April 1988

Antitrust Law and Evolutionary Models of Legal Change

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I. INTRODUCTION

Following his impressive survey of the principal common law areas,[1] Richard Posner observed that the common law contained an implicit

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1. That is, property, contracts, and torts.

379

economic logic.[2] As a result, common law rules allocate responsibilities to minimize the costs of social interaction,[3] which is to say that common law rules are "efficient" in the economic sense. Posner explained this startling outcome by noting that a judge's intuition and common sense will compel considerations of efficient resource allocation.[4] This explanation was not particularly palatable to economists who are used to outcomes being driven by the pursuit of individual self-interest[5] and not by the insights of well-meaning judges.

Paul Rubin offered an alternative explanation that is considerably more in keeping with economic logic.[6] Rubin's evolutionary model spawned a fascinating series of articles that has enhanced understanding of the common law's evolutionary process.[7] In essence, an inefficient rule involves unnecessarily high costs. Such a rule imposes deadweight welfare losses upon one of the parties to a dispute. As a result, one party has more to gain than the other party has to lose by a change from an inefficient rule to an efficient rule.[8] Accordingly, litigation will occur until the precedent is changed and an efficient rule emerges.[9] In contrast, an efficient rule will not be litigated because

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2. R. POSNER, ECONOMIC ANALYSIS OF LAW 98 (1972).

3. *Id.*

4. *Id.* at 99. Posner states:

   The character of common law litigation forces a confrontation with economic issues. The typical common law case involves a dispute between two parties over which one should bear a loss. In searching for a reasonably objective and impartial standard . . . the judge can hardly fail to consider whether the loss was the product of wasteful, uneconomical resource use. In a culture of scarcity, this is an urgent, an inescapable question. And at least an approximation to the answer is in most cases reasonably accessible to intuition and common sense.

Id.

5. A. SMITH, THE WEALTH OF NATIONS 423 (Modern Libr. 1937) (5th ed. 1789) provides the earliest observation that an "invisible hand" leads individuals pursuing their own self-interest to promote the interests of society generally. In a complex society, Smith's invisible hand may not operate satisfactorily. *See* Bator, *The Anatomy of Market Failure*, 72 Q.J. ECON. 351 (1958).

6. Rubin, *Why is the Common Law Efficient?*, 6 J. LEGAL STUD. 51 (1977).

7. *See* Blume & Rubinfeld, *The Dynamics of the Legal Process*, 11 J. LEGAL STUD. 405 (1982); Goodman, *An Economic Theory of the Evolution of the Common Law*, 7 J. LEGAL. STUD. 393 (1978); Heiner, *Imperfect Decisions and the Law: On the Evolution of Legal Precedent and Rules*, 15 J. LEGAL STUD. 227 (1986); Priest & Klein, *The Selection of Disputes for Litigation*, 13 J. LEGAL STUD. 1 (1984); Priest, *Selective Characteristics of Litigation*, 9 J. LEGAL STUD. 399 (1980); Priest, *The Common Law Process and the Selection of Efficient Rules*, 6 J. LEGAL. STUD. 65 (1977) [hereinafter *Selection of Efficient Rules*].

8. Epstein, *The Social Consequences of Common Law Rules*, 95 HARV. L. REV. 1717 (1982) (expressing some doubt that the principal common law doctrines decisively influence the flow of scarce resources in a market economy).

9. *See infra* notes 16-36 and accompanying text.

no deadweight loss exists and, therefore, the disfavored party has less to gain than the favored party has to lose. Consequently, settlements emerge and the rule of law does not change. Thus, one prediction of this theory is that inefficient rules will be litigated while efficient rules will lead to out-of-court settlements.[10]

In his remarkable survey of antitrust law in the United States, Robert Bork found inefficient rules in nearly every area of the law.[11] Accordingly, antitrust should be a fertile ground for applying the evolutionary model of the common law.[12] Since we have antitrust statutes, one may object that the statutory language controls the results rather than any evolutionary process. These statutes, however, contain vague prohibitions that require judicial interpretation in the common law tradition.[13] Consequently, the predictions of the evolutionary model ought to be valid for antitrust rules. To illustrate this, the article examines the economically efficient rule against price fixing among horizontal competitors[14] and the economically inefficient rule prohibiting the imposition of maximum resale prices.[15] Then, the article examines the pattern of litigation and finds that the efficient rule is litigated far more often than the inefficient rule. Since this is inconsistent with predictions of the evolutionary model, some explanations for this result are offered.

II. EVOLUTION OF COMMON LAW EFFICIENCY

The basic driving force behind the evolution of efficient common law rules flows from the pursuit of individual self interest. This may be demonstrated through an example that will provide the analytical foundation for the subsequent analysis of antitrust rules.[16] Suppose that an accident has occurred in which A has injured B. The harm

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10. On settlements generally, see Gould, *The Economics of Legal Conflicts*, 2 J. LEGAL STUD. 279 (1973). *See also* Priest & Klein, *supra* note 7.

11. *See* R. BORK, THE ANTITRUST PARADOX: A POLICY AT WAR WITH ITSELF (1978).

12. Rubin, *Common Law and Statute Law*, 11 J. LEGAL STUD. 205 (1982) (contends that one should not expect antitrust rules to be efficient, but we shall argue that this is not correct). *See infra* notes 27-36 and accompanying text.

13. *See infra* notes 37-47 and accompanying text.

14. United States v. Socony-Vacuum Oil Co., 310 U.S. 150 (140) (court established *per se* rule against price fixing agreements).

15. Albrecht v. Herald Co., 390 U.S. 145 (1968). The *Albrecht* rule has been examined in some detail and found wanting. *See, e.g.*, Blair & Fesmire, *Maximum Price Fixing and the Goals of Antitrust*, 37 SYRACUSE L. REV. 43 (1986); Blair & Kaserman, *The* Albrecht *Rule and Consumer Welfare: An Economic Analysis*, 33 U. FLA. L. REV. 461 (1981); Easterbrook, *Maximum Price Fixing*, 48 U. CHI. L. REV. 886 (1981).

16. This example is drawn from Rubin, *supra* note 6, with a change in notation.

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caused by the accident can be represented by H. If the law places
the liability for accidents on A, then A will have an incentive to spend
some amount, which we denote by C_A on accident avoidance.[17] A
certain number of accidents will occur despite A's incurring costs of
C_A because it is usually not optimal to reduce the number of accidents
to zero.[18] Given A's expenditure of C_A on accident avoidance, the
number of accidents that will occur anyway is denoted by N_A. In
contrast, if the legal rule imposed liability upon B, then B would incur
accident avoidance costs of C_B, which may be vastly different from
those incurred by A,[19] and N_B accidents nevertheless would occur.[20]

In this setting, an efficient legal rule is one that minimizes the
total costs associated with potential accidents. If the present value
(PV) of the accident avoidance costs incurred by B plus the accident
costs that occur anyway[21] is less than that for A, that is, if

$$PV(C_B + N_BH) < PV(C_A + N_AH),$$

then liability should be placed on B because B is the lowest cost party.

Suppose that B is the most efficient accident avoider, but an inef-
ficient legal rule assigns liability to A rather than to B. This will lead
A to incur accident avoidance costs of C_A and N_A accidents will occur.
Assuming that both A and B know about the legal rule, and A is

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17. If A is risk neutral, then A will incur accident avoidance costs up to the point where
the marginal benefit of further accident avoidance, measured by the expected reduction in
accident claims, is equal to the additional expenditure on accident avoidance.

18. For example, suppose that the harm (H) if an accident occurs is $100,000. Suppose
further that, given current levels of accident avoidance costs (C_A), the probability that an
accident will occur is 1%. With no further expenditure for accident avoidance, the expected
accident claims are $(0.01)(\$100,000) = \$1,000$. No risk neutral decisionmaker will spend more
than $1,000 for additional accident avoidance under these circumstances. But reducing the prob-
ability of an accident to zero is often excessively expensive; thus, it is optimal for some accidents
to occur.

19. For example, if automobile drivers were always liable in an accident with a pedestrian,
the accident avoidance costs would be far different than those incurred by pedestrians if the
rule of liability were reversed.

20. Considerations similar to those sketched in *supra* note 19 dictate that the optimal
number of accidents depends upon the rule of liability.

21. The present value of a flow of costs over time is given by the following formula:

$$PV(COSTS) = \sum_{t=1}^{T} (COST)/(1 + i)^t$$

where T is the number of time periods, i is the discount rate, and $\sum_{t=1}^{T}$ denotes summation.
See, e.g., J. WESTON & E. BRIGHAM, MANAGERIAL FINANCE 66-92 (7th ed. 1981).

concerned about the precedent for future cases, as well as the instant case, there will be an incentive to litigate.[22]

When an accident occurs, A and B must decide whether to settle or to litigate. If they go to court and A wins, A does not pay H to B and A stops incurring the accident avoidance costs of C_A since precedent now favors A. At the same time, B will begin incurring accident avoidance costs of C_B. If B wins, B receives H and A continues incurring C_A since precedent continues to favor B. Letting the costs of litigation for A and B be T_A and T_B, respectively, and using P to designate the probability of B's winning,[23] the expected value of litigation to A is[24]

$$E[L]_A = -P(H) + (1-P)(PV(C_A + N_AH)) - T_A$$

while the expected value to B is

$$E[L]_B = P(H) + (1-P)(-PV(C_B + N_BH)) - T_B$$

If, on balance, the expected value of litigation is positive, that is, if

$$E[L]_A + E[L]_B > 0,$$

then the parties will litigate rather than settle. If the expected value of the litigation is not positive, then the parties will reach an out-of-court settlement. In our example, litigation will occur provided that[25]

$$(1-P)[PV(C_A + N_AH) - PV(C_B + N_BH)] > T_A + T_B$$

The greater the inefficiency, as measured by the difference between the present value of the costs, the more likely the litigation. The stronger the precedent is, the smaller (1-P) will be, and the less likely

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22. Many individuals have little interest in legal rules beyond the present case. When A and B are corporations, such as insurance companies or labor unions, they may be interested in the present case for its own sake and for the impact that it has on precedent.

23. We assume that there are only two outcomes: A wins or B wins. The probability of B's winning measures the relative frequency of B's winning. The sum of probabilities must always add up to one. Thus, if P is the probability of B's winning, then 1-P is the probability of A's winning. *See, e.g.*, E. PARZEN, MODERN PROBABILITY THEORY AND ITS APPLICATIONS 17-28 (1960).

24. The notation $E[\bullet]$, adopted from the mathematical statistics literature, means the expected value of whatever is in the brackets.

25. This expression follows algebraically from the inequality
$E[V]_A + E[V]_B > 0.$

the parties are to litigate.[26] Finally, as the costs of litigation rise, settlement becomes more likely.

In summary, an inefficient rule is likely to be litigated when the precedent assigning liability to the highest cost party is not too strong, the inefficiency is substantial in monetary terms,[27] and the costs of litigation are not too high. The fact that a certain issue is continually relitigated means that judges are continually facing opportunities to change the precedent. When some judges rule in favor of A, precedent will begin to change in favor of A. The legal rule will become efficient and the issue will no longer be litigated because the expected gains to litigation are too small.

Following Rubin's initial insight, several useful extensions and refinements have furthered understanding of the common law's evolutionary tendency toward efficient rules. George Priest[28] argues that inefficient rules impose greater costs on those subject to them and thereby increase the stakes of the dispute over those that would exist with efficient rules. Since the stakes are higher, there is a greater likelihood that inefficient rules will lead to litigation simply because the expected returns to litigation are higher. Thus, inefficient rules are more likely to be reviewed. In other words, the set of cases available for judicial review will contain a disproportionately large number of inefficient rules. Those rules that are not contested will be predominantly efficient. When it is primarily inefficient rules that are litigated, there will be a tendency toward efficiency in the set of all rules.[29] Priest finds that

> [e]fficient rules "survive" in an evolutionary sense because they are less likely to be relitigated and thus less likely to be changed, regardless of the method of decision. Inefficient rules "perish" because they are more likely to be reviewed and review implies the chance of change whatever the method of judicial decision.[30]

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26. Priest & Klein, *supra* note 7, at 17-24 (arguing persuasively that litigation occurs most frequently when P and (1-P) are closer to one half. This is because each side has a good chance of winning).

27. If the rule were efficient, the condition for litigation would never be satisfied. Thus, there would be no litigation.

28. *Selection of Efficient Rules*, *supra* note 7, at 65. In an addendum to his paper, Rubin offers a critique of Priest's contribution. Rubin, *supra* note 6, at 62-63.

29. *Selection of Efficient Rules*, *supra* note 7, at 68-69. Priest shows that even if the judiciary decides the outcome randomly, as by flipping a coin, efficiency will emerge over time due to the opportunity set of cases that the judiciary considers. *Id.* at 68-69.

30. *Id.* at 72.

Thus, Priest's analysis suggests that the common law process incorporates a strong tendency toward efficient outcomes.

In Rubin's analysis, the probability of one party's winning was purely a function of precedent. John Goodman changed the analysis by making the probability of one party's winning a function of precedent and the legal expenses incurred by both parties.[31] In particular, he assumed that any increment in legal expenses incurred by a party in a legal dispute will lead to some increment in that party's probability of winning a favorable decision.[32] Furthermore, he reasoned that the party with the greater economic stake in the decision will have more incentive to influence the outcome through additional legal costs and, therefore, will enjoy a higher probability of winning.[33] Even if the existing precedent favors an inefficient solution, the inefficiency will impose sufficient costs upon the disadvantaged party such that over time a series of reversals will lead to an efficient precedent.[34]

The evolutionary models of the common law process rely upon the litigation of inefficient rules by parties interested in precedent. Movements toward efficiency are not advanced by the wisdom of common law judges,[35] but by private decisions to litigate. Rubin has observed that similar forces influence statutory law[36] since special interest groups may invest in lobbying efforts that are designed to influence legislation. The next section examines the antitrust statutes and their common law characteristics.

III. ANTITRUST AS COMMON LAW

Our fundamental antitrust statute is the Sherman Act of 1890.[37] While one may suppose that the statutory language sets out clearly

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31. Goodman, *supra* note 7, at 393. Goodman relied upon game theory in his analysis. On the mathematical theory of games, see J. FRIEDMAN, GAME THEORY WITH APPLICATIONS TO ECONOMICS (1986); R. LUCE & H. RAIFFA, GAMES AND DECISIONS (1957); M. SHUBIK, GAME THEORY IN THE SOCIAL SCIENCES (1982).

32. Goodman, *supra* note 7, at 393.

33. *Id.*

34. Blume & Rubinfeld, *supra* note 7, at 405, analyze the dynamically efficient path that the evolution to statistically efficient legal rules should follow. In essence, they examine the trade-off between *stare decisis* and a system involving rapid precedential changes. For some remarkable insights regarding the consequences of change, see Kaplow, *An Economic Analysis of Legal Transitions*, 99 HARV. L. REV. 509 (1986).

35. Priest & Klein, *supra* note 7, at 1. Priest has shown that efficiency will emerge even where the judicial decision process is random. *See also* Goodman, *supra* note 7, at 393 (Goodman's model can be used to incorporate judicial bias).

36. Rubin, *Common Law and Statute Law*, 11 J. LEGAL STUD. 205 (1982). For an earlier observation that this is the case, see G. TULLOCK, TRIALS ON TRIAL (1980).

37. 15 U.S.C. §§ 1-7 (1984).

what types of business behavior are permissible this is not the case. For example, section 1 provides in relevant part that "[e]very 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."[38] This is a vague and general principle that private efforts to eliminate competition are prohibited.[39] But the statute contains no definition of what constitutes a restraint of trade. Moreover, that term did not have a universally understood meaning in 1890. It is, in fact, a legal term of art that obtained its current meaning through a series of judicial decisions.[40] The Sherman Act thus provided a statutory foundation upon which the judiciary could develop a federal common law of trade restraints.[41]

From its enactment, commentators have criticized the Sherman Act for its vague language, elusive meaning, and ambiguous charges. Although its language incorporated terms like "restraint of trade," which were known to the common law, Congress did not simply codify the common law.[42] The use of common law terms and references imposed a new jurisdiction upon the federal courts.[43] In essence, the Sherman Act was little more than a legislative command to the judiciary to develop a federal common law of business practices as they relate to competition. According to Herbert Hovenkamp, "the Sherman Act can be regarded as 'enabling' legislation — an invitation to the federal courts to learn how business and markets work and formulate a set of rules that will make them work in socially efficient ways."[44] Thus, the federal common law courts would proceed as all common law courts proceed. They would employ the usual techniques of judicial reasoning, consider that reasoning along with decisions of other courts, and participate in the evolution of the law in the dynamic common law tradition.[45]

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38. *Id.* § 1.

39. W. LETWIN, LAW AND ECONOMIC POLICY IN AMERICA 3 (1965).

40. A. NEALE & D. GOYDER, THE ANTITRUST LAWS OF THE U.S.A. 22 (3d ed. 1980).

41. For the most recent criticism of judicial activism, see Arthur, *Farewell to the Sea of Doubt: Jettisoning the Constitutional Sherman Act*, 74 CALIF. L. REV. 263 (1986).

42. H. THORELLI, THE FEDERAL ANTITRUST LAWS 228-29 (1954) (believing the Sherman Act was meant to be a federal codification of the common law of England and the several states). Congress recognized, however, that the common law contained some ambiguities, which would become clearer with subsequent decisions. *Id.*

43. P. AREEDA, ANTITRUST ANALYSIS 49 (3 ed. 1981).

44. H. HOVENKAMP, ECONOMICS AND FEDERAL ANTITRUST LAW 52 (1985).

45. P. AREEDA, *supra* note 43, at 50. *See also* H. THORELL, *supra* note 42, at 228-29. Thorelli states that "in adopting the standard of the common law Congress expected the courts not only to apply a set of somewhat vague doctrines but also in doing so to make use of that 'certain technique of judicial reasoning' characteristic of common law courts." *Id.* at 228.

Although one often finds an obligatory reference to the common law antecedents of the Sherman Act, Hovenkamp points out that "[t]he common law may continue to guide antitrust decisionmaking, but in most cases the evidence is hard to find."[46] He goes on to explain that when one refers to the common law nature of antitrust, this usually "refers to the power of the courts to devise specific rules that interpret a broadly worded statute. The phrase is *not* generally used to suggest that federal antitrust law today follows the common law of restraints on trade."[47]

Since the content of the antitrust law is subject to common law interpretation and development, one should be able to test the evolutionary model of the common law by observing certain rules that have developed. The next two sections examine the evolution of two antitrust rules: horizontal price fixing and vertical maximum resale price fixing. Both practices are per se illegal, but one is efficient while the other is inefficient.

IV. PRICE FIXING AMONG HORIZONTAL COMPETITORS

From the beginning, the Supreme Court has held that price fixing is precisely the kind of restraint of trade that the Sherman Act was designed to prevent.[48] There have been a few diversions along the way,[49] but the central thrust of the case law has been to make price fixing a *per se* violation of section 1 of the Sherman Act.

The earliest cases grappled with the lack of legislative guidance. For example, Justice Peckham's *Trans-Missouri*[50] decision barred all restraints of trade. A group of eighteen railroads formed the Trans-Missouri Freight Association for the purpose of establishing and maintaining reasonable rates, rules, and regulations on all freight traffic.[51] The agreement covered all traffic subject to competition between any two or more members.[52] The Association decided that rate changes

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46. Hovenkamp, *Antitrust Policy After Chicago*, 84 MICH. L. REV. 214 (1985).

47. *Id.* at 214 n.7. *See also* Ekelund & Tollison, *Economic Regulation in Mercantile England: Heckscher Revisited*, 18 ECON. INQUIRY 567 (1980) ("Monopoly founded on custom or by Parliament was held to be legitimate under the common law, while monopoly founded by royal grant was not.").

48. A remarkable survey of the law and economics is provided by Bork, *The Rule of Reason and the Per Se Concept: Price Fixing and Market Division*, 74 YALE L.J. 775 (1965), 75 YALE L.J. 373 (1966) (this two-part article is valuable reading).

49. *See* Appalachian Coals, Inc. v. United States, 288 U.S. 344 (1933).

50. United States v. Trans-Missouri Freight Ass'n, 166 U.S. 290 (1897).

51. *Id.* at 292.

52. *Id.* at 293.

normally should be agreed upon at a monthly meeting.[53] In between meetings, independent rate cuts were permissible as necessary for "meeting competition."[54] The defendants argued that the collusive rates were reasonable and necessary to avoid ruinous competition.[55] Justice Peckham rejected both the reasonable rate argument[56] and the ruinous competition argument.[57] Then he turned to the literal wording of section 1 and held that there were no exceptions: all restraints of trade violated the Act.[58]

The following year, Justice Peckham faced a remarkably similar fact situation.[59] In this case, however, he clearly articulated that not all restraints of trade are illegal.[60] He found that only those restraints whose direct and immediate effect is to restrain interstate commerce are banned by the Sherman Act.[61] This, of course, applied to the railroads' price fixing agreement.

In *Addyston Pipe & Steel*, Judge Taft applied and refined Justice Peckham's reasoning.[62] The manufacturers of cast iron soil pipe in one section of the country formed an association to reduce competition among their members.[63] One important element of their scheme was to assign certain cities to specified producers.[64] Another important facet of the scheme was bid rigging, which is a variant of price fixing.[65] For business outside the allocated cities, the association selected the price to be charged to the customer.[66] Production responsibility was assigned to the association member that was willing to pay the largest amount into a bonus pool.[67] This bonus pool was then divided among

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53. *Id.* at 294.

54. *Id.* at 295.

55. *Id.* at 303.

56. *Id.* at 327-30.

57. *Id.* at 330-33.

58. *Id.* at 340.

59. United States v. Joint-Traffic Ass'n, 171 U.S. 505 (1898) (thirty-one railroad companies formed an association agreeing to fix and modify established rates).

60. *Id.* at 560-62. Restraints that are necessary to *promote* business are not illegal. The distinction involves ancillary restraints that are generally permissible under the common law. For an interesting examination, see Bork, *Ancillary Restraints and the Sherman Act*, 15 A.B.A. SEC. ANTITRUST L. PROC. 211 (1959).

61. 171 U.S. at 577.

62. United States v. Addyston Pipe & Steel Co., 85 F. 271 (6th Cir. 1898), *aff'd* 175 U.S. 211 (1899).

63. 85 F. at 273.

64. *Id.*

65. *Id.* at 274.

66. *Id.*

67. *Id.*

the members according to each firm's proportion of total productive capacity.[68] The winner would submit a bid equal to that selected by the association and the other firms would submit higher bids.[69]

The association offered several defenses. First, they argued that their intention was not to charge unreasonable prices, but to avoid ruinous competition.[70] Since ruinous competition injures the public, contracts to check ruinous competition should not be deemed illegal.[71] Judge Taft was unpersuaded that the courts should try to determine how much restraint should be tolerated to protect against ruinous competition.[72] Second, the defendants argued that the contributions to the bonus pool were deductions from reasonable prices to prevent each member from being too greedy.[73] The logic of this argument is not entirely clear but presumably it was a serious contention. Third, the fixed prices were not only reasonable, but they were also subject to competition from outsiders.[74] Finally, the association was not a monopoly since it involved only about thirty percent of the national capacity.[75] These arguments were designed to support the contention that the association lacked the power to fix prices, but Judge Taft quickly disposed of this disingenuous assertion. Taft finally ruled against the association's restraints.[76]

The rule against price fixing acquired more specificity in the *Trenton Potteries*[77] case, which involved twenty-three producers of vitreous pottery fixtures for bathrooms. These production firms accounted for over eighty percent of that business in the United States.[78] The defendants admitted they had combined to fix prices.[79] The issue was

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68. *Id.*

69. *Id.*

70. *Id.* at 279.

71. *Id.*

72. *Id.* at 283-84. The court stated:

It is true that there are some cases in which the courts . . . have set sail on a sea of doubt, and have assumed the power to say, in respect to contracts which have no other purpose and no other consideration on either side than the mutual restraint of the parties, how much restraint of competition is in the public interest, and how much is not.

Id.

73. *Id.* at 284.

74. *Id.* at 291.

75. *Id.* at 291-92.

76. *Id.* at 292. "The most cogent evidence that they had this power is the fact, everywhere apparent in the record that they exercised it." *Id.*

77. United States v. Trenton Potteries, 273 U.S. 392 (1927).

78. *Id.* at 394.

79. *Id.*

whether the trial court properly instructed the jury that "if it found the agreements or combinations complained of, it might return a verdict of guilty without regard to the reasonableness of the prices fixed." The Supreme Court took this opportunity to clarify its view on price fixing agreements:

> The aim and result of every price-fixing agreement, if effective, is the elimination of one form of competition. The power to fix prices, whether reasonably exercised or not, involves power to control the market and to fix arbitrary and unreasonable prices. The reasonable price fixed today may through economic and business changes become the unreasonable price of tomorrow. Once established, it may be maintained unchanged because of the absence of competition secured by the agreement for a price reasonable when fixed. Agreements which create such potential power may well be held to be in themselves unreasonable or unlawful restraints, without the necessity of minute inquiry whether a particular price is reasonable or unreasonable as fixed . . . .[80]

Thus, price fixing clearly became a *per se* violation of the Sherman Act without proof of economic effect. Price fixing as a business practice was deemed an inherently unreasonable restraint of trade.

The *Trenton Potteries* court's hostility toward price fixing [as a business practice] was reiterated, clarified, and extended by Justice Douglas in his *Socony-Vacuum*[81] decision, which is the controlling case today. During the 1920s and 1930s, so-called "hot oil" and "hot gasoline," that is oil and gasoline produced in violation of state prorationing laws, were sold at prices substantially below the prices of legally produced oil and gasoline.[82] In addition, there seemed to be considerable quantities of "distress" gasoline on the spot market.[83] The distress gasoline was due to the inadequate storage facilities of independent refiners who could not sell all of their output through normal outlets.[84] Distress sales, of course, were made at substantially reduced prices on the spot market.[85]

The major oil companies were vitally interested in spot market prices because their contracts with jobbers involved formula prices

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80. *Id.* at 397.
81. United States v. Socony-Vacuum Oil Co., 310 U.S. 150 (1940).
82. *Id.* at 171.
83. *Id.*
84. *Id.*
85. *Id.*

that depended on the spot market price.[86] Alarmed at the deterioration in spot market prices, the major oil companies formed a Tank Car Stabilization Committee to deal with the problem.[87] The Committee's plan had each major oil company select one or more of the independent refiners with distress gasoline as its "dancing partner."[88] Each major company was responsible for buying the distress supply of its dancing partner.[89] By eliminating the distress supply from the spot market, the spot price was higher than otherwise would have been the case and, therefore, the prices paid by jobbers to the major oil companies were also higher.[90] Thus, by acting collusively to purchase a very small portion of the total supply, the majors had a substantial effect on their total sales revenue.[91]

Justice Douglas reviewed the Supreme Court decisions dealing with section 1 and found no relief for the major oil companies:

> Thus for over forty years this Court has consistently and without deviation adhered to the principle that price-fixing agreements are unlawful per se under the Sherman Act and that no showing of so-called competitive abuses or evils which those agreements were designed to eliminate or alleviate may be interposed as a defense. . . .[92]

The issue then turned to whether the per se rule of *Trenton Potteries* applied to *Socony-Vacuum*. In *Socony-Vacuum*, the major oil companies had not agreed on uniform and inflexible prices as was the case in *Trenton Potteries*. The oil companies argued that price fixing was illegal per se only where the conspirators set uniform and inflexible prices.[93] Douglas disposed of this distinction as irrelevant. Since the program had the purpose and effect of raising prices, it was a violation of section 1.

> Any combination which tampers with price structures is engaged in an unlawful activity. Congress has not left with us the determination of whether or not particular price-fixing schemes are wise or unwise, healthy or destructive. It has

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86. *Id.* at 166.
87. *Id.* at 178.
88. *Id.* at 179.
89. *Id.*
90. *Id.*
91. *Id.* at 194-95.
92. *Id.* at 218.
93. *Id.* at 218.

not permitted the age-old cry of ruinous competition and
competitive evils to be a defense to price-fixing conspiracies.
It has no more allowed genuine or fancied competitive abuses
as a legal justification for such schemes than it has the good
intentions of the members of the combination.[94]

To add even further clarity, Douglas wrote: "Under the Sherman Act
a combination formed for the purpose and with the effect of raising,
depressing, fixing, pegging, or stabilizing the price of a commodity in
interstate or foreign commerce is illegal per se."[95] This remains the
rule of law. Every case that involves a question of price fixing cites
or quotes Justice Douglas's *Socony-Vacuum* opinion with obvious ap-
proval.

A.   *Economic Evaluation of the Price Fixing Rule*

Horizontal price fixing is thus illegal *per se*. This is an economically
efficient rule. Figure 1, which compares the competitive price and
output with the collusive price and output, shows the rule's efficiency.
Consumer demand for the product in question is represented by the
negatively sloped line labeled D. Assuming the industry is small com-
pared to the size of the input markets, industry adjustments in output
will leave the input prices unaffected. Consequently, the entry and
exit of separate profit-seeking firms will yield a horizontal long-run
supply function, like the one shown in Figure 1 as LRS. Competition
leads to the production and sale of Q_C units of output, which will be
sold for the competitive price of P_C. The sales revenue ($P_C \cdot Q_C$) will
be just large enough to cover all of the costs of producing and distribut-
ing Q_C units of output, including a normal return on the investment
in each competitive firm. Furthermore, price is such that any consumer
who is willing to pay the cost to society of an additional unit of output
can buy that extra output. Those who value the product more than
the competitive price enjoy consumer surplus.[96] In Figure 1, the trian-
gular area $ABCP_C$ represents the consumer surplus associated with
the competitive price and output.[97]

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94.   *Id.* at 221.

95.   *Id.* at 223.

96.   The concept of consumer surplus can be traced to DUPUIT, *On the Measurement of the
Utility of Public Works* (1844), *translated and reprinted in* READINGS IN WELFARE
ECONOMICS 255-83 (K. Arrow & T. Scitovsky 1969).

97.   This measure is a reasonable approximation of the theoretically correct measure of
consumer surplus lost. *See* Willig, *Consumer's Surplus Without Apology*, 66 AM. ECON. REV.
589 (1976).

FIGURE 1

Price and Cost
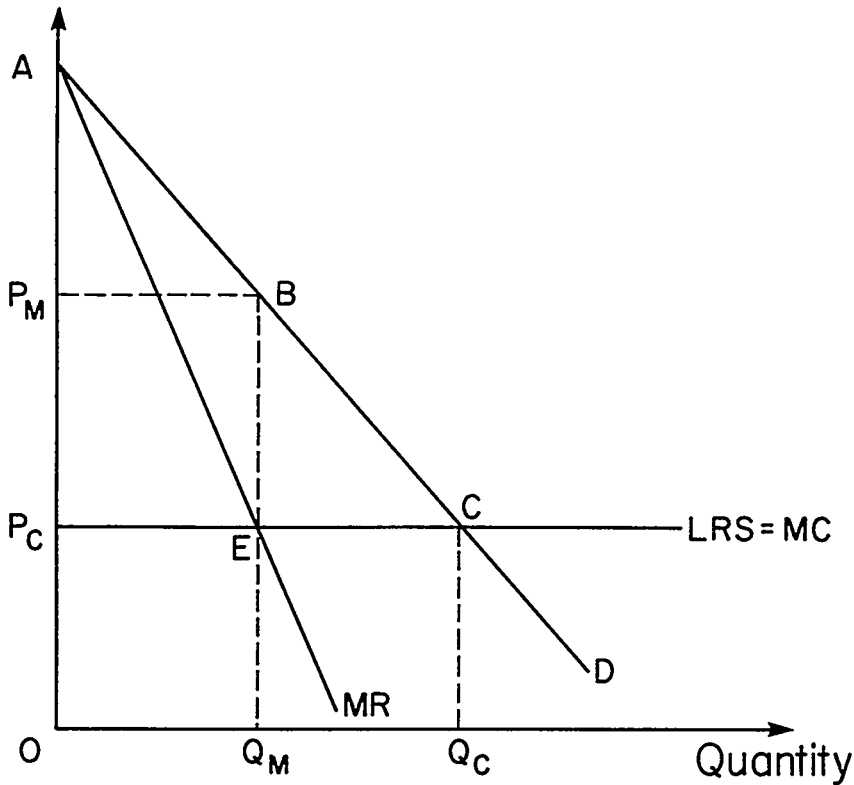
These results may be contrasted with those that flow from price fixing. If the formerly competitive firms agree to refrain from price competition, they can benefit themselves. If the firms are sufficiently cooperative, the colluders may select the joint profit maximizing price and thereby collectively behave like a monopolist.[98] In Figure 1, this requires producing output Q_M, where marginal revenue equals marginal cost[99] and pricing that output at P_M. The colluders will experience a profit equal to the rectangular area $P_M BEP_C$. Those consumers who continue to buy the product will enjoy consumer surplus equal to the triangular area ABP_M. The sum of consumer surplus and producers' profits, areas ABP_M and $P_M BEP_C$, is less than the consumer surplus associated with competitive pricing. Those consumers distributed along

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98. For a detailed theoretical examination of price fixing, see R. BLAIR & D. KASERMAN, ANTITRUST ECONOMICS 132-53 (1985).

99. For the group of formerly competitive firms, the long run supply (LRS) now serves as the marginal cost curve.

the demand curve between B and C are willing to pay more than the cost to society of producing those units of output between Q_M and Q_C. But the colluding firms refuse to produce those units of output. They will only produce Q_M because that is the output that maximizes their profit.

An interesting result has occurred here. In order to transfer consumer surplus of $P_M BEP_C$ from consumers to the producers, consumer surplus is reduced by $P_M BEP_C$ *plus* the triangle BCE. The latter area has been termed a deadweight social welfare loss.[100] Thus, horizontal price fixing is inefficient in the sense that social welfare is reduced, that is, consumers lose more than the price fixers gain. Accordingly, an antitrust rule that prohibits price fixing will tend to prevent these reductions in social welfare. Such a rule is efficient.[101]

B. *Litigation v. Settlement of Horizontal Price Fixing Cases*

Following the literature on evolutionary models,[102] one may examine the condition that will determine whether a horizontal price fixing case will be litigated or settled. Section 4 of the Clayton Act[103] provides that "[a]ny person who shall be injured in his business or property by reason of anything forbidden in the antitrust laws may sue therefor . . . and shall recover threefold the damages by him sustained, and the cost of suit . . . ." For the consumers who have been victimized by price fixing, the Supreme Court has decided that they fall within the protection of section 4.[104] Therefore, the victimized consumers are entitled to sue for three times the overcharge plus their attorney fees.[105]

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100. The welfare loss triangle is developed from a famous article by Hotelling, *The General Welfare in Relation to Problems of Taxation and of Railway and Utility Rates*, 6 ECONOMETRICA 242 (1938).

101. Even the most ardent critics of antitrust policy generally approve of the rule against price fixing. *See* R. BORK, *supra* note 11, at 263-79; R. POSNER, ANTITRUST LAW 8-22 (1976).

102. *See supra* notes 6-7.

103. 15 U.S.C. § 15 (1984).

104. In Reiter v. Sonotone Corp., 442 U.S. 330, 337-45 (1979), an individual sought treble damages from five manufacturers of hearing aids. They argued that the "business or property" language in § 4 refers to "business activity or property related to one's business." *Id.* at 330. The Supreme Court rejected this strained construction and ruled that "[a] consumer not engaged in a 'business' enterprise, but rather acquiring goods or services for personal use, is injured in 'property' when the price of those goods or services is artificially inflated by reason of the anticompetitive conduct complained of." *Id.* at 339.

105. As Figure 1 shows, the effect of the price fixing is to raise price from the competitive level (P_C) to the monopoly level (P_M). Thus, the injury to the consumer's property is measured by the overcharge ($P_M - P_C$) on the items sold.

For a victim of the price fixing conspiracy, the expected value of litigation, $E[L]_C$ will be equal to the probability of their winning times treble damages plus the present value of the overcharges that presumably will not occur in the future minus the expected costs of litigation. In the formula

$$E[L]_C = P[3(0/C) + PV(0/C)] - (1-P)(C_C)$$

P denotes the probability of winning the case in court, (1-P) is the probability of losing, O/C represents the total overcharge due to collusive pricing, PV(.) designates present value, and C_C represents the cost of litigation to the consumer.

The price conspirators who have been illegally overcharging their customers have an expected value of litigation, $E[L]_P$, equal to the probability of their losing times the treble damages that they will have to pay, the present value of the overcharges that they will no longer be able to collect, and the consumers' litigation costs plus the probability of their winning times the present value of the future overcharges minus their costs of litigation.

$$E[L]_P = -P[3(0/C) + PV(0/C) + C_C] + (1-P)[PV(0/C) - C_P$$

where C_P represents the producers' costs of litigation.

Litigation will occur if the sum of the expected values of litigation is positive, that is, if

$$E[L]_C + E[L]_P > 0.$$

If this is not true, then the parties will settle rather than litigate. In that case, the expected cost to the price fixers exceeds the expected gain to the victims.[106] In notational form, settlement will occur if $-E[L]_P > E[L]_C$, that is, if

$$P[3(0/C) + PV(0/C) + C_C] - (1-P)[PV(0/C)] + C_P >$$
$$P[3(0/C) + PV(0/C)] - (1-P)C_C$$

Algebraic rearrangement yields the following simplified condition for settlement:

$$(1-P)[PV(0/C)] < C_C + C_P$$

That is, if the probability of the price fixers' winning times the present value of future overcharges is less than the total private costs of

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106. Rubin, *supra* note 6, at 54.

litigation,[107] then the case will be settled. If this inequality is reversed, litigating to change the precedent will be profitable.

The more firmly entrenched the existing precedent is in favoring the victims, the larger the probability of their prevailing at trial, and the smaller the probability of litigation. This follows from the fact that as P increases (1-P) necessarily decreases. The costs of litigation also come into play: the greater the costs of litigation, the more likely settlement will occur.[108] In the case of horizontal price fixing, the *per se* rule suggests that P is much larger than 0.5 and, in fact, approaches 1.0. As a result, the left side of the inequality is very small and little litigation should ensue.[109]

C. *Alternatives to Horizontal Price Fixing*

In a classic price fixing cartel, the ostensible competitors agree on a common price to charge. They also agree on the quantities that each is to produce, and other terms of exchange such as delivery terms, credit terms, and product quality.

There are, however, alternative means to the same or similar non-competitive end. Given the sound social reason for judicial hostility toward horizontal price fixing, it is of some interest to see how economically equivalent business practices are handled. For the most part, they receive the same harsh treatment as price fixing.

In competitive bids for business, bid rigging involves an agreement on which firm will win. The agreed upon losers submit bids above that submitted by the winner. This obviously is an effort to avoid competition with the result that prices will be higher. Thus, bid rigging is closely related to price fixing and constitutes a per se violation of section 1.[110]

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107. The private costs do not include society's expenditure on resources to provide a judicial system.

108. Salop & White, *Treble Damages Reform: Implications of the Georgetown Project*, 55 ANTITRUST L.J. 73, 76 (1986). Reports that "attorney's fees for both sides in the typical case averaged in the range of $200,000 to $280,000." *Id.*

109. This is not to say that one should not expect much price fixing. If the deterrent effect of the antitrust law and the associated penalties are not strong enough, one would expect price fixing to be a common occurrence. Once discovered, however, the resulting suit should be resolved without litigation if (1-P) is sufficiently close to zero. For analysis of the deterrent effects of antitrust penalties, see Blair, *A Suggestion for Improved Antitrust Enforcement*, 30 ANTITRUST BULL. 433 (1985) (analysis of the deterrent effects of antitrust penalties).

110. The prohibition against bid rigging can be traced to the decision in National Soc'y of Professional Eng'rs v. United States, 435 U.S. 679 (1978) (collaboration to avoid competitive bidding is also illegal); Addyston Pipe & Steel Co. v. United States, 175 U.S. 211 (1899).

One of the problems confronting a price fixing cartel involves cheating:[111] a cartel member may try to get even more profit by expanding its output beyond its quota. This will require a price reduction in order to sell the higher volume.[112] One cheater will do little damage to the agreement, but each firm has an incentive to cheat, which undermines the stability of the cartel. One way of avoiding this problem is to share the markets on a geographic basis. In general, this will not lead to quite as much total profit because the territorial assignments cannot be designed as precisely as quotas assigned to cartel members. It does, however, create a series of monopolies in the assigned territories,[113] thereby eliminating any incentive to cheat by reducing price. Clearly, this will lead to monopoly prices as depicted in Figure 1. Thus, market division can be a very good substitute for price fixing. This practice also invokes judicial hostility.[114]

Putative competitors sometimes agree on terms that amount to indirect price increases. For example, a group of rival firms may agree to withdraw the extension of free credit for thirty days. Since the monetary value of interest-free credit is obvious, its removal amounts to a price increase. When the decision to remove interest-free credit is not unilateral it violates the antitrust laws.[115] Similarly, an agreement to reduce the quality of a product without a corresponding price reduction amounts to a price increase. This, too, is illegal.[116] Finally, information exchanges may have an undesirable side effect on price levels. Accordingly, such exchanges violate section 1.[117]

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111. *See* R. BLAIR & D. KASERMAN, *supra* note 98, at 141-45.

112. This assumes that the demand curve has a negative slope and thus requires a price reduction to increase the quantity sold.

113. *See* R. BLAIR & D. KASERMAN, *supra* note 98, at 165-69.

114. Antecedents for the current hostility can be found in *Addyston Pipe & Steel,* 175 U.S. at 211. United States v. Sealy, Inc., 388 U.S. 350 (1967) and Timken Roller Bearing Co. v. United States, 341 U.S. 593 (1951), both display continued suspicion of market division where price is apt to be influenced. Finally, United States v. Topco Assocs., Inc., 405 U.S. 596 (1972), ruled that market division even without substantial market power or some evidence of price fixing was illegal *per se.* For a critique of *Sealy* and *Topco,* see R. BORK, *supra* note 11, at 270-79.

115. Catalano v. Target Sales, 446 U.S. 643 (1980).

116. National Macaroni Mfr's Ass'n v. Federal Trade Comm'n, 345 F.2d 421 (7th Cir. 1965). Agreements on price that are allegedly necessary to protect against quality deterioration are questionable. For example, the use of minimum fee schedules by professionals prevents price competition below the minimum. Although it has been claimed that fees below the minimum may impair quality, such agreements are illegal. Goldfarb v. Virginia State Bar, 421 U.S. 773 (1975).

117. The hostility to information exchanges is traceable to American Column & Lumber Co. v. United States, 357 U.S. 377 (1921). More recent decisions confirming this attitude are

A boycott or concerted refusal to deal removes some rivals from the competitive fray. A boycott reduces supply and causes prices to increase.[118] When the purpose and effect of a boycott is to raise prices above the competitive level, it is illegal per se.[119]

Congress provided a vague, statutory prohibition of restraints of trade in section 1 of the Sherman Act. Early decisions established the per se illegality of price fixing. Given the unambiguous prohibition of price fixing, subsequent litigation has not focused on efforts to change this rule. Litigation has instead involved questions of characterizing other business practices that amount to price fixing in purpose and effect.[120] The antitrust law has evolved in the common law tradition and identified various business practices that should be proscribed due to their influence on prices.[121]

V. MAXIMUM RESALE PRICE FIXING

The Supreme Court's treatment of maximum resale price fixing is rather brief and not particularly insightful. The earliest mention of

provided by United States v. United States Gypsum Co., 438 U.S. 422 (1978); United States v. Container Corp. of Am., 393 U.S. 333 (1969). For an interesting critique and analysis of the antitrust treatment of information exchanges, see Posner, *Antitrust and Information: Reflections on the* Gypsum *and* Engineers *Decisions,* 67 GEO. L.J. 1187 (1979).

118. *See* R. BLAIR & D. KASERMAN, *supra* note 98, at 174-77 (analysis of impact of boycotts on price).

119. *See* Klor's Inc. v. Broadway Hale Stores, Inc., 359 U.S. 207 (1959). *See also* R. POSNER, *supra* note 101, at 207-10 (Judge Posner contends that boycotts are illegal *per se* when used to enforce a business practice that violates substantive antitrust policy).

120. Some litigation, of course, involves the fact of price fixing. There are instances where one may suspect that price fixing has occurred, but because of its clandestine nature no "smoking gun" evidence exists. In such instances, litigation may be necessary to establish the fact of price fixing.

121. The most serious failure in antitrust law evolution is the area of tacit agreements. Some markets may involve so few rivals that "agreement" may be reached without any overt communication. Tacit understandings are thought to be reached through signals. For an early contribution, see E. CHAMBERLIN, THE THEORY OF MONOPOLISTIC COMPETITION 30-55 (8th ed. 1962). *See also* Posner, *Oligopoly and the Antitrust Laws: A Suggested Approach,* 21 STAN. L. REV. 1562 (1969) (tacit agreements between competitors is within the reach of the antitrust laws). *But see* Turner, *The Definition of Agreement Under the Sherman Act: Conscious Parallelism and Refusals to Deal,* 75 HARV. L. REV. 655 (1962) (although such behavior is clearly noncompetitive, it is nevertheless out of reach of the antitrust laws). There is a continuing or renewed interest in this problem. For a sampling of the recent literature, see Clark, *Price Fixing Without Collusion: An Antitrust Analysis of Facilitating Practices After* Ethyl Corp., 1983 WIS. L. REV. 887; Elzinga, *New Developments on the Cartel Front,* 29 ANTITRUST BULL. 3 (1984); Grether & Plott, *The Effects of Market Practices in Oligopolistic Markets: An Experimental Examination of the* Ethyl *Case,* 22 ECON. INQUIRY 479 (1984); Hay, *Oligopoly, Shared Monopoly, and Antitrust Law,* 67 CORNELL L. REV. 439 (1982); Spence, *Tacit Co-ordination and Imperfect Information,* 11 CANADIAN J. ECON. 490 (1978).

fixing maximum prices is *Socony-Vacuum*, which was a horizontal price fixing case.[122] In clarifying the Court's attitude toward cases that have an impact upon price, Justice Douglas wrote "[u]nder the Sherman Act a combination formed for the purpose and with the effect of raising, depressing, fixing, pegging, or stabilizing the price of a commodity in interstate or foreign commerce is illegal per se."[123] For over ten years, the language regarding "depressing" prices remained nothing more than dictum. In 1951, however, the Supreme Court handed down an important decision in the *Kiefer-Stewart*[124] case.

Kiefer-Stewart was an Indiana firm that had a wholesale liquor business.[125] The defendants, Seagram and Calvert, were producers of liquor that was sold to wholesalers in Indiana.[126] Seagram and Calvert agreed not to sell their products to any wholesaler that refused to respect the maximum resale prices that they set.[127] Since Kiefer-Stewart refused to respect these maximum resale prices, it was denied access to Seagram and Calvert products.[128] As a result, Kiefer-Stewart was injured by lost profits on lost sales.[129] Seagram and Calvert claimed that the decision to fix maximum resale prices was motivated by the horizontal price fixing conspiracy among its wholesale customers and presented evidence to support this contention.[130] In spite of this evidence, the Court ruled in favor of Kiefer-Stewart and explicitly reaffirmed the dictum in *Socony-Vacuum* on the grounds that agreements to fix maximum resale prices "cripple the freedom of traders and thereby restrain their ability to sell in accordance with their own judgment."[131]

Following the logic developed in *Kiefer-Stewart*, the Court held a maximum price fixing scheme to be illegal in its *Albrecht* decision.[132] Due to the special nature of the home delivery of newspapers, the publisher of the *Globe-Democrat*, the Herald Company, assigned exclusive territories to its carriers.[133] Within each exclusive territory, the

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

123. *Id.* at 223.

124. Kiefer-Stewart Co. v. Joseph E. Seagram & Sons, 340 U.S. 211 (1951).

125. *Id.* at 212.

126. *Id.*

127. *Id.*

128. *Id.* at 213.

129. *Id.*

130. *Id.* at 214. "The alleged illegal conduct of petitioner, however, could not legalize the unlawful combination by respondents nor immunize them against liability to those they injured." *Id.*

131. *Id.* at 213.

132. Albrecht v. Herald Co., 390 U.S. 145 (1968).

133. *Id.* at 147.

assigned distributor had a monopoly on home delivery, which assured that the costs incurred in providing home delivery service would be minimized because duplicate effort was eliminated.[134] In order to prevent each distributor from exploiting its monopoly power, the publisher imposed maximum resale prices.[135] These delivery routes were subject to termination if the carrier charged a price in excess of the price advertised by the *Globe-Democrat*.[136] Albrecht was one of the *Globe-Democrat's* distributors and, although he was aware of the maximum price policy, he ignored it and charged a higher price.[137] Following the complaints of several customers, the publisher warned Albrecht that he was jeopardizing his distributorship.[138] When Albrecht continued to overcharge his customers, the publisher took action against him by first competing directly and later by substituting another distributor for part of Albrecht's territory.[139] When Albrecht sued the publisher and others for injuries suffered, the distributorship was terminated and he was forced to sell it.[140]

On appeal, the Supreme Court explicitly approved its earlier decision in *Kiefer-Stewart*, which, of course, defeated the Herald Company as the Court found that "schemes to fix maximum prices, by substituting the perhaps erroneous judgment of a seller for the forces of the competitive market, may severely intrude upon the ability of buyers to compete and survive in that market."[141] Although the Court was aware that competitive forces may not operate in exclusive territories, it ruled that fixing maximum prices violated section 1 of the Sherman Act.[142]

A. *Economic Evaluation of the* Albrecht *Rule*

The rule of per se illegality for fixing maximum resale prices is inefficient in an economic sense. To demonstrate this, consider Figure

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134. *Id.*

135. *Id.*

136. *Id.*

137. *Id.*

138. *Id.*

139. *Id.*

140. Albrecht sold his route for $12,000, which was $1,000 more than he had paid for it. The substituted distributor, Kroner, sold his customers within Albrecht's territory for $3,600 to the party who had purchased Albrecht's route. *Id.* at 148 n.4.

141. *Id.* at 152.

142. *Id.* at 153. The majority found in favor of Albrecht in spite of a particularly cogent dissent by Justice Harlan that spelled out the economic rationale for fixing maximum resale prices. It is hard to believe today that Justice Harlan's logic was not persuasive. *Id.* at 156.

FIGURE 2

Price and Cost
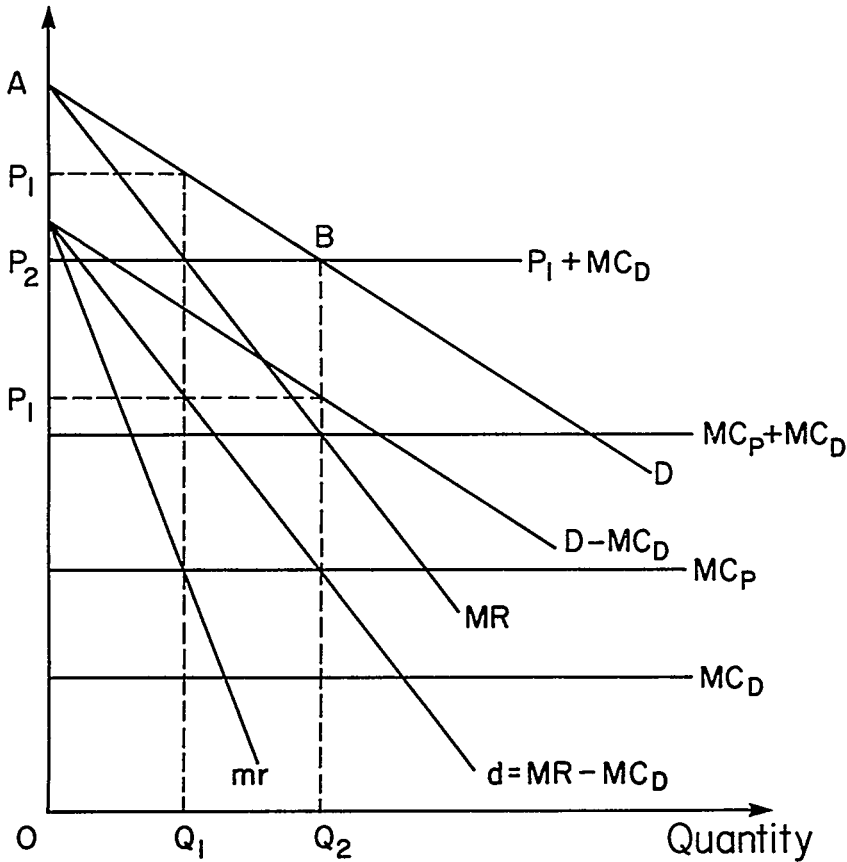
2, which develops the motivation for maximum price fixing and reveals the social and private costs of the *Albrecht* rule.[143] Maximum price fixing usually arises when monopoly power is present at both the production stage and the distribution stage.

Suppose that ABC, Inc. has a legal patent monopoly on the widget. XYZ, Inc. distributes the widget for ABC. Assume that scale economies in distribution are such that the market will only support a single distributor. As a result, XYZ has a monopoly on the distribution of widgets. Initially, we analyze the situation in which the distributor remains free to exercise its monopoly power in distribution,

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143.   *See* R. BLAIR & D. KASERMAN, *supra* note 98, at 341-47. The Supreme Court majority in *Albrecht* had the benefit of the nearly flawless analysis provided in Justice Harlan's dissent showing the inefficiency of the *per se* rule.

that is, the manufacturer does not establish maximum resale prices. The demand for widgets facing the distributor is represented by D in Figure 2, and the associated marginal revenue is represented by MR. In order to determine the retail price and output of widgets, we have to know the wholesale price charged to the distributor, which requires knowing the derived demand for widgets facing the manufacturer. Since the distributor is a natural monopolist, it will maximize its profits by equating its marginal revenue to its marginal cost. Marginal revenue is the sum of the price charged by the producer for its widgets (p) plus the marginal cost of distribution (MC_D). In the absence of resale prices, optimality requires that $MR = p - MC_D$ or alternatively $p = MR - MC_D$. Thus, the distributor will select its profit maximizing output by equating the price it has to pay to the manufacturer (p) with its net marginal revenue. Net marginal revenue is $MR - MC_D$. Consequently, when the distributor has a monopoly, the producer's derived demand is $d = MR - MC_D$.

The producer exploits its monopoly power by selecting the price and output where its marginal cost (MC_P) and marginal revenue (mr) are equal. The producer will manufacture Q_1 widgets for this market, charge a price of p_1 per widget to the distributor, and earn profits of $(p_1 - MC_P)Q_1$.

The distributor will have a marginal cost equal to the price it pays to the manufacturer (p_1) plus the marginal cost of distributing the widgets (MC_D). The distributor maximizes its profit by equating this marginal cost ($p_1 + MC_D$) to its marginal revenue (MR). Consequently, the distributor will sell Q_1 widgets to final customers at a retail price of P_1. The distributor now earns profits of $(P_1 - (p_1 + MC_D))Q_1$.

B. *Impact of Maximum Resale Prices*

The distributor clearly benefits from its status as a natural monopolist of widgets. This benefit comes at the expense of the producer and the distributor's customers. One way for the producer to reverse this flow of benefits is to impose maximum resale prices upon the distributor. It can enforce such a contract by terminating sales to dealers who fail to comply and forcing them out of business.

The producer maximizes profits by preventing the distributor from behaving like a natural monopolist. In other words, the producer wants the distributor to behave as though it were a competitive firm. If the distributor behaved competitively, it would operate where its marginal cost equaled demand. Since its marginal cost is the price it pays for the widgets (p) plus the marginal cost of distribution (MC_D), the curve labeled $D - MC_D$ would be the derived demand for the producer's

output with competition in distribution.[144] The marginal revenue curve for the derived demand, $D - MC_D$, is labeled d and equals $MR - MC_D$. Under competitive distribution, the producer will equate its marginal revenue, $MR - MC_D$, to its marginal cost, MC_P, and manufacture Q_2 widgets in order to maximize its profit. It will charge the distributor a wholesale price of p_1 for this output, and the distributor will in turn charge final customers a retail price of P_2. The manufacturer's profit in this situation is given by the area $(p_1 - MC_P)Q_2$. In contrast, the distributor earns zero economic profit since the price it pays for the widget plus the marginal cost of performing the distribution function equals the retail price, $(p_1 + MC_D = P_2)$.

The identical outcome can be achieved by setting maximum resale prices. In Figure 2, if the producer establishes a maximum resale price of P_2, the distributor's marginal revenue curve becomes equal to P_2 for all outputs between zero and Q_2. For outputs greater than Q_2, the distributor's marginal revenue curve drops to MR. Thus, a maximum resale price of P_2 will prevent the distributor from restricting output below Q_2 because the distributor's marginal cost will equal the effective marginal revenue at Q_2 units of output. Fixing maximum resale prices yields the price and quantity that would result from competition at the distribution stage. For the retail customer, price is lower and a larger quantity is consumed when the manufacturer sets maximum resale prices. This, of course, benefits the consumer. In addition, maximum resale prices increase the manufacturer's profits to the level that would be realized if the distribution stage were competitive. The manufacturer is motivated by this increased profit, and not by some concern for the welfare of the retail customers. Nonetheless, the producer's imposition of maximum resale prices enhances consumer welfare.

Maximum resale price fixing is invariably used by a supplier to prevent distributors from exploiting their market power. In *Kiefer-Stewart*, ostensible horizontal competitors in wholesale distribution were allegedly fixing *minimum* prices. The wholesalers were conspiring to *raise* prices. The concerted action of Seagram and Calvert may prevent the inevitable decline in sales that accompanies an increase in price. Although wholesale distributors alone may have had little monopoly power, collectively they were trying to emulate the price

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144. Competitive behavior would result in $D = p + MC_D$. Thus, the manufacturer faces a derived demand of $p = D - MC_D$.

and output that a monopolist would select. Fixing maximum prices thwarts these intentions of horizontal price fixers at the distribution stage.

C. *Inefficiency of the* Albrecht *Rule*

By prohibiting maximum resale price fixing, the *Albrecht* rule permits a restriction of output from Q_2 to Q_1 and an increase in the retail price from P_2 to P_1. At the price and output of P_2 and Q_2, respectively, total profit — all of which goes to the producer — equals $(P_2 - (MC_P + MC_D))Q_2$. When the distributor raises the retail price to P_1, it increases its profits from zero to $(P_1 - P_2)Q_1$. At the same time, the producer's profits fall by more than the increase in the distributor's profits.[145] Thus, the total profits with the *Albrecht* rule are lower than they would be if maximum price fixing were allowed. The reduction in the total profits earned is a measure of the inefficiency of the *Albrecht* rule. This inefficiency provides an incentive for litigation.[146]

D. *Litigation v. Settlement of* Albrecht *Rule Cases*

Since the *Albrecht* rule is inefficient, the evolutionary models suggest that upstream firms may be interested in pursuing a change in the rule through repeated litigation.[147] But engaging in litigation is a risky activity that can be avoided by settlement. Whether settlement is more likely than litigation depends upon the expected costs and benefits of litigation to the parties.

When an upstream firm imposes maximum resale prices on a downstream firm, it prevents that downstream firm from earning excess profits. Accordingly, the downstream firm will be suing for three times

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145. The decrease in the producer's profits equals $(P_2 - (MC_P + MC_D))(Q_2 - Q_1)$. In Figure 2, $(Q_2 - Q_1) = Q_1$. Thus, the producer loses profits of $(P_2 - (MC_P + MC_D))Q_1$. Figure 2 shows that $(P_1 - P_2)Q_1$ is less than $(P_2 - (MC_P + MC_D))Q_1$. A more rigorous proof is provided in R. BLAIR & D. KASERMAN, LAW AND ECONOMICS OF VERTICAL INTEGRATION AND CONTROL 33-35 (1983).

146. The *Albrecht* rule also imposes social welfare losses. When the distributor raises the home delivered price to P_1, it imposes a deadweight social welfare loss of $(\frac{1}{2})(P_1 - P_2)(Q_2 - Q_1)$. Thus, the *Albrecht* rule prohibits a pricing strategy that would prevent a reduction in social welfare. On these grounds, the *Albrecht* rule is socially inefficient.

147. The rule against fixing maximum prices persists. Although the practice may occur in any situation where successive market power exists, most of the recent cases involve newspaper distribution, as in Newberry v. Washington Post Co., 438 F. Supp. 470 (D.D.C. 1977), or gasoline dealers as in Yentsch v. Texaco, 630 F.2d 46 (2d Cir. 1980). In these cases, the lower courts have endorsed the unambiguous holding of the Supreme Court. Consequently, the vitality of the rule enunciated in *Albrecht* continues despite its questionable economic logic.

the profits denied by the maximum resale price fixing (r_D), plus its costs of litigation (C_D).[148] If the upstream firm wins, it will still have to pay its own costs of litigation (C_U), but it will avoid a continued reduction in its profits.[149] This reduction is some multiple of the downstream firm's profits: br_D where $b > 1$. Thus, the upstream firm stands to lose three times r_D plus C_D. If it goes to trial and wins, it will save the present value of the profit reduction ($PV(br_D)$). Since the upstream firm must pay its own litigation costs in any event, the expected value of litigation to the upstream firm is

$$E[L]_U = P[-3r_D - C_D - C_U)] + (1-P) [-C_U + PV(br_D)]$$

where P is the probability of the downstream firm's winning, and (1-P) is the probability of the upstream firm's winning.

If the downstream firm sues and wins, it will recover three times the excess profit denied by the maximum resale price fixing. If it loses, it will have to pay its own cost of litigation[150] and give up r_D in the future. Consequently, the expected value of litigation for the downstream firm is

$$E[L]_D = P[3r_D] + (1-P) [-PV(r_D) - C_D]$$

The condition for litigation can be found by comparing the expected gains and losses of going to court. One expects a case to be litigated if the expected loss to the upstream firm is less than the expected gain to the downstream firm, that is, if $-E[L]_U < E[L]_D$:

$$P[3r_D + C_D + C_U] - (1-P) [C_U + PV(br_D)] <$$

$$P[3r_D] + (1-P) [-C_D - PV(r_D)]$$

After some algebraic rearrangement, one finds that a maximum price fixing case will be litigated in an effort to overturn the *Albrecht* rule if

$$(1-P)[PV(br_D) - PV(r_D)] > C_D + C_U$$

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148. Section 4 of the Clayton Act provides in relevant part that "[a]ny person who shall be injured in his business or property by reason of anything forbidden in the antitrust laws may sue therefor . . . and shall recover threefold the damages by him sustained, and the cost of suit, including a reasonable attorney's fee . . . ." 15 U.S.C. § 15 (1980).

149. Assume now that the upstream firm has only two options: to engage in maximum price fixing or not to engage in it.

150. This abstracts from the usual practice of the plaintiff's having a contingent fee arrangement with an attorney.

In this condition for litigation, $PV(br_D) - PV(r_D)$ is a measure of the inefficiency of the *Albrecht* rule, while (1-P) is the probability of the upstream firm's winning the suit. Thus, the upstream firm will litigate the inefficient *Albrecht* rule if the probability of its winning times the inefficiency of the rule exceeds the sum of the litigation costs. Otherwise, the dispute will be settled.

We have seen that fixing maximum resale prices is illegal per se and, as a result, precedent strongly favors the downstream firm. This suggests that (1-P) is relatively small although it is still positive. For $b > 1$, the second bracketed term is positive and, therefore, the left-hand side is positive although it may be quite small. Since the sum of the litigation costs is necessarily positive, and may be quite substantial in antitrust cases, the condition for litigation may not be satisfied. In fact, this appears to be the case because there are very few maximum price fixing cases actually litigated. Only two cases have reached the Supreme Court: *Kiefer-Stewart* in 1951 and *Albrecht* in 1968.[151] Moreover, very few lower court cases have been tried.[152] Since the *Albrecht* rule is inefficient, this is an unfortunate result because the evolutionary process cannot operate to reverse the inefficienty.

One reason that there may not be much future litigation is that plaintiffs may experience serious difficulty in proving damages. For example, the court in *Northwest Publications, Inc. v. Crumb*[153] acknowledged "the clear precedent of *Albrecht* and its progeny,"[154] which made maximum vertical price fixing a per se violation. But it found that Crumb could not prove damages because competitive forces in the market compelled distributors to hold down prices.[155] The competitive force that the court referred to was a termination clause in the distributors' contracts.[156] The court characterized the clause as "a legal, competitive market force" that restrained their pricing freedom.[157] As long as a distributor is aware that its franchise will be

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151. Arizona v. Maricopa County Medical Soc'y, 457 U.S. 332 (1982), also dealt with fixing maximum prices, but it involved a horizontal agreement. The motivation and analysis is quite different. *See* Harrison, *Price Fixing, the Professions, and Ancillary Restraints: Coping With Maricopa County*, 1982 U. ILL. L. REV. 925.

152. The few that have been tried usually involve gasoline and newspaper distribution. *See supra* note 147.

153. Northwest Publications, Inc. v. Crumb, 752 F.2d 473 (9th Cir. 1985).

154. *Id.* at 475.

155. *Id.* at 476.

156. *Id.* at 477.

157. *Id.* at 476.

terminated if it exceeds certain prices, the distributor will be unable to prove that damages flowed from the *Albrecht* violation rather than from the manufacturer's legal right to terminate a distributor.[158]

VI. ALTERNATIVES TO FIXING MAXIMUM PRICES

Inefficiency develops because the downstream firm does not simply receive a piece of the upstream firm's profit: total profits also decline. The value of br_D provides some measure of the incentive that the upstream firm has to remove the inefficiency. Fixing maximum resale prices is not a sensible option given the extreme hostility of the *Albrecht* rule. Thus, firms may search for alternatives and, fortunately, alternatives exist. Many of these alternatives are quite safe from antitrust attack in spite of the fact that they yield results that are economically equivalent to resale price fixing. Several of these alternatives are considered.

A. *Vertical Integration*

In our patented widget hypothetical, the producer could vertically integrate and distribute its widgets through its own employees. This would provide results economically equivalent to the results achieved by fixing maximum prices. Following vertical integration, the producer-distributor would produce and distribute Q_2 widgets where marginal cost ($MC_P + MC_D$) equals marginal revenue (MR). The retail price would be P_2, and the firm's profits would be $(P_2 - MC_P - MC_D)Q_2$. This strategy would appear to be reasonably safe from antitrust challenge.[159]

B. *Performance Standards*

The producer may insist upon an adequate performance by its distributor as a substitute for vertical price fixing. Based upon its knowledge of demand and cost conditions, the manufacturer may require that its distributor sell Q_2 widgets. There is only one way that the distributor can sell Q_2 widgets and that is to reduce the price from P_1 to P_2. Thus, controlling quantity is equivalent to controlling price and the profits are clearly the same. Apparently, no cases render performance standards illegal.

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158. *Id.*

159. P. AREEDA, ANTITRUST LAW ¶ 729.7 (Supp. 1982), surveys several newspaper cases in which independent distributors were eliminated through vertical integration. *See also* Paschall v. Kansas City Star, 727 F.2d 692 (8th Cir.) (en banc), *cert. denied*, 469 U.S. 872 (1984). *See generally* P. AREEDA & D. TURNER, 4 ANTITRUST LAW 296-319 (1980) (survey of 43 cases).

C. *Dual Distribution*

A third option is to engage in dual distribution. In this instance, the manufacturer would offer to serve any customer at a retail price of P_2. This would make it impossible for the independent distributor to charge a price in excess of P_2 because the customer could always turn to the producer to get a lower price. To the extent that this effectively deters the distributor from charging more than P_2, dual distribution will act precisely the same as fixing maximum resale prices.[160] Dual distribution does not appear to violate the antitrust laws unless some predatory squeeze occurs.[161]

A recent case deserves consideration. In *Jack Walters & Sons, Corp. v. Morton Building, Inc.*,[162] the plaintiff, Walters, was a building materials distributor and the defendant, Morton, was a manufacturer of prefabricated farm buildings.[163] Morton sometimes advertised retail prices directly to the ultimate customer.[164] In order to maintain the credibility of its advertising claims, Morton had to be sure that Walters as well as other dealers respected those prices.[165] Walters complained that this constituted an *Albrecht* violation.[166] Judge Posner found that "even if Morton did violate the prohibition against fixing its dealers' prices, the only harm to Walters came from the fact that competing dealers (or Morton itself) would lower their prices to consumers if Walters did not."[167] Thus, imposing price discipline through dual distribution received judicial approval.

There are at least three alternatives to fixing maximum resale prices that provide equivalent economic results without exposing the upstream firm to antitrust liability. As a consequence, the potential for litigation that could reverse the unfortunate precedent of *Albrecht* is even less likely than the preceding section would imply. There is no reason for an upstream firm to contest a *per se* rule when a reasonably safe alternative exists.

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160. Dual distribution, however, is a cumbersome way of dealing with the successive monopoly problem, especially if the manufacturer actually has to serve many customers.

161. For a brief analysis, see P. AREEDA & D. TURNER, 3 ANTITRUST LAW ¶ 728 (1978).

162. Walters & Sons Corp. v. Morton Bldg., Inc., 737 F.2d 698 (7th Cir.), *cert. denied*, 469 U.S. 1018 (1984).

163. *Id.* at 701.

164. *Id.* at 707.

165. *Id.* at 708.

166. Walters also alleged that Morton illegally tied its trademark to the sale of its building material packages, engaged in predatory acts to assume the distribution function, and owed Walters a duty of good faith. *Id.* at 701.

167. *Id.* at 709.

VII. CONCLUSION

According to the evolutionary models of the common law,[168] inefficient rules of law will tend to be litigated while efficient rules will not. As a result, the common law efficiency that Judge Posner observed[169] was due to the pursuit of individual self-interest. This article sought to determine whether the evolutionary models of the common law could be applied fruitfully to the Sherman Act.[170] The evolution of the *per se* rule against horizontal price fixing and its variants were examined. This rule is economically efficient and is not challenged as would be expected according to the evolutionary theory.[171] The economically inefficient rule against vertically fixing maximum resale prices, the *Albrecht* rule, was also examined. Since this rule is inefficient, it imposes deadweight welfare losses upon the upstream firm. The upstream firm has more to gain than the downstream firm has to lose by a change to an efficient rule. Accordingly, the evolutionary theory predicts continued litigation of the *Albrecht* rule.

For several reasons the *Albrecht* rule is not frequently litigated. First, there are alternatives that are both less hazardous legally and provide economically equivalent results.[172] The asymmetry in the legal treatment of these economically equivalent alternatives encourages firms to use relatively inefficient business strategies. This, in turn, increases the upstream firm's costs, but it increases them by less than the expected costs of challenging the existing precedent. This is a very general point that should not be overlooked. Whenever alternative strategies exist, the firm must consider the relative costs of adopting a safer, although higher cost strategy, in lieu of litigating to alter a precedent. In the case of horizontal price fixing, safer alternatives are hard to find. But in the case of the vertical price fixing, safer alternatives exist which may well involve higher costs.

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168. *See supra* notes 6-7 & 12; *see also supra* notes 16-36 and accompanying text.

169. R. POSNER, *supra* note 2.

170. *See supra* notes 37-47 and accompanying text. Since the vague language of the Sherman Act required common law interpretation and development, one would expect these models to be useful.

171. The prevalence of suits reflects the fact that some subtleties are still to be resolved. *See* Catalano v. Target Sales, 446 U.S. 643 (1980); United States v. United States Gypsum Co., 438 U.S. 422 (1978); Goldfarb v. Virginia State Bar, 421 U.S. 773 (1975). Private and public remedies appear inadequate to deter price fixing. For contrasting views on deterrence compare Blair, *A Suggestion for Improved Antitrust Enforcement*, 30 ANTITRUST BULL. 433 (1985) with Landes, *Optimal Sanctions for Antitrust Violations*, 50 U. CHI. L. REV. 652 (1983).

172. *See supra* notes 159-67 and accompanying text.