review Under the Federal Trade Commission Act,* 66 CORNELL L. REV. 1194 (1981).

47 *See* notes 41-43 and accompanying text *supra.*

calculus is dramatically altered. The price-cutting firm still makes the additional sales, but gives up the higher margin on sales that it could have made at the higher price. With the retroactive clause, it gives up the extra margin it has already received on all sales during, for example, the previous six months. Even without the threat of retaliation, these considerations alone may be sufficient to render price cutting unprofitable.

This explains why oligopolists like to see most-favored-customer clauses in other sellers' contracts. Why, however, would a firm ever enter into one with its *own* customers?[48] The second of the two oligopoly tasks—the establishment of mutual confidence of adherence to the oligopoly price—suggests an answer. The firm may have no intention of being the first to cut prices, but may find it difficult to persuade its rivals that its intentions are sincere. Such persuasion may be critical lest the rivals launch a preemptive price cut, not out of their own greed, but out of fear that the first firm cannot be trusted. By voluntarily entering into a most-favored-customer clause, the first firm constrains its own future actions, thereby effectively persuading its rivals that it will not initiate a price cut, and establishing the mutual confidence necessary to launch a period of noncompetitive pricing.

c. *The Nature of Agreement Under Indirect Collusion*. These examples of indirect collusion do not involve face-to-face communication. Each, however, involves a specific, arguably avoidable, act. In that respect the practices resemble formal collusion, where specific, avoidable acts are likewise at issue more than where successful noncompetitive pricing is achieved through pure oligopolistic interdependence.

A possible distinction between formal and indirect collusion is that the former involves agreement.[49] In one sense of the word—implying a binding contract—most instances of formal collusion would not qualify.[50] On the other hand, if "agreement" means simply a "meeting of the minds" or a "mutual intent to follow a common course of action," even pure oligopolistic interdependence appears to qualify.

Implementing a noncompetitive price in an oligopoly framework requires establishing a common "mental state" with mutual awareness of the consensus industry price and mutual confidence that all firms will adhere to that price.[51] Whether formal collusion is necessary to produce that mental state depends on the complicating factors present.[52] Where

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48 Competitive pressure from customers may force firms to include such a clause. This is less likely to be the case for the first firm to offer such a clause.

49 *See* Turner, *supra* note 4, at 663-65.

50 *See* notes 37-38 and accompanying text *supra*.

51 These are the two basic tasks of the oligopolists. *See* notes 12-14 and accompanying text *supra*.

52 If conditions are particularly unfavorable, even formal collusion may be insufficient to achieve noncompetitive pricing.

conditions are extremely favorable, no overt acts are required to produce the requisite mental state, and a noncompetitive price is established and maintained solely by pure oligopolistic interdependence. No less a meeting of the minds exists when duopolists, with identical costs and an openly sold standard product, select the identical list price and recognize the folly of price cutting, than when twenty manufacturers with widely differing costs producing a differentiated product sold secretly to sophisticated buyers "agree" in a hotel room to charge an identical price.

II

Application of the Economic Model in the Context of Formal Agreement

An economic model of oligopolistic behavior is of primary value when there is no direct evidence of a formal agreement not to compete.[53] This section uses the economic model developed in the preceding section to explore two such situations. The first is when a plaintiff, while not offering direct evidence of a formal agreement not to compete, asks the court to infer the existence of such an agreement from circumstantial evidence. The second situation involves a formal agreement to follow a program of facilitating practices; examples include agreements among competitors on a delivered price formula for quoting list prices, and agreements to exchange certain kinds of information. This section does not propose any changes in antitrust doctrine. Rather, it applies the economic model to these situations to clarify the issues and to support a finding of liability under proper facts.

A. *Inferring Formal Agreements*

Where they are without direct evidence of a formal agreement, courts may infer the existence of a formal agreement on the basis of circumstantial evidence, some of which is economic in character. The textbook case in this category is *Interstate Circuit, Inc. v. United States*,[54] in which a group of film distributors simultaneously pledged not to deal with a class of theaters except on certain terms. These terms included a minimum admission price for "feature" films on subsequent runs, and a prohibition against offering two "feature" films as a double feature. The

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53 Where there is direct evidence of an agreement not to compete, a court does not need to engage in a sophisticated economic analysis to determine the presence of an agreement or, under the per se rule, to determine the extent to which the agreement restrains trade. Some economic theory may be employed in the damages phase of the case where a need exists to establish what the price would have been "but for" the conspiracy. *See* E. TIMBERLAKE, FEDERAL TREBLE DAMAGE ANTITRUST ACTIONS § 21 (1965); Parker, *Measuring Damages in Federal Treble Damage Actions,* 17 ANTITRUST BULL. 497 (1972).

54 306 U.S. 208 (1939).

pledge came in the form of parallel agreements between each of the distributors and Interstate, a chain of first-run theaters.[55]

The decision turned on whether the distributors had actually agreed among themselves to impose restrictions on the subsequent-run exhibitors.[56] The government produced no direct testimonial evidence of such an agreement. Instead, the government relied on "inferences drawn from the course of conduct of the alleged conspirators" to establish the existence of an agreement.[57] The trial court, apparently finding a formal agreement, cited "the nature of the proposals made [by Interstate]; . . . the manner in which they were made; . . . [and] the substantial unanimity of action taken [on the proposals] by the distributors"[58] as factors supporting its conclusion.

The economic model developed previously suggests a method of organizing the data to determine whether an inference of formal conspiracy is warranted in similar cases. Initially, the court must ask whether the end result differs from what would be expected in a competitive industry as a result of the basic forces of supply and demand.[59] In a case in which prices are at issue, the focus might be on the absolute level of prices or profits, the recent movement of prices compared with cost changes, or the presence of identical sealed bids. In *Interstate Circuit*, the trial court remarked that the proposed restrictions constituted an important departure from prior practice, involving a drastic increase in admission prices for the subsequent-run theatres.[60] The Supreme Court concurred with the trial court's conclusion that such a dramatic shift

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55 This case differs from the traditional price-fixing case because Interstate, not the film distributors, appeared to be the main beneficiary. Fewer theatergoers would be willing to avoid Interstate's first-run prices by waiting to see a "feature" film on a subsequent run. The distributors' participation in the contracts stemmed from Interstate's monopoly position in several cities and its presumed power not to deal with any distributor who failed to adhere to Interstate's wishes. Another unique aspect of this case is that each of the contracts between Interstate and a film distributor might individually violate § 1 of the Sherman Act as an agreement to impose onerous terms on third parties. *See* Klor's, Inc. v. Broadway-Hale Stores, Inc., 359 U.S. 207 (1959).

56 306 U.S. at 221.

57 *Id.*

58 *Id.* The Court also noted the failure of the defendants to "call as witnesses any of the superior officials who negotiated the contracts with Interstate or any official who, in the normal course of business, would have had knowledge of the existence or non-existence of such an agreement among the distributors." *Id.*

59 A variant of the question is to ask whether the observed behavior was individually rational; would the firm have followed the same course of action absent any confidence that rivals would behave similarly? This variant is problematic, however, when events have an industry-wide impact. If, for example, the wholesale price of canned tomatoes increases by $.10, a grocer in a competitive environment will pass the increase along in his retail price; otherwise, he will be selling below costs. He also knows that his rivals are experiencing the same cost pressures. Hence, the question of what he would do if he did not expect rivals to behave similarly is not meaningful.

60 United States v. Interstate Circuit, Inc., 20 F. Supp. 868, 872 (N.D. Tex. 1937), *aff'd*, 306 U.S. 208 (1939).

could not have been the result of independent, competitive behavior.[61]

Even if the end result is not what would be expected in a competitive environment, the inquiry is not over, because there may be several possible explanations for the result. Formal collusion is one possibility; pure oligopoly interdependence is another. To distinguish among these and other possibilities, the economic model suggests a question related to the two oligopoly tasks: what enabled and motivated each firm to follow the same course of action?

The Court in *Interstate Circuit* noted that all of the distributors had adopted substantially identical plans at about the same time, even though the plans were a radical departure from prior practice.[62] It seems unlikely that identical contracts could have emerged as the result of the distributors having reacted simultaneously to the same cost and demand pressures. In addition, given that the contracts were private agreements between Interstate and each of several distributors, the parallel conduct cannot be attributed to the kind of price leadership that is observed when one supermarket posts a higher price for canned tomatoes and others match it.

Following this reasoning, the Court intially seems to have relied on a "facilitating practices" theory to explain the unanimity of action. Interstate's proposal to each of the distributors was contained in a letter that "named on its face as addressees the eight local representatives of the distributors, and so from the beginning each of the distributors knew that the proposals were under consideration by the others."[63] The Court also noted that the unanimous action created "the prospect of increased profits."[64]

Partly because the contracts ultimately signed by each of the distributors, while substantially identical to one another, were different from the original proposal, the Court appears to have rejected the theory that the simultaneous invitations could have been the entire explanation. The Court also emphasized the need for mutual confidence that all distributors would go along.[65] In upholding the trial court's appar-

61 306 U.S. at 223.

62 *Id.*

63 *Id.* at 222.

64 *Id.*

65 "Each was aware that all were in active competition and that without substantially unanimous action with respect to the restrictions for any given territory there was risk of a substantial loss of the business and good will of the subsequent-run and independent exhibitors. . . . [t]here was risk, too, that without agreement diversity of action would follow." *Id.* The risk of non-unanimous action in the Interstate situation apparently stemmed not from the individual incentive of distributors to cheat by not signing the contract with Interstate, but from the possibility that diversity of action would occur through an inability to coordinate. The incentive deliberately to deviate was mitigated by the risk that Interstate, with a first-run monopoly position in several cities, would refuse to show the films of a distributor who did not sign.

ent inference of formal collusion, the Court stated that it was unable to find "any persuasive explanation, other than agreed concert of action, [for] the singular unanimity of action on the part of the distributors."[66] The Court therefore concluded that a formal agreement enabled and motivated the defendants to follow the same course of action.[67]

This discussion suggests two rather divergent defenses available in a situation in which the plaintiff asks the court to infer formal collusion from circumstantial evidence. The first is to argue that the behavior was competitive. There is no need to inquire how a "meeting of the minds" arose because none was necessary for the observed behavior to occur. The behavior was independently rational and would have occurred without any assurance that others would behave similarly.[68]

If this argument is unpersuasive, an alternative explanation is that the parallel, allegedly noncompetitive result is the natural consequence of oligopolistic interdependence given the industry setting. In effect, the defendant is arguing that the behavior was individually profit-maximizing given the likely reaction of its rivals.[69] This defense would be most

66 *Id.* at 223.

67 Although the Court apparently concluded that formal agreement had occurred, it suggested its likely receptiveness to an indirect collusion approach:

> While the District Court's finding of an agreement of the distributors among themselves is supported by the evidence, we think that in the circumstances of this case such agreement for the imposition of the restrictions upon subsequent-run exhibitors was not a prerequisite to an unlawful conspiracy. It was enough that, knowing that concerted action was contemplated and invited, the distributors gave their adherence to the scheme and participated in it. . . .
>
> It is elementary that an unlawful conspiracy may be and often is formed without simultaneous action or agreement on the part of the conspirators . . . . Acceptance by competitors, without previous agreement, of an invitation to participate in a plan, the necessary consequence of which, if carried out, is restraint of interstate commerce, is sufficient to establish an unlawful conspiracy under the Sherman Act . . . .

Id. at 226-27.

68 Firms might be assured that rivals will act similarly because all are subject to the same market forces, and any firm that acted differently would reduce, not increase, its profits. *See* note 58 *supra*. Individual compulsion, however, not the assurance of parallel action, is the primary force leading to the observed pattern of behavior.

69 A plaintiff's argument that a firm's behavior was inconsistent with its own self-interest proves nothing other than, perhaps, the irrationality of the firm's management. The plaintiff must argue that the firm's behavior was inconsistent with its own self-interest unless it obtained assurances that its rivals would behave similarly. In the defense suggested here, the defendant agrees with the plaintiff's argument but asserts that the assurance need not have stemmed from formal agreement.

For an example of the problem of relying on notions of individual self-interest in an oligopolistic context, see Milgram v. Loew's, Inc., 192 F.2d 579, 583 (3d Cir. 1951), *cert. denied*, 343 U.S. 929 (1952) ("Each distributor has thus acted in apparent contradiction to its own self-interest. This strengthens considerably the inference of conspiracy, for the conduct of the distributors is, in the absence of a valid explanation, inconsistent with decisions independently arrived at."). The court apparently ruled out the possibility that the defendant knew, from industry structure, that its actions would be matched by rivals, and that in this event plausible when concentration is extremely high, the product is simple and homogeneous, and sales are both open and continuous.[70]

Theatre Enterprises v. Paramount Film Distributing Corp.,[71] which is often cited in support of the argument that parallel conduct stemming from oligopolistic interdependence does not violate the Sherman Act, demonstrates the differences between the two defenses. In a famous dictum, the Court noted that "[c]ircumstantial evidence of consciously parallel behavior may have made heavy inroads into the traditional judicial attitude toward conspiracy; but 'conscious parallelism' has not yet read conspiracy out of the Sherman Act entirely."[72] Because "conscious parallelism" is often used interchangeably with "oligopolistic interdependence" in the economics literature, *Theatre Enterprises* traditionally has been viewed as an example of the second defense. The facts of the case, however, suggest that the Court may have had the first defense in mind. In *Theatre Enterprises*, plaintiffs argued that the parallel action of a number of film distributors in refusing to give first-run films to a particular suburban Baltimore theater was the result of a conspiracy among the distributors. The Supreme Court determined that each distributor may have had an independent reason to behave as it did, implying that each distributor would have acted in the same way regardless of what its rivals did.[73] The distributors may not have been aware of one another's parallel conduct and, more importantly, even if they were aware, it made no difference. This type of behavior is competitive, not oligopolistic; thus, no basis exists for an inference of formal collusion.

B. *Formal Agreements that are not Facially Anticompetitive*

The typical cartel arrangement is manifested in an agreement not to compete. Frequently this involves agreements to use a uniform price or to allocate customers or territories.[74] Where the agreement is other than a naked covenant not to compete, economic analysis may be helpful in determining its likely impact on competition. Two classic catego-

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any alternative strategy would be less profitable. Courts' failure to recognize this alternative possibility may lead to improper analysis of self-interest.

70 If the industry structure was more complicated, the only reasonable inferences would be that formal collusion, or at least indirect collusion, had occurred. *See* notes 20-24, 34-48 and accompanying text *supra*. The value to the plaintiff or the defendant in pointing to indirect collusion as a possible explanation obviously depends on the legal status of that category of behavior.

71 346 U.S. 537 (1954).

72 *Id.* at 541 (footnote omitted).

73 *Id.* at 541-42.

74 Occasionally the agreement does not directly govern prices or allocate customers, but the impact on competition is so obvious that the court requires little economic analysis to condemn the arrangement. *See, e.g.,* United States v. Socony-Vacuum Oil Co., 310 U.S. 150 (1940) (agreement among major gasoline refiners to purchase excess gasoline output of independent refiners that otherwise would depress market price of gasoline).

ries of agreement that can be examined in this light are agreements to use a particular pricing formula and agreements to exchange certain kinds of transactions data.[75]

1. *Delivered Price Formulas*

As indicated above,[76] an oligopoly seeking to avoid price competition faces a complication when customers and suppliers are geographically dispersed, because a different delivered price exists for each customer from any given supplier. Thus, even if one firm knows its rival's mill price, it may not be able to match the delivered price to a given customer unless it knows the relevant shipping costs from the rival's plant to that customer. This matching problem is simplified if firms adopt a convention that the list price to a given customer will be the price at the plant plus some readily ascertainable shipping charge—the published rail tariff from the nearest producer's plant to the customer, for example.[77]

The agreement to use a particular pricing system does not, by itself, necessarily affect the incentive or the ability of firms to cheat by undercutting the list price determined under the pricing formula. Hence delivered pricing, by itself, may not contribute to the second of the oligopoly tasks, just as a hotel-room agreement to fix a specific price does not necessarily prevent or reduce cheating. It does, however, simplify the process of establishing a consensus price. In this respect, use of a delivered price formula accomplishes what could be accomplished in hotel-room meetings. The other task, confidence in adherence to the consensus price, must be achieved through oligopolistic interdependence or other means.[78]

At least two potentially adverse effects follow from a delivered price system. First, assuming adherence to the system, any given firm locks itself into a particular geographic pricing pattern for its own customers. Customers near the firm's plant may not receive any reduction in price reflecting the lower transport costs of serving them.[79] Second, the com-

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75 Both categories have been examined extensively in the literature; only limited commentary is required here. On delivered pricing systems, see Kaysen, *Basing Point Pricing and Public Policy,* 63 Q.J. ECON. 289 (1949); Note, *supra* note 46; Comment, *Price Systems and Competition: The Basing Point Issues,* 58 YALE L.J. 426 (1949). On information exehanges, see Stocking, *The Rule of Reason, Workable Competition, and the Legality of Trade Association Activities,* 21 U. CHI. L. REV. 527 (1954); Note, *Antitrust Liability For An Exchange of Price Information—What Happened to* Container Corporation?, 63 VA. L. REV. 639 (1977).

76 *See* notes 46-47 and accompanying text *supra*.

77 An extension of the agreement is to distribute the appropriate shipping rates to all firms to eliminate any uncertainty or error regarding a specific rate.

78 Indeed, the delivered price system also might be used in conjunction with a more formal cartel to simplify the task of promoting mutual confidence in adherence to the consensus price.

79 Under uniform delivered prices, for example, all customers are effectively charged the

mon use of a delivered price system can facilitate oligopolistic pricing even where no formal agreement exists on the actual price quoted to customers.

Even though an adverse effect is not inevitable,[80] courts may properly adopt a per se treatment of formal agreements to use a delivered price system. If there are competitive benefits to the use of a delivered price system, these benefits can be obtained without an agreement; indeed, an incentive exists for unilateral action to employ it. In addition, because an agreement may and frequently will give rise to competitive harm, the calculus is clearly on the side of per se prohibition. In short, problems of measuring performance, establishing the precise impact of the practice on performance, and assessing possible competitive benefits from the practice are largely circumvented in the case of a formal agreement to use a particular delivered price system.

2. *Information Exchange Agreements*

Information exchange agreements can involve many kinds of data, typically an agreement to exchange recent price quotations or sales quantities with varying degrees of formality.[81] The efficacy of such information in facilitating oligopolistic pricing must be examined in light of the tasks to be accomplished and the complicating factors pertinent to the industry.

Information exchange can contribute to either of the two oligopoly tasks. Data on recent prices charged by industry leaders can serve to communicate to other rivals that some movement in the price of the leaders has occurred and thereby permit the recipients of this information to follow, albeit with more of a lag than had face-to-face discussions occurred. If prices are communicated before they go into effect, this method may be nearly as efficient as direct collusion. Rivals may respond and thereby signal the price leader that they have ratified its recent price move. This offers the leader greater assurance that it will not be alone in raising list prices and thereby reduces the leader's risk in initiating a price increase.[82]

Exchange of actual invoices or data on sales volume provides a check on adherence to list prices, because rivals can monitor one an-

same amount for transportation, which is incorporated into the uniform price. In some basing-point systems, nearby customers may pay even more than a more distant customer if the plant of the producer in question is not a basing point. *See* F. SCHERER, *supra* note 11, at 325-29.

[80] Oligopolistic pricing is not inevitable; structural conditions may make oligopolistic pricing impossible. *See* notes 19-32 and accompanying text *supra*.

[81] The data exchanged could consist of actual invoices, a computerized list of prices, or simply an acknowledgment of discount offers.

[82] *See* notes 17, 41-43 and accompanying text *supra*. For a more detailed discussion of this effect in practice, see notes 127-31 and accompanying text *infra*.

other's actual prices or detect any unusual growth in volume that would raise inferences of price shading.[83] The availability of this check increases the level of confidence in adherence and makes an increase in list prices or matching a rival's increase less risky.[84]

Application of the per se approach to information exchange agreements is more problematical than its application to delivered price systems. Information exchanges may have a procompetitive effect because they provide firms with a more complete understanding of market conditions.[85] These benefits, unlike those flowing from pricing formulas, may not be achieved easily through unilateral action. Absent an agreement requiring a contribution of information as a quid pro quo for receiving the comparable information about competitors, an obvious incentive exists for a firm to behave as a "free rider" and not contribute any information about itself.

Because a program of information dissemination will likely require some tacit or explicit agreement, a complete prohibition of such agreements under a per se rule means that any possible benefits from such a program will almost certainly go unrealized. Although empirical evidence quantifying such benefits is virtually nonexistent, court decisions and scholarly writing suggest that, at least in the context of an otherwise competitive industry, such benefits may be significant.[86]

The possibility of significant benefits from information exchanges suggests that a flat prohibition is unwise; yet a full rule of reason approach might put the courts in the unenviable position of having to quantify and compare the benefits and costs to competition. An alternative suggested by Justice Fortas's concurring opinion in *United States v. Container Corp.*[87] is a modified per se approach, under which the agree-

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83 There is no guarantee that the invoices or other information have not been fabricated; even formal cartels rely to some degree on "honor among thieves." *See* notes 33-34 and accompanying text *supra*.

84 For any of these measures to succeed, the structural features of the industry must be at least mildly favorable. *See* notes 19-32, 40 and accompanying text *supra*. For example, even the most formal and extensive data exchange would probably not have an anticompetitive impact in a very unconcentrated industry.

85 *See* note 45 and accompanying text *supra*.

86 *See, e.g.,* American Column & Lumber Co. v. United States, 257 U.S. 377, 412 (1921) (Holmes, J., dissenting):

> I should have thought that the ideal of commerce was an intelligent interchange made with full knowledge of the facts as a basis for a forecast of the future on both sides. A combination to get and distribute such knowledge, notwithstanding its tendency to equalize, not necessarily to raise, prices, is very far from a combination in unreasonable restraint of trade.

See also Posner, *supra* note 45, at 1193-97.

87 393 U.S. 333 (1969).

> I do not understand the Court's opinion to hold that the exchange of specific information among sellers as to prices charged to individual customers, pursuant to mutual arrangement, is a *per se* violation of the Sherman Act. . . .

ment is per se illegal in the presence of certain structural conditions.[88] The general approach is fully compatible with the earlier discussion of complicating factors.[89] One would expect high concentration, relatively simple and homogeneous products, and relatively smooth sales to be necessary conditions[90] for an anticompetitive impact to emerge.

III

APPLICATION OF THE ECONOMIC MODEL WHEN NO FORMAL AGREEMENT EXISTS

B. *Tacit Agreement As Illegal Conduct*

When the end result seems inconsistent with vigorous competition, yet a formal agreement cannot be demonstrated either by direct or circumstantial evidence, the problems in articulating a coherent basis for antitrust liability become substantially more complex. Courts' efforts to deal with this category have, for the most part, centered on a notion of "tacit" or "implicit" agreement. These efforts have been largely unsuccessful, producing a confused series of opinions that provide little guidance on when antitrust liability will be found.

A basic reason for this lack of success is the courts' failure to link legal notions of culpability with a relevant economic model of oligopoly behavior. This section demonstrates the fundamental weakness in the concept of a tacit agreement as a basis for antitrust liability. An alternative legal argument based on the economic model is developed, permitting a clearer and more principled basis for distinguishing culpable from lawful behavior.

When no formal agreement exists, yet an industry's performance is inconsistent with vigorous competition, the economic model suggests two possible explanations. First, firms may have employed facilitating

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> [The] evidence, although not overwhelming, is sufficient in the special circumstances of this case to show an actual effect on pricing. . . .

Id. at 338-39 (Fortas, J., concurring). For a differing characterization of the government's evidence, see United States v. Container Corp., 393 U.S. 333, 340-47 (1969) (Marshall, J., dissenting). One commentator has decried the failure of lower courts to follow *Container*'s approach to information exchanges. *See* Note, *supra* note 75, at 667.

One commentator has argued for the adoption of a modified per se approach with regard to the consciously parallel use of delivered pricing systems. *See* Note, *supra* note 46, at 1194. Of course, where the avowed purpose of the agreement is to suppress competition, the usual per se approach will be followed. *See* United States v. Socony-Vacuum Oil Co., 310 U.S. 150 (1940).

88 393 U.S. at 338-40. Some of the structural conditions emphasized, such as low entry barriers, seem at odds with the possibility of successful oligopoly pricing for any sustained period. *See id.* at 339-40.

89 *See* notes 19-32 and accompanying text *supra*.

90 Open sales are not included as a factor because, typically, the anticompetitive impact of an information exchange is to convert what would have been secret transactions into open sales in the sense that sellers, although not necessarily customers, become well informed about rivals' prices.

practices, adopted without formal agreement, that make it possible to achieve a noncompetitive outcome without direct collusion. Second, under the most favorable structural conditions, the outcome could result from pure oligopolistic interdependence. Under either explanation, a meeting of the minds can fairly be said to exist, because a meeting of the minds is a necessary condition for the performance to be noncompetitive.

Courts' principal efforts to deal with this overall category have not appreciated these alternative explanations. Courts have imposed antitrust liability on a subset of these situations based on the notion of tacit or implicit agreement. The issue to be resolved, however, is whether "tacit agreement" for section 1 purposes includes the kind of meeting of the minds that can arise solely from oligopolistic structure.[91] If "meeting of the minds" is synonymous with "agreement," then every noncompetitive outcome involves agreement, and antitrust liability could follow from every finding of a noncompetitive outcome. Although there is nothing conceptually repugnant in labeling such perceived interdependence as a "meeting of the minds" implying the presence of an agreement, major equitable and practical concerns arise when section 1 liability is attached to behavior that is not plausibly avoidable.[92]

But if the concept of tacit agreement does not extend to this kind of oligopolistic coordination, what, if anything, does it include? Courts sometimes characterize the additional types of circumstantial evidence they seek in conscious parallelism cases as "plus factors."[93] Analysis of two of the most commonly used "plus factors" suggests that they do nothing to clarify the proper legal standard. The first such factor is evidence suggesting that the result can be explained *only* as the outcome of a formal conspiracy. This kind of evidence would rule out not only competitive or independent behavior, but also indirect collusion and pure oligopolistic interdependence.[94] The second kind of "plus factor" is evidence showing that the result cannot be explained by independent motivation. This might include evidence of poor performance or evidence of "aberrant" behavior, such as identical prices in a sealed bid auction, or more generally, evidence that the behavior would not be rational unless all firms behaved similarly. "Plus factor" analysis, there-

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91 The definition of agreement as an offer and acceptance provides a basis for categorization. The analysis is not advanced, however, without a clear understanding of what constitutes offer and acceptance. "Offer and acceptance" can be defined as requiring direct communication or formal exchange. This definition would be reasonably unambiguous, but would certainly omit a large number of situations in contract as well as antitrust law that even traditionalists would want to describe as agreement.

92 *See* note 12 and accompanying text *supra*. Even greater problems would arise in fashioning the relief to be granted in such a situation.

93 P. AREEDA, *supra* note 5, at 373.

94 For a discussion of the nature of this evidence, see note 66 and accompanying text *supra*.

fore, serves to eliminate the spurious parallelism cases—parallelism that is merely the result of all firms reacting independently to the same competitive forces—but leaves formal collusion, informal collusion, and pure oligopolistic interdependence as possibilities. In neither case does the "plus factor" separate out conduct that should survive antitrust scrutiny.

Bogosian v. Gulf Oil Corp.[95] demonstrates that efforts to resolve this problem have not been successful. In *Bogosian*, a number of oil companies that supplied a group of service stations required that each service station operator sell the gasoline only of the oil company whose trademark the service station carried. The district court granted summary judgment for most of the defendant oil companies "because it concluded that the allegation of 'interdependent consciously parallel action' in a complaint is an insufficient statement of the concerted action necessary to state a claim under § 1."[96]

The appellate court reversed, neatly sidestepping the main issue. The court required plaintiffs to show *at least* that the parallel behavior cannot be explained entirely by independent business motivation.[97] If independent business reasons can explain the behavior, however, no "meeting of the minds" is necessary and no basis exists for an inference of collusion, whether formal[98] or informal. Nor is the result attributable to oligopolistic interdependence; each firm would have behaved the same way regardless of how it anticipated its rivals would behave. The decision is silent on what more, if anything, the plaintiff must establish, or whether parallel action resulting from pure oligopolistic interdependence is adequate for liability under the Sherman Act.[99]

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95 561 F.2d 434 (3d Cir. 1977), *cert. denied*, 434 U.S. 1086 (1978).

96 *Id.* at 440.

97 The law is settled that proof of consciously parallel business behavior is circumstantial evidence from which an agreement, tacit or express, can be inferred but that such evidence, without more, is insufficient unless the circumstances under which it occurred make the inference of rational independent choice less attractive than that of concerted action. . . .

We recently articulated those circumstances in *Venzie Corp. v. United States Mineral Products, Co.*, 521 F.2d 1309 (3d Cir. 1975):

> "(1) a showing of acts by defendants in contradiction of their own economic interests . . .; and (2) satisfactory demonstration of a motivation to enter an agreement . . ."

Id. at 1314 (citation omitted). *Id.* at 446.

98 If hard evidence of formal collusion exists, the fact that independent decisionmaking could have produced the same outcome would not be a permissible defense.

99 Plaintiffs also contend that even if their complaints are construed not to allege a combination, that an allegation of interdependent consciously parallel action states a § 1 claim. Neither plaintiffs nor defendants offer a definition of interdependence, however. A situation of interdependence has been said to exist when, in a highly concentrated market, there is an awareness that, because of the limited number of sellers, any variation in price or price-related structures will necessarily have a demonstrable effect on the sales of others such that each firm bases its decisions, at least in part, on the anticipated

A. *Indirect Collusion As Illegal Conduct*

The economic model developed in the previous sections can be used to fashion a procedure for distinguishing culpable from nonculpable behavior under antitrust analysis. This Article argues that indirect collusion is not fundamentally different from direct collusion and that firms engaging in indirect collusion through a program of facilitating practices should face antitrust liability.[100]

The problem of a culpable acts requirement does not exist for the practices labeled "indirect collusion." In such cases, the defendants have taken specific avoidable acts that produce a consensus on the price to be charged and mutual confidence that rivals will adhere to that price. These practices, like formal collusion, establish the meeting of the minds that makes it individually rational for each firm to behave in a parallel noncompetitive way. The combination of a meeting of the minds and culpable acts leading to a consensus provides a coherent basis

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> reactions of the others to its initiative. . . . There is a lively debate, however, concerning the relationship of interdependence to collusion. . . . If these theories are to be tested, it should be done on a fully developed factual record which probes the conflicting economic facts on which they are premised. The complaint is much too blunt an instrument with which to forge fundamental policies regarding the meaning of competition in concentrated industries. . . . We conclude that the ruling that the specific allegation of interdependent consciously parallel action made here fails to state a claim should be vacated so that the issue can be decided, if necessary, after the relevant facts are fully developed.

561 F.2d at 446-47.

The dissenting judge would have preferred to decide the policy issue, asserting that "an allegation of consciously parallel behavior without more, would not state a Sherman Act claim." *Id.* at 457. The "more" he would require seems to be at least that the behavior cannot be explained as the result of independent motivation. *Id.* at 458 (Aldisert, J., dissenting). This additional requirement is fully compatible with the majority opinion. The dissent, however, is equally unclear about whether some additional proof is required. A strong indication exists that pure oligopolistic interdependence would not be enough:

> In a concentrated industry, such mutually conscious and interdependent conduct by several competitors may have anticompetitive effects. But it is not necessarily collusive, and I cannot understand how a proliferation of descriptive words changes the legal status of the conduct. Until there is a contract, combination or conspiracy, in restraint of trade, there is no § 1 violation.

Id. at 459. The dissent negates the force of that comment shortly thereafter:

> In their brief in this court, plaintiffs rely primarily on *Wall Products Co. v. National Gypsum Co.*, 326 F. Supp. 295 (N.D. Cal. 1971), and *Modern Home Institute, Inc. v. Hartford Accident and Idemnity Co.*, 513 F.2d 102 (2d Cir. 1975). Based on these decisions, they say "it is clear that [the courts] have uniformly held that proof of interdependent conscious parallel action, while not conclusive proof of a Section 1 Sherman Act violation, is sufficient to support a finding of violation." Appellants' Brief at 21. In my view, it is not necessary to agree or disagree with that reading of the cases in order to affirm the summary judgment here.

Id. Commentators generally share the view that the issue is not clearly resolved. *See, e.g.,* P. AREEDA, *supra* note 5, at 371-73.

100 There are some important evidentiary issues, however, that may limit application of the indirect collusion concept. *See* notes 134-38 and accompanying text *infra*.

for making policy distinctions. Indeed, one could consider formal collusion simply as one of many methods each potentially culpable by which firms *actively* achieve a noncompetitive result. That the presence or absence of agreement, however defined, provides as clear a basis for such distinctions is doubtful.

Although courts have not gone so far as to treat formal collusion as a subset of a wider class of culpable behavior, courts occasionally suggest that individual firm actions, short of formal collusion, can form the basis for antitrust liability.[101] The *Interstate Circuit* Court identified the multicopy letter from the exhibitor to the various distributors as an act that facilitated the distributors' parallel and anticompetitive conduct towards the second-run theaters.[102] The Court also seemed willing to base a finding of unlawful agreement on the parallel conduct plus the letter. Unfortunately for those seeking clear precedent in this area, the Court apparently was convinced that some of the parallel conduct represented such a substantial departure from the historical pattern that formal collusion must have occurred following the receipt of the letter.[103]

Aside from the dictum in *Interstate Circuit*, tentative support for an indirect collusion theory of antitrust liability can be found in three areas. First, in the delivered pricing cases, the FTC has succeeded in establishing that firms engaging in a uniform system of delivered pricing may violate the Federal Trade Commission Act without proof of agreement. Second, the Justice Department's "shared monopoly" theory suggests that section 1 liability might follow from parallel adoption of a program of facilitating practices without proof of a formal agreement. Finally, in *In re Ethyl Corp.*,[104] the FTC used an indirect collusion theory in arguing for liability under the Federal Trade Commission Act.

1. *Delivered Pricing As a Facilitating Device*

A formal agreement to use a particular pricing system, such as basing point or uniform delivered pricing, poses no serious analytical or legal problems.[105] The classic cases condemning delivered pricing, however, did not involve evidence showing directly or indirectly that a formal agreement had occurred.[106] The question then is whether the parallel use of a particular delivered pricing system that leads to an anticompetitive result violates the antitrust laws without a showing of

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101 The Supreme Court once held the view that even pure oligopolistic interdependence would serve as a basis for liability. *See* American Tobacco Co. v. United States, 328 U.S. 781, 808-15 (1946). This view no longer commands substantial support. *See* text accompanying note 52 *supra*. The discussion here is confined to indirect collusion.

102 *See* notes 63-64 and accompanying text *supra*.

103 306 U.S. at 222-25; *see* note 66 and accompanying text *supra*.

104 No. 9128 (F.T.C. Aug. 5, 1981).

105 *See* notes 76-80 and accompanying text *supra*.

106 *See generally* Note, *supra* note 46, at 1200-10.

agreement. If so, the cases provide an excellent illustration of the indirect collusion or facilitating practices approach.

FTC v. Cement Institute,[107] the first modern case of significance, involved a basing point pricing system that permitted firms to quote identical prices to any given customer regardless of location, even in a sealed bid context.[108] The FTC did not attempt to prove an agreement among firms to use the basing point system. Instead, the FTC demonstrated the existence of a combination to employ the basing point system for the purpose of selling at identical prices.[109]

The combination consisted not simply of the parallel use of a basing point system, but of "numerous concerted activities carried on in order to make the multiple basing point system work in such way that competition in quality, price and terms of sale of cement would be nonexistent. . . ."[110] These actions served as facilitating practices that created mutual confidence in adherence to the pricing system.

It would not have been incompatible with prior cases to label these collective activities as agreement. Indeed, while review of the FTC's order was pending in the court of appeals, the Justice Department filed a civil action alleging an agreement in violation of section 1 of the Sherman Act.[111] In its opinion, the Supreme Court suggested its willingness to consider an argument that indirect collusion involving individual, albeit parallel, conduct may fall within the scope of the Federal Trade Commission Act.[112] Given that the Court approved the FTC's finding of concerted activity, however, it is difficult to be certain that the FTC could prevail with such an approach.

The next delivered pricing case appears more directly relevant to the "indirect collusion" approach. In *Triangle Conduit & Cable Co. v. FTC*,[113] the FTC, in its first count alleged a conspiracy among manufacturers of rigid steel conduit.[114] In a second count, however, the FTC charged that the conduit sellers restrained price competition in violation of section 5 of the Federal Trade Commission Act "'through their con-

107 333 U.S. 683 (1948).

108 For example, in 1936, 11 cement producers each bid $3.286854 per barrel for 6,000 barrels of cement. *Id.* at 713 n.15.

109 *Id.* at 688-89.

110 *Id.* at 709.

111 *Id.* at 693-94.

112 "[I]ndividual conduct, or concerted conduct, which falls short of being a Sherman Act violation may as a matter of law constitute an 'unfair method of competition' prohibited by the Trade Commission Act." *Id.* at 708.

113 168 F.2d 175 (7th Cir. 1948), *aff'd by an equally divided Court sub nom.* Clayton Mark & Co. v. FTC, 336 U.S. 956 (1949).

114 *Id.* at 176. In commenting on this count, the Seventh Circuit noted that "the existence of a plan or method which equalizes the delivered costs or prices of competitors having widely different freight costs to given destinations constitutes strong evidence in itself of an agreement to use such plan or system." *Id.* at 179.

current use of a formula method of making delivered price quotations with the knowledge that each did likewise . . . .'"[115] According to the FTC, this practice deprived local customers of price advantages derived from being close to the point of production and resulted in monopolistic control over the price of rigid steel conduits.[116] With respect to the second count, the court observed that the use of the basing-point formula allowed each conduit seller to quote identical delivered prices. This practice required sellers systematically to increase or decrease their mill net price for each customer to match their competitors' delivered prices. In such a situation, therefore, each seller must consciously intend not to exclude competitors from their natural freight advantage territory, which "in effect invites the others to share the available business at matched prices in his natural market in return for a reciprocal invitation."[117] The Court concluded simply that "we cannot say that the Commission was wrong in concluding that the individual use of the basing point method as here used does constitute an unfair method of competition."[118]

The FTC originally interpreted this decision as giving it considerable authority in conscious parallelism cases, but subsequently reversed its position in the face of severe congressional opposition.[119] For many years thereafter it challenged the parallel use of delivered pricing only when there was some evidence of collusion.[120] In *Boise Cascade Corp. v. FTC*,[121] however, the FTC resurrected its view that parallel use of delivered pricing alone could violate section 5. The Ninth Circuit, declining to enforce the FTC's order prohibiting the use of the delivered price system, initially did little to clarify the issue of what must be proved to establish a violation of section 5. Based on the existing case law and the FTC's policy statement, the court concluded that "the bare existence of an industry-wide artificial freight factor" was not enough to support a finding of a section 5 violation. Rather, the court was "looking for at least a tacit agreement" to use the formula.[122] While the court declined to identify precisely what it meant by tacit agreement, it subsequently appeared to render the issue moot by holding

> that in the absence of evidence of overt agreement to utilize a pricing system to avoid price competition, the Commission must demonstrate that the challenged pricing system has actually had the effect of fixing

115 *Id.* at 176.
116 *Id.*
117 *Id.* at 181.
118 *Id.*
119 *Boise Cascade Corp. v. Federal Trade Commission*, 637 F.2d 573 (9th Cir. 1980). *See* Note, *supra* note 46, at 1207-08.
120 637 F.2d at 576.
121 *Id.* at 573.
122 *Id.* at 576-77.

or stabilizing prices. Without such effect, a mere showing of parallel action will not establish a section 5 violation.[123]

The *Boise Cascade* opinion indicates that parallel use of facilitating practices such as a delivered pricing formula can be held to violate section 5 without the need to allege an agreement, overt or tacit, so long as an anticompetitive effect can be established. The only area of controversy, and the reason the FTC failed to prevail in *Boise Cascade*, is that an actual anticompetitive impact must be demonstrated.[124] It apparently will not suffice to show that, given the industry structure, an anticompetitive impact is likely. Otherwise, the opinion seems unusally favorable to an indirect collusion theory, at least in connection with section 5.

2. *Shared Monopoly Under the Sherman Act: The Turbine Generator Investigation*

The Justice Department's theory that behavior short of formal collusion can trigger antitrust liability under the Sherman Act[125] was developed during the Department's investigation of the turbine generator industry during the period 1963-1972.[126] The government concluded

123 *Id.* at 577.

124 For a discussion of the impact of this requirement, see notes 134-38 and accompanying text *infra*.

125 The government's theory came to be known as "shared monopoly." The term "shared monopoly" has generated considerable confusion because it has been used to refer to three rather different antitrust situations. Carl Kaysen and Donald Turner addressed the first issue to which the term has been applied. Their concern was with oligopolistic industries that could generate supra-competitive profits by pure oligopolistic interdependence and thereby escape prosecution under all but the most liberal view of the antitrust laws. Their proposal, adopted in the so-called "Neal Report" to President Johnson and later introduced as legislation by Senator Hart, called for a kind of "no-fault shared monopoly" whereby industries that performed noncompetitively for an extended period could be dissolved to reduce concentration without any requirement of proving culpable conduct. *See* C. KAYSEN & D. TURNER, *supra* note 2, at 111-18; REPORT OF THE WHITE HOUSE TASK FORCE ON ANTITRUST POLICY, at A-1 to A-11 (1968), *reprinted in* 2 ANTITRUST L. & ECON. REV. 11 (1968).

The second application of the phrase "shared monopoly" occurs in the context of the § 2 concept of "monopolizing." The issue here is how an oligopoly prevents new entry which would undermine the "shared monopoly." This concept was applied in the Commission's long-running case against the cereal manufacturers. This case involved some tactics allegedly aimed at achieving noncompetitive prices, but the primary focus was on efforts to deter new entry. The case recently was dismissed. *See In re* Kellogg Co., 1981 TRADE REG. REP. (CCH) ¶ 63,811 (Jan. 17, 1981).

The third application is the one developed in this Article under the name "indirect collusion." The label "shared monopoly" was used by Attorney General Bell in his speech announcing a Justice Department program to search for situations of indirect collusion. In retrospect, the choice of the label "shared monopoly" was unfortunate because it suggested that the Department supported the no-fault oligopoly concept, an idea that has lost considerable support since the late 1960s, or the cereals-type approach, which never generated substantial enthusiasm. The Department's true aim was a behavior-oriented approach to Sherman Act § 1 liability.

126 In 1976, the Antitrust Division of the Department of Justice concluded its investiga-

that from mid-1963 onward,[127] price competition in the sale of turbine generators had been virtually eliminated, but found no evidence of direct communication between the two producers, General Electric (GE) and Westinghouse. More than pure oligopolistic interdependence, however, was involved. The government identified certain facilitating practices employed in the industry that appeared to have been instrumental in eliminating price competition.

These practices were contained in a pricing policy that GE initiated in May 1963 and that Westinghouse effectively matched shortly thereafter. The new pricing strategy included a revision of the price book that simplified procedures for pricing turbine generators;[128] use of a published multiplier to reflect periodic changes in book prices;[129] a policy of offering no individual discounts off book prices and introduction of a price protection plan designed to implement the no-discount philosophy;[130] and publication of outstanding orders and price quotations.[131]

tion into pricing practices in the domestic steam turbine generator industry and prepared to file a civil suit under § 1 of the Sherman Act. Prior to filing, the parties reached a settlement involving substantial injunctive relief. The Department prepared a memorandum in which it detailed its theory of the case and the reasons why it accepted the settlement in lieu of litigation. That public document forms the basis for this section of the Article, and many parts of this section are taken directly from that document. Because the case was not litigated, the "facts" used in this Article represent allegations that the government would have had to prove at trial. For the government's memorandum and accompanying documents, see 42 Fed. Reg. 17,004 (1977).

127 During the 1950s an elaborate conspiracy involving the industry ended with the indictment in 1960 of GE, Westinghouse, and Allis-Chalmers. Turbine generator prices, which began a precipitous decline in 1958, continued to decline following the indictment. By December 1962, Allis-Chalmers had withdrawn from the market, but the industry continued to be saddled with excess capacity and prices continued to decline during the first part of 1963. *See id.* at 17,005-06.

128 *Id.* at 17,006. The revised price book employed various formulas that greatly simplified the pricing of the highly complex, customized machines and contained a series of pricing examples that explained the use of the formulas. Virtually all of the pricing information necessary to ealculate the book price of any large turbine generator, and other terms and conditions of sale, were included.

129 *Id.* To compute the actual price in effect at any given time, GE employed a published multiplier. The multiplier was a percentage figure and applied to book prices. For example, the price quoted to a customer in May 1963 was computed by multiplying the book price by the multiplier of .76. The use of the multiplier permitted GE to make swift changes in all of its prices inherent in printing an entirely new book, and reduced the risk of misinterpretation by Westinghouse.

130 *Id.* The price protection clause was introduced to deal with the problem of secret discounts. In the event GE lowered prices for a particular customer, any buyer within the previous six-month period could receive an identical discount retroactively. Customers would be permitted to audit GE's books for sales in the six months subsequent to their own purchase. Hence, GE could not employ selective price cuts without imposing a substantial penalty upon itself. *See* note 48 and accompanying text *supra*.

131 42 Fed. Reg. 17,004 (1977). At the time of an increase in the published multiplier, GE published all of the orders it had received and the quotations it had made at the preexisting price levels. Unless Westinghouse knew that a quote at the lower price level had been made prior to the price increase, it would not know for certain whether GE had cheated on the new price level.

The Justice Department concluded that these practices allowed GE and Westinghouse to avoid price competition without the need for formal collusion. Both oligopoly tasks had been satisfactorily accomplished. The consensus on the right price was achieved through GE's "augmented" price leadership, including the price book, the simplified pricing formulas, and the multiplier. GE's pricing strategy allowed Westinghouse to ascertain the price GE would employ in any sales situation, thereby effectively removing a major source of uncertainty and a major stumbling block in the industry's attempt to stabilize prices for such a highly complex product. The price protection clause and the publication of outstanding orders established mutual confidence that both parties would adhere to the consensus price.

Although the Justice Department's articulation of how the facilitating practices contributed to the elimination of price competition comports nicely with the approach developed in this Article, precisely how the Justice Department would have articulated the reason why the behavior in question violated section 1 of the Sherman Act is not entirely clear. No case was filed,[132] and the only reference to the legal theory that the Department would have employed is contained in the introductory paragraphs of a memorandum the Department filed with the court. Citing the absence of price competition in the industry, the parallel adoption of the facilitating practices, and the defendants' alleged intent to stabilize prices, the Department concluded that "this public exchange of assurances, with such intent, did constitute an agreement to stabilize prices which warranted the filing of a civil action . . . alleging a violation of the Sherman Act. . . ."[133] Thus, although the narrative of the memorandum is compatible with an "indirect collusion" approach, the language speaks of the practices themselves as constituting an agreement, presumably tacit, rather than facilitating an agreement.

The Department's mention of the parties' intent is interesting, although it is unclear whether the Department believed that intent would be a necessary ingredient in such a case. Apart from whether intent is essential to the legal theory of the case, the government would clearly have benefited from documentary evidence that the parties intended to reduce price competition by implementing the new policies and believed they had accomplished that result.

In particular, absent evidence of intent, the government might have faced serious problems in convincing a court to condemn the par-

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132 Because GE and Westinghouse offered to provide the desired relief and because of the uniqueness of the case, no case was filed. Also, Westinghouse argued that the filing of an antitrust suit would lead to numerous private treble damage actions and that such suits, plus its liability arising out of the uranium supply contracts litigation, would possibly lead to Westinghouse's departure from the turbine generator business. *Id.* at 17,009.

133 *Id.* at 17,006.

ties' conduct under an indirect collusion or tacit agreement approach. The government would have had to establish an impairment of price competition attributable to the challenged practices. Moreover, to the extent that *Boise Cascade* reflects how a court will treat cases involving an alleged Sherman Act violation,[134] it suggests that in the absence of formal collusion, evidence that poor performance is *likely* to result from the challenged practice will not suffice. Rather, it may be necessary to establish that the level of competition was deficient in some absolute sense.[135]

The government also might have to establish a link between the proven poor performance and the practices cited in the complaint. Absent documentary evidence of the parties' perceptions about the likely or actual impact of the practices, this too may pose a genuine problem. Economics is not a laboratory science in which experiments can be performed to sort out the independent effect of any given influence. In the antitrust context, the government wants to determine how the industry would have performed "but for" the cited practices. Unfortunately, even if one could identify a period of time in which the practices were not in use, normally other parameters affecting the industry will differ so that it will be impossible to sort out the independent influence of the challenged practices.[136]

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134 *Boise Cascade* involved a prosecution under the FTC Act. *See* notes 121-24 and accompanying text *supra*.

135 An economist is likely to evaluate the absolute level of performance in terms of excessive price-cost margins or excessive profits. This gives rise to both data availability and data interpretation problems. *Cf.* Kruse, *Deconcentration and Section 5 of the Federal Trade Commission Act*, 46 GEO. WASH. L. REV. 200, 208 n.49 (1978) (discussing some difficulties in proving anticompetitive effects in context of FTC's case against major cereal manufacturers). For a typical multi-product firm, meaningful profit data may not be available for the product line that is the focus of the complaint. Even where some statisties are available, they may not properly measure what the economist seeks to measure—the difference between price and long-run incremental cost. In any event, the data must be interpreted. To establish that price is not equal to the relevant incremental cost will not suffice. Rather, the question about the size of the margin or the level of profits is likely to be "relative to what?" Deriving and defending the appropriate benchmark may prove a severe challenge.

More common in an antitrust context is an analysis of the dispersion of prices among suppliers. In the GE matter the government believed that prices quoted by GE and Westinghouse were nearly always identical. In litigation, such a claim would inevitably generate economic testimony by the defense that identical prices among suppliers are fully compatible with perfect competition and are the norm in any market in which the product is fungible. Given that prospect, the prospective defendants' admission that they believed the practices had succeeded in eliminating competition would have provided a major advantage for the government.

136 In the context of the turbine generator industry, the government might have compared the absence of price competition after 1963 with the rampant discounting in the 1961-1963 period. Defendants might have countered by noting that demand stabilized after 1963 and that one of the three competitors had left the market, so that pure oligopolistic interdependence in a two-firm industry might have yielded the same result. The documentary evidence presumably reduced, if not totally eliminated, this burden for the government.

This problem is also present in determining damages in a traditional Sherman Act case.

Finally, where the focus is not on a formal agreement to engage in certain practices but on the parallel adoption of those practices, the government may have to balance the possible competitive benefits of those practices with the previously "measured" costs.[137] Given the almost certain impossibility of measuring benefits and costs precisely, it is unclear what rules of thumb courts will resort to where defendants claim that certain practices reduce costs or otherwise convey some benefit to the consumer. Where the government can establish that the practices were undertaken for the purpose of reducing competition, courts can fairly presume that no significant benefits will be foregone by their prohibition.[138]

3. *Shared Monopoly Under the FTC Act: Ethyl*

The latest and clearest use of the indirect collusion approach occurred in the FTC's case against the four manufacturers of lead-based antiknock additives.[139] The FTC challenged three practices that it claimed adversely affected competition: use of a uniform delivered pricing system for quoting list prices, public announcement of list-price changes in advance of the effective date, and use of a most-favored-customer clause in contracts with individual customers.[140] The case is noteworthy because complaint counsel did not allege any agreement, formal or tacit. This provided a clear opportunity to establish what *Cement Institute*,[141] *Triangle Conduit*,[142] and *Boise Cascade*[143] had suggested—that

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Cf. 2 P. AREEDA & D. TURNER, ANTITRUST LAW ¶ 344, at 229 (1978) (In order to determine damages "[a]fter an illegal price-fixing conspiracy, one would compare the agreed price or the actual price resulting from an agreed formula or other misbehavior, with the price that would have prevailed in the absence of the illegal conduct.") (footnote omitted). The courts have responded to the empirical problem by imposing a looser standard for establishing damages once the violation is established. *See id.* at 228. *See also* notes 146-58 and accompanying text *infra* (discussing this problem in connection with the *Ethyl* case).

137 *See* National Soc'y of Professional Eng'rs v. United States, 435 U.S. 679 (1978).

138 After the filing of the modified consent decree in GE-Westinghouse, the Antitrust Division launched an extensive and well-publicized search for cases in which to employ the facilitating practices approach. At this time the label "shared monopoly" was applied. *See* Dep't of Justice, Memorandum on Shared Monopolies (May 26, 1978), *reprinted in* 1978 ANTITRUST & TRADE REG. REP. (BNA) No. 874, at F-1 (July 27, 1978). Two years later, the effort had not produced a single case. The evidentiary problems just discussed probably were a factor in this failure. If proving that competition has been diminished by virtue of certain practices is difficult when all discovery is completed, to find such a situation in the first place using the usual investigative techniques must be even more difficult.

139 *In re* Ethyl Corp., No. 9128 (F.T.C. Aug. 5, 1981). The complaint parallels the language of the government's memorandum in GE-Westinghouse. The author of this Article coauthored the government's GE-Westinghouse memorandum and served as an expert witness for the FTC in *Ethyl*. Hence, the relationship of the FTC theory to that developed here is not coincidental.

140 *Id.* at 2.

141 333 U.S. 683 (1948); *see* notes 107-12 and accompanying text *supra*.

142 168 F.2d 175 (7th Cir. 1948), *aff'd by an equally divided court sub nom.* Clayton Mark & Co. v. FTC, 336 U.S. 956 (1949). The appellate court opinion in *Triangle Conduit* was reason-

parallel,[144] nonconspiratorial behavior could violate the FTC Act.

Complaint counsel achieved an initial victory in establishing that an agreement in the traditional sense is not a necessary ingredient in proving a case brought under the FTC Act. The Administrative Law Judge (ALJ) stated that section 5 can apply where

> the activities violate the spirit of the Sherman Act, in particular Section 1's prohibition against conspiracies, contracts or combination in restraint of trade. . . . [I]f the spirit of the Sherman Act is to prevent activities in the marketplace which unreasonably restrict or foreclose competition, that spirit may be violated whether such effect on competition results from concerted or individual behavior.[145]

Although he stated that agreement was not a prerequisite to a finding of liability on these facts, the ALJ did not define precisely the outer limits of the FTC Act.

In addition to establishing the legal theory of the complaint, complaint counsel was faced with three evidentiary tasks: to show (1) that price competition was substantially attenuated; (2) that the result could be traced in some significant degree to the challenged practices; and (3) that any competitive benefits of the practices were less than the competitive harm.[146]

Complaint counsel did not attempt to demonstrate "poor" performance by establishing that prices and profits were too high in some absolute sense.[147] Rather, complaint counsel focused on the lack of dispersion of prices—list prices were identical across firms and most sales were at list. If list prices were equal to marginal costs, the lack of dispersion of actual prices would be consistent with vigorous competition in a homogeneous product. Several indicia, however, including the "phantom freight" paid by nearby customers under the uniform delivered price system employed in the industry, suggested that list prices were above long-run marginal cost. Thus, to the extent that any competitive pressures existed, they should have manifested themselves in discounts

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ably unambiguous, although that court also upheld the FTC's finding of an illegal agreement. *See* notes 113-20 and accompanying text *supra*. Subsequent FTC practice, however, casts doubt on its confidence in the mandate implicit in *Triangle Conduit*. *See* notes 119-20 and accompanying text *supra*.

143 637 F.2d 573 (9th Cir. 1980); *see* notes 121-24 and accompanying text *supra*.

144 The degree of parallelism was not perfect. While all firms used a uniform delivered pricing system, the use of public announcements of price changes and most-favored-customer clauses varied over time and across firms. *In re* Ethyl Corp., No. 9128, slip op. at 50-59 (F.T.C. Aug. 5, 1981).

145 *Id.* at 129-30.

146 *See also* notes 75-90 and accompanying text *supra* (treatment of similar evidentiary problems in the context of agreements to use delivered pricing and exchange information).

147 In its rebuttal case, the FTC successfully used respondents' data to establish that return on equity in this market was high relative to commonly-used benchmarks. *In re* Ethyl Corp., No. 9128, slip op. at 136-37.

from list prices. Widespread adherence to list prices that themselves exceed marginal costs suggests a lack of price competition, not an excess of it.[148]

Complaint counsel believed that the defendants' use of uniform delivered pricing and public announcement of price changes facilitated this noncompetitive result by establishing a consensus on prices—the first of the oligopoly tasks. They reasoned that use of uniform delivered pricing made it easy for each firm to determine and match its rivals' list price to any given customer.[149] Given the wide dispersion in customer locations, use of uniform delivered pricing meant that instead of each firm having hundreds of effective list prices, depending in each case both on the location of the seller's plant and the location of the buyer, the list price for each seller consisted of a single number.

The public announcements of list-price changes[150] reduced the uncertainty facing a firm contemplating an increase in list prices by ensuring that rivals would learn of the increase and have a chance to respond before the price increase went into effect. The leader thus knew, before its increase was effective, whether rivals would match the increase in list prices.

The most-favored-customer clauses were cited as facilitating practices because of their tendency to encourage adherence to the stated list prices. The clauses typically promised a customer that it could make its purchases at the lowest price offered to any other customer.[151] Complaint counsel argued that the clauses discouraged discounts from list prices.[152] Moreover, the clauses reduced each firm's uncertainty about whether its rival would be discounting. This made increasing list prices and adhering to the established list price less risky.[153]

Denying that the facilitating practices caused the industry's unsatisfactory performance, the defendants argued that any unsatisfactory performance could be attributed to the structure of the industry along with other elements beyond the sellers' control. They pointed to the small number of firms and the fact that the product was perfectly fungible.

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148 An important issue was how to treat nonprice competition. Firms occasionally "competed" for business by various methods, such as providing certain services free of charge, some of which came quite close to what economists would describe as price competition. The ALJ refused to trcat nonprice competition as an acceptable substitute for price competition and indicated that the level of nonprice competition was symptomatic of the absence of price competition. *Id.* at 140-41.

149 *Id.* at 149-52.

150 Typically, the price leader issued a press release at least 30 days in advance of the effective date. *Id.* at 50-52, 93.

151 This differs from the price-protection clause at issue in GE-Westinghouse, because in the *Ethyl* case no provision for a retroactive rebate existed. *See* note 130 and accompanying text *supra*.

152 *See* notes 47-48 and accompanying text *supra*.

153 *In re* Ethyl Corp., No. 9128, slip op. at 152-53 (F.T.C. Aug. 5, 1981).

They also argued that buyers would inform rival sellers of any firm's discount from the list price. Therefore, list prices would tend to be identical for all sellers and no incentive to reduce the price would exist because rivals would learn of and promptly match any firm's effort at price shading.[154]

The ALJ's opinion, resolving this conflict in favor of complaint counsel's characterization, focused on other structural features of the industry—the geographic dispersion of customers, that sales were not open, and that a relatively small number of large buyers made substantial annual purchases—to show that uniform list prices and minimal discounts were not inevitable. In addition, complaint counsel had presented live testimony from industry participants intended to show that the challenged practices affected the way in which firms behaved. The ALJ's opinion concluded that firms appeared to obtain information about price moves from the public announcement of list price changes.[155] The uniform delivered price system simplified the problem of matching list prices. Industry executives were reluctant to give discounts because of the most-favored-customer clause and rival firms understood the effect of such a clause. Moreover, the FTC's expert economic witness testified that the practices had a significant impact on price competition.

With respect to the possible competitive benefits from the challenged practices,[156] the ALJ concluded that while any one customer might benefit from advance notice, a most-favored-customer clause, or uniform delivered prices, the industry-wide use of these practices resulted in an higher level of prices. Therefore, "[a]ny procompetitive benefits of the challenged practices [were] clearly outweighed by their anticompetitive attributes."[157]

The *Ethyl* initial opinion, when combined with *Boise Cascade*, provides support for an "indirect collusion" approach under section 5 of the Federal Trade Commission Act. Under this approach, the FTC does not need to establish an agreement, explicit or tacit, if it can show that the firms' facilitating practices have the collective effect or reducing competition. However, even absent the need to show agreement, the

154 Defendants also introduced testimony that decisionmakers perceived the Robinson-Patman Act as an obstacle to selcctive discounts. The ALJ rejected this explanation. *See id.* at 56.

155 *Id.* at 86-89.

156 The FTC agreed that the practices had not been instituted for the purpose of eliminating competition. Indeed, uniform delivered prices and most-favored-customer clauses may have been used by Ethyl when it was the sole supplier of antiknock additives prior to 1948. Hence the FTC could not infer from an anticompetitive purpose that the practices had no competitive benefits. Moreover, defendants presented testimony that individual customers desired and, in the case of most-favored-customer clauses, bargained for the challenged practices. *See id.* at 54-56.

157 *Id.* at 160.

FTC's burden of proof substantially exceeds that which is required in a standard conspiracy case where the per se rule applies. Under the facilitating practices approach, the FTC will need to demonstrate that the industry performance is noncompetitive in some respects and that the result is attributable to the cited practices. Moreover, the FTC may have to demonstrate that the adverse effects on competition are not offset by aspects of the practices that enhance efficiency or otherwise promote competition.

Conclusion

Economic theory about oligopoly behavior can contribute little to antitrust analysis in situations where direct evidence exists of a formal conspiracy to fix prices or otherwise avoid competition. Where the agreement is not facially anticompetitive, or where no formal agreement can be established from direct evidence, an economic model of oligopoly behavior is useful and, perhaps, essential.

A problem arises, however, in using conventional economic theory in attempting to establish antitrust liability, however. The standard economic model of oligopoly, which is premised on separate profit-maximizing decisions by each firm that treat the likely reaction of rivals simply as a parameter, virtually precludes any extension of antitrust beyond situations where formal conspiracy can be proved. Liability is avoided because in the standard model, nothing that the individual oligopolist has done appears to be culpable; its decisionmaking merely takes into account the assumed reaction of rivals.

This Article has offered an alternative economic model in which the focus is on the ingredients that are necessary for oligopolists to achieve and maintain a noncompetitive price. It points to the complicating factors that stand in the way of that result and argues that such results are seldom likely to occur unless oligopolists take specific actions aimed at circumventing or overcoming the complicating factors.

The economic model can be useful in several contexts. First, where the plaintiff believes that a formal agreement exists, but no direct evidence of such an agreement is available, the economic model points to the circumstances that permit an inference of such an agreement in a particular industry structure. Second, the model can analyze formal agreements, such as information-exchange agreements, that do not on their face eliminate competition, but when viewed in the context of the particular industry structure, may be seen as posing serious risks of reducing the level of competition.

Finally, where neither direct nor circumstantial evidence of a formal agreement exists, the model suggests a useful way of determining whether any culpable behavior can be identified. The approach suggested by the economic model differs considerably from the traditional legal approach, which has concentrated on expanding the notion of agreement. This Article suggests a more straightforward attack on the practices that facilitate the noncompetitive outcome. When the focus is on the specific actions taken by oligopolists, formal collusion is seen as merely a particularly nefarious subset of a broader class of behavior. When conditions permit, other actions can be equally effective in achieving the same noncompetitive result. To distinguish among these various categories of behavior based on whether an agreement exists seems largely an exercise in semantics.

The approach to this third category suggested in this Article is compatible with recent prosecutorial efforts under both the Sherman Act and the Federal Trade Commission Act. The best line of attack is under section 5 of the Federal Trade Commission Act, because proof of an agreement is unnecessary.[158] One aspect of limiting the facilitating practices approach to FTC enforcement is to remove the possibility of private treble damage actions. This has appeal if some unfairness is perceived in exposing firms to damages for behavior which is culpable only because of the particular structural circumstances of the industry under scrutiny.

158 Although a plaintiff may be able to succeed with the same facts under the Sherman Act, it still may be necessary to construe the behavior as constituting some form of agreement.