Chapter 3: Anticartel Laws and Enforcement

> *"Although library shelves groan under the weight of legal and economic scholarship devoted to the substance and process of competition law and policy,…. there has been relatively little work devoted to competition-law remedies"* (Calvani 2005:4-5).

Monopolies and cartels are the epitomes of destructive forces that can wreck markets. They do so by wielding market power. This chapter explains the nature of market power, the laws that are meant to contain it, and what nations have done to combat international cartels.

Market Power

The principal application of industrial economics to antitrust analysis is to identify exercised market power. In economics and the law, market power is the ability to control exchange prices or to prevent entry by a buyer or seller into a market. That control is a matter of degree. A market participant has power over price if it has discretion to influence price over some range. Similarly, a seller need not be able to blockade market entry entirely to have market power – merely the ability to slow down the rate of entry or prevent one new potential seller from entering is enough.

Exercised market power may derive from the concerted action of buyers or sellers (also called multilateral market power) or from the conduct of a single, typically dominant firm (unilateral market power). Collective action by buyers or sellers that has as its principal aim the increase or maintenance of their market power is called *collusion* in economics and *conspiracy in restraint of trade* under the competition laws of most modern industrial countries.

Monopoly is the oldest word in the language to describe market power. It came into English in Sir Thomas More's *Utopia* published in 1551. By 1601 treatises and court decisions in English Common Law condemned monopoly behavior as an unlawful business practice that resulted in the enrichment of the monopolist at the expense of the buyer. Originally, the word monopoly covered both the case of a single seller and the

case of a few sellers, but by the late 19th century the latter situation had come to be called *oligopoly.* Oligopoly is a descriptive term for an industry with a few sellers, but it does not necessarily denote illegal behavior. Other closely related terms are syndicate, pool, trust, or cartel. Trusts were often the legal instruments used to hold the combined assets of merged firms and thereby exercise true monopoly power. Thus, by the 1870s "trusts" had taken on a pejorative connotation. In 1890, G.B. Shaw defined trusts as "a combination to destroy competition and to restrain trade." When the Sherman Act was passed in 1890 to control abusive trust behavior, it became popularly known as an "anti-trust" law. *Cartel* is the most precise term to describe business combinations formed by agreement to regulate production, sales, or prices. Cartels are oligopolies that explicitly engage in monopolistic conduct.

In economics the most widely accepted measure of the extent of exercised market power is the Lerner Index, also called the price-cost margin. For a given industry, the Lerner index is the difference between the observed market price and a competitive benchmark price divided by the market price. The numerator of the Lerner Index is called the *overcharge* because it is the amount buyers overpay for price-fixed goods. Given the demand and cost conditions in a particular industry, the Lerner Index for a monopolist represents the maximum profit that a firm can earn in the industry.[1] In a perfectly competitive industry, the Lerner index will be zero. By analogy, the Lerner Index captures the profit rate on sales that can be attained by an effective cartel.

The time frame is critical in assessing the degree of market power, and it has important implications for antitrust applications. In the short run, some capital costs are *fixed* in that they do not vary with the level of firm or industry output, whereas the remaining portion of total costs are *variable*. In the short run fixed costs are irrelevant to maximizing profits, and the appropriate measure of costs in the Lerner Index is *short run marginal costs*. From the point of view of antitrust analysis, the presence of long run market power is more serious in the sense that it generates monopoly profits for sellers and causes injury to buyers. The degree of market power in the short run is always greater than or equal to market power in the long run. In the short run, a profit maximizing firm with market power may not be covering its full costs; that is, the firm's economic profits may be negative and it may not be imposing an overcharge on its customers.[2] That is,

[1] It is also the profit-maximizing condition for firms that choose prices in an oligopoly with differentiated brands. In all three cases, the Lerner Index is the inverse of the own-price elasticity of demand facing the firm (market, residual, and brand demand, respectively) (Werden 2000).

[2] Economic profits or rents do not include a normal return to investors or bondholders in the firm, whereas conventional accounting concepts may count these as part of the profits

a positive Lerner Index in the long run may be considered evidence of *monopoly power* or, in the phrase used in antitrust case law, “a high degree of market power” (Werden 2000).

U.S. antitrust case law has incorporated the economic definition of market power in decisions of the Supreme Court going back to 1969. The term “monopoly power,” the more common term used by the courts, is “the power to control prices or exclude competition.” This formulation may be interpreted as two alternative ways of exercising a high degree of market power: price fixing and raising barriers to entry. Alternatively, the reference to exclusionary conduct may be interpreted as showing concern for duration as an aspect of high degree of market power.

In sum, U.S. antitrust decisions seem to equate monopoly power or a high degree of market power with a positive Lerner Index in the long run. High market shares, concentration, and barriers to entry are often cited as practical indicia of monopoly power. The Lerner Index can also be inferred from the own-price elasticity of demand, and increasingly the courts seem to be adopting this approach (Werden 2000).

Anti-cartel Laws

The philosophical foundation of the antitrust laws incorporates two principles (ICN 2005a). First, the *retribution* principle stresses that sanctions should be imposed on violators in proportion to the harm inflicted on the victims. In economic terms, antitrust fines and compensation should be related to the economic harm generated by price fixing. Second, the *utilitarian* principle insists that society is best served when penalties are high enough to prevent recidivism, either by the perpetrator himself (special deterrence) or as an example to other would-be wrongdoers (general deterrence). Antitrust enforcement promotes economic welfare through a combination of organizational and individual penalties that disgorges illegal monopoly profits to parties who purchased price-fixed goods and discourages future cartel formation. That is, penalties ought to be both compensatory and punitive.

Optimal deterrence theory dates from a classic 1968 paper by Gary Becker (Garoupa 1997). Most theories of optimal legal enforcement assume that the aim is maximization of social welfare. From this principle one can deduce several strong conclusions. Optimal enforcement may involve a combination of fines and imprisonment. Where prisons are expensive (as in Europe), fines will be preferred to monetary fines; the opposite

of a firm. In equilibrium, competitive firms earn zero economic profits but may make positive accounting profits.

seems to be the case in the United States. Under the simplest of assumptions, the optimal fine is the harm caused by the crime divided by the probability of detection. Risk-avoiding behaviors require a lower optimal fine than risk-loving ones. Amnesty programs save enforcement resources and are generally preferred to regimes with no amnesty programs. Litigation costs lower the optimal fine. Systems of justice that mistakenly convict the innocent should have lower sanctions; criminal-law systems with extensive protections for the accused should have higher sanctions. Deterrence is enhanced by legal systems that punish conspiracies to commit crimes, even though the conspiracy may be ineffectual. Private suits result in overall lower costs of public and private enforcement. These conclusions, while sensible, have received only limited empirical verification.

Historical Development

In his magisterial survey of the world's competition laws in the mid-1960s, Edwards (1967) found 24 countries with antitrust laws. Twelve had been adopted prior to World War II, though most of these had fallen into disuse or had been superseded by government policies that actively promoted cartels in the 1930s. By and large, prior to 1945 countries with cartel laws had weak or nonexistent penalties. Often the laws merely permitted investigations or required registration of cartels. Sometimes, as in France, the courts found anticartel laws in conflict with laws that permitted businesses to form industry associations. In other cases, the laws left on the books were simply unenforced. Except for 1933-1937 when depression concerns led to the passage of the National Recovery Act, only the United States steadfastly enforced its antitrust law before the 1960s (Wells 2002).

From 1973 to 1989 at least 17 more countries adopted new or greatly strengthened antitrust laws, many of them Member States of the EU (Palim 1999). For example, the UK passed its first anticartel law in 1956, but the weak remedies (investigation and administrative pressure to cease certain collusive practices) had little effect on subsequent industry price competition (Symeonidis 2000). On the other hand, Germany's strengthening of its competition law in 1958 (cartel penalties could reach triple damages) was particularly influential, prompting the European Economic Community to adopt its own competition law in the same year (Harding and Joshua 2003). During 1990-1996 no less than 26 additional countries implemented serious competition laws, all of them outside the EU (Palim 1999). The total of 70 nations accounted for 78% of global GDP. Today more than 100 countries have antitrust laws.

Adoption of antitrust laws was motivated by several factors. Immediately after World War II the former members of the cartels were

politically weak, partly because of abuses revealed by post-war investigations; in some cases cartels were held responsible for inflation, international trade restrictions, or retarded productivity growth; and cartels were judged to be incompatible with the dismantling of national planning policies.

The post-war national competition laws varied in several respects from those of the United States. Their purpose was to keep prices at "reasonable" levels, protect business from unfair competition, and to maintain economic stability. The U.S. concept of protecting the competitive process for the benefit of consumer welfare is unusual in non-U.S. antitrust statutes. Despite the differences in antitrust philosophy, the *content* of most antitrust laws is quite similar. In about half the cases, price-fixing was strictly prohibited (except for export prices); the remainder prohibited cartels operating "contrary to the public interest".

Passage of national antitrust laws accelerated in the 1990s because of four factors (Connor 1997, Palim 1999). First, many countries in the Soviet bloc and Latin America abandoned price controls and centralized economic planning; antitrust laws were viewed as necessary to constrain the market power of privatized firms in concentrated sectors. Second, with the liberalization of international trade and investment rules by many newly industrializing countries, multinational firms began lobbying for a more predictable legal environment for business, including more transparent competition laws. Chile's highly successful growth strategy was due in part to the clarity of its national antitrust enforcement policies. Third, as many countries turned away from military or dictatorial regimes, antitrust laws were passed as part of the process of democratization, of which the dispersion of economic decision making is seen as one part. South Korea's Fair Trade Commission is often cited as an example in this regard. The World Bank began making the implementation of effective antitrust enforcement a condition of loans for economic restructuring as early as 1991 in the case of Argentina. Such policies were often welcomed in countries that had relied on heavy investment in state enterprises as a major development strategy, often with disappointing results for employment creation and industrial efficiency.

A fourth motive for the adoption of antitrust laws is the formation of customs unions. When expansions of the EU occurred in the 1990s, the formation of national competition-law agencies with substantive and procedural features compatible with the EU's became a necessary condition for membership. Poland, Hungary, and other new EU members have framed competition laws on the model of the German Federal Cartel Office. In North America, the formation of the North American Free Trade Agreement (NAFTA) area prompted Mexico to pass new competition laws in 1993.

Cartels have come to be condemned by international bodies (ICPAC 2000). The United Nations' Commission on Trade and Development (UNCTAD) began holding annual conferences antitrust laws in the mid-1970s. In 1980 UNCTAD issued a set of nonbinding recommendations to its member countries for laws that control restrictive business practices, including clear prohibitions of cartel activities. Prior to 1980 only about five developing countries had instituted competition laws, but during the 1980s UNCTAD was reporting annually on the adoption of about three new national antitrust laws.

Another multilateral agency concerned with cartel policies is the Organization of Economic Co-Operation and Development (OECD). In 1998, its 29 members adopted a set of recommendations on cartel enforcement which ICPAC called "the first consensus statement on an approach to international hard core cartels." The OECD statement defines a hard core cartel as an anticompetitive agreement, concerted practice, or arrangement by competitors to fix prices, rig bids, restrict output, or to divide markets by allocating market shares, customers, suppliers, territories, or lines of business. The OECD recommends the adoption of laws that prohibit cartels and that provide for effective enforcement and sanctions. Moreover, member countries are encouraged to sign mutual assistance agreements between their antitrust agencies and repeal legislation that blocked cooperative enforcement efforts. The ICN (2005b:5) has reinforced the OECD theme:

> "Secret cartel agreements are a direct assault on the principles of competition and are universally recognized as the most harmful of all types of anticompetitive conduct."

Despite the exhortations of UNCTAD and the OECD, anticartel laws and enforcement procedures remain quite variable across the 100 or so jurisdictions that now have such laws. These differences often reflect the general differences in national legal systems. The UNCTAD and OECD recommendations do not have the force of international law; they are more like model laws or workable principles. In general, Australia, Canada, Korea, and the European Union have the most active programs of anticartel enforcement after the United States. In most other countries in Asia and Latin America (e.g., China and Venezuela) there are laws on the books that are as a practical matter unenforced (Connor 1997).

Some national antitrust laws specify extensive lists of multilateral conduct that are deemed *per se* illegal, just as price fixing is in the United States, but most national laws follow a rule-of-reason approach even for

hard core cartels.[3] The types of sanctions available to the antitrust units or the courts also vary considerably across jurisdictions. Cease-and-desist orders or court injunctions are quite common, and future violations of such orders can bring about very severe additional sanctions. Fines are also typical, but fining policies vary greatly. Most antitrust laws cite exemptions for labor unions, farmers' cooperatives, and certain directly regulated industries. A very large majority of the world's antitrust regimes, beginning with the United States in 1918, permit export cartels to fix prices (Levenstein and Suslow 2004).

The ability of plaintiffs to bring private damages suits, the sanctioning of individuals and leniency policies vary internationally. Like corporations everywhere, individuals guilty of price fixing are typically subject to civil penalties or none at all. The United States, Canada, France, Ireland, Israel, Latvia, UK, Norway, and Japan have criminalized their price-fixing laws, but only the United States and Israel regularly prosecute individuals and seek prison sentences for the ringleaders of cartel. Individual fines are often, capped at modest levels, but Germany allows for treble damages to be assessed on persons.

The Sherman Act

The Sherman antitrust act was made law in the United States in July 1890 (Hovenkamp 1998). Although it was preceded by similar laws in several U.S. states, it would prove to be the world's first effective anticartel statute.[4] The Sherman Act is descended from the English common law that underpins much U.S. law, but its passage was primarily a populist response to abuses by large-scale industrial trusts that first appeared in the 1880s (Sullivan and Fikentscher 1998). The major goal of the Act was to enhance various libertarian economic and political values protected by the U.S. constitution: property, contract, economic opportunity, and political liberty. Simply as law, the Sherman Act may be viewed as federalizing the common law of trade restraints (Hovenkamp 1998). Its emphasis on preserving the competitive process, protecting buyers from exploitive prices, keeping market entry free, and shielding companies from abusive tactics made the Sherman Act a uniquely American invention. In the early 20th century, the goals of antitrust shifted somewhat as the courts interpreted

[3] Sullivan and Fikentscher (1998) assert that in Germany and the EC there is no distinction between antitrust violations as per se or rule-of-reason.

[4] Several Western and Midwestern states of the United States had antitrust laws in the 1880s, but sub-national units had difficulties devising remedies for convicted national firms. France (1790) and Canada (1889) also passed laws against price fixing, but these laws were unenforced for many decades (Connor 1997).

antitrust as a tool for furthering laissez-faire economic policies. Up to the early 1930s, both the administrative branch and the courts consistently supported anticartel actions. After a brief hiatus in the mid 1930s, the growing realization of the symbiotic relationship between German cartels and the rise of National Socialism stimulated a renewed animus toward cartels.

The Department of Justice won its first price-fixing case in *U.S. v. Trans-Missouri Freight Assn.* in 1897 (Hovenkamp 1998). One reason for the lag between passage and enforcement was the broad, even vague language of the Act. Congress intended to state general principles of illegal conduct rather than enumerate specific types of conduct. Thus, Section 1 of the Sherman Act rather simply prohibits

> ". . . every contract, combination . . . or conspiracy in restraint of trade or commerce among the several states, or with foreign nations . . ."

In effect, Congress delegated the interpretation of the law to the federal courts.

As is true of any important law, legal battles are fought over nearly every word in the statute. For example, notwithstanding Congress' use of the word "every," the Supreme Court decided as early as 1911 that only *unreasonable* restraints were intended to be prohibited. Some restraints are classified as unreasonable under every circumstance. Conspiracies that involve agreements on common prices, on market shares, on exclusive sales territories, and on boycotts are generally deemed unreasonable. Such cases are decided on a *per se* illegality basis. That is, these behaviors are illegal irrespective of the circumstances or their market impacts. On the other hand, some types of collusive conduct may have pro-competitive effects as well as effects destructive of competition. These cases are decided on a "rule of reason" basis.[5] That is, the courts will entertain economic evidence about the balance between the benefits and the harm caused by the restraint and will examine under which circumstances one effect may dominate the other. In *per se* violations no economic evidence need be presented to the court. One justification of the *per se* rule for price-fixing cases is conservation of judicial resources.[6]

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5 "All you need to know about *per se* vs. rule of reason is that under the latter, defendant wins." (Aphorism attributed to Albert Foer.)

6 Not all academic writers agree. Posner (1969) takes the position that there is no substantive difference between cartel behavior and tacit collusion. If so, the logical conclusion is that all price fixing cases should be decided on a rule-of-reason basis with full information presented on market effects (Gertner and Rosenfield 1999). However, so far such opinions remain in the minority.

The borderline between *per se* violations of the Sherman Act and rule-of-reason violations has shifted somewhat in the last 30 years or so (Gilbert and Williamson 1998). One type of restrictive practice that is no longer considered a *per se* violation is exclusive dealing. Similarly, some types of vertical price-fixing arrangements have been considered under a rule-of-reason approach. Setting maximum prices to be charged by franchisees is no longer illegal. It is nearly impossible to find credible U.S. antitrust experts advocating the abandonment of the *per se* rule for horizontal price fixing, even among those writers hostile to antitrust enforcement in general (Bork 1978).[7]

The Sherman Act may be prosecuted by the DOJ as a criminal felony or as a civil matter at the discretion of the courts. Prosecutors will bring forth criminal charges if they judge the price fixing to be a serious violation and if the evidence for prosecution seems strong enough. The burden of proof in a criminal prosecution falls on the government and involves four elements (Bell and Gaskin 1999). First, the prosecutors must demonstrate beyond a reasonable doubt that a conspiracy or *explicit agreement* was entered into by the parties. Normally, one or more of the parties to the agreement must testify that their oral or written communication was in fact a genuine deal or contract. Second, the defendants must have knowingly and *intentionally* entered into the agreement. In the case of a cartel, the intent must be shown to be the goal of increasing prices or profits of the participants. Third, the conduct must fall into the category of unreasonable restraints. Naked cartel behavior always qualifies. Fourth, federal prosecutors must demonstrate that the market spilled across state or international borders. Intrastate trade can only be prosecuted under antitrust laws passed in at least 44 of the 50 states.

Although nearly all overt price conspiracies are prosecuted by the Department of Justice as criminal matters, in a small percentage of cases the evidence may not be strong enough to convince a jury "beyond a reasonable doubt." The DOJ then has the option of prosecuting an alleged cartel as a civil matter. In a civil trial only the preponderance of the evidence is required to obtain a conviction. In most price-fixing cases the most difficult element is the question of intent, so in civil proceedings the jury is often presented with circumstantial evidence about the parallel behavior of the firms that may allow it to *infer* that an agreement must have been made. The Federal Trade Commission, the state attorneys general, and parties injured by a cartel also have standing to bring civil suits against

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[7] McChesney and Shugart (1995) believe that some types of cartels are socially efficient. However, even if the cartels can reduce industry dead-weight losses, these benefits may not outweigh jurists' concerns for conservation of judicial resources or society's concerns for equity or small-business protection. Japan and the EU regularly grant exemptions for cartels in industries with excess capacity.

alleged cartels. As plaintiffs, they too are required only to show that a conspiracy was more likely to have occurred than not.

Defendants in Sherman Act cases have a number of possible defenses that may let them go free. First, a defendant may present evidence that it withdrew from the conspiracy more than five years before the case was filed. Second, a corporate defendant may attempt to show that the managers who ran the conspiracy did so in direct violation of company policy. Of course, the "rogue managers" are still liable for prosecution. Third, defendants may attempt to prove that the companies involved in the cartel were in fact under common ownership and control. A company cannot conspire with itself, only another independent business can. Fourth, defendants may argue that they have already been prosecuted in the jurisdiction for the same crime; this is the "double jeopardy" defense. Fifth, defendants may try to establish that they were acting under government authority. Price-fixing agreements may be legal if a government regulatory body oversees an industry. Moreover, certain types of organizations are immune from Sherman Act prosecution; most nonprofits are exempt, and since the 1920s farmers' cooperatives and labor unions have been exempt. Sixth, perhaps the most common defense concerns intent. Defendants will frequently argue that their agreements were for some purpose other than raising prices. They might suggest that their meetings were management-training exercises or that they met simply to exchange innocent information. For both prosecutors and defendants, the actual effect on prices is irrelevant to guilt or innocence. Nor can defendants suggest that they were unaware of the law.

Legality of Tacit Collusion

The important distinction between tacit and overt collusion seems to be clearer in economic analysis than it is in the law (Gertner and Rosenfeld 1998). U.S. courts generally use the term price fixing to encompass all forms of cartel behavior and to indicate that it is *per se* illegal. Often the key feature in a case that determines whether the *per se* rule applies is the legal and economic meaning of the "agreement." Naked cartels always meet the test, but not all prosecutions of cartels have evidence of secret meetings with explicit agreements.

A contract between two firms to merge is also an explicit agreement that will restrain competition between the two entities, yet mergers are always analyzed under the rule of reason. Moreover, the courts have treated certain types of open joint sales under the rule of reason because they arguably increased output and social welfare (e.g., *Broadcast Music, Inc. v. CBS* 1979). Certain types of joint ventures also may legally engage

in pricing (*Daugher* 2006). In some cases prosecutors will allege cartel behavior but lack direct evidence of an explicit agreement. In these cases, it will be necessary to present circumstantial evidence about market effects so as to allow the jury to infer that an explicit agreement must have occurred. If this evidence is persuasive, then liability for the price fixing follows the *per se* rule.

Many effective price-raising conducts involve the formation of tacit understandings among rivals. Some types of price leadership require a leading firm to initiate a round of price changes in the industry by an explicit announcement or "signal." The followers need not explicitly express their concurrence with the price change by communicating it to the leader, but they can achieve the same result by announcing a parallel price change to their customers or indirectly to their rivals through trade publications. Such parallel pricing actions have usually been classified as "non-cooperative" behavior in economic models of oligopoly – strategic oligopolistic interdependence that does not constitute overt collusion or conspiracy under the law. Tacit collusive actions usually require a punishment mechanism in order to be effective in raising long run profits. While price wars are the classic form of punishing deviants from a tacitly collusive arrangement, punishment may take the form of predatory actions targeted against deviants. Moreover, strategies covering market segmentation, most-favored-nation contracts, exchanges of information through trade associations, and early credible price announcements can help discover deviant behavior. These are called facilitating practices. In general, facilitating devices increase the predictability of future behavior among rivals.

Predatory behavior and facilitating devices may be illegal collusive conduct. Historically parallel behavior, especially in prices, may be used to infer the existence of an express agreement. In general, absent direct evidence of such an agreement, merely parallel behavior cannot suffice for price-fixing liability. However, evidence of parallelism in behavior can be combined with so-called "plus factors" that may seal the guilt of a group of sellers under the Sherman Act. Among the plus factors are identical bids in sealed-bid auctions, a predictable pattern of winning or losing in auctions, conduct against self interest, exchanges of excessively detailed transaction data, price announcements far in advance of purchase dates, preventing new product introductions, or other evidence of a dramatic change in market conduct that could not be due to shifts in demand or supply.

U.S. law on facilitating practices for tacit collusion is a bit unsettled. An important case was the issuance of detailed price books by General Electric and Westinghouse during 1963-1974. Combined with a quickly adjusted multiplier and price protection clauses, the two companies perfectly matched their prices on large turbo-generators. In 1977,

a consent decree ended the practice (Hay 2000). However, in a similar case involving makers of a gasoline additive (*Ethyl* 1980), the court said that advance signaling for the purpose of informing rivals of their pricing intentions had no efficiency defense. If so, the practice could be declared a *per se* illegal implicit practice; that is the adoption itself was an *implicit conspiracy.* In the *Airline Tariff Publishing Co.* case (1993), advanced price announcements that involved communications among airlines through their shared reservation system were found to be illegal even though the practice had legitimate business purposes that benefited consumers. This conduct was declared illegal under a rule-of-reason analysis: the harm to entry conditions outweighed the benefits of early announcements.

Thus, Hay (2000) argues that an independently adopted industry-wide practice for the purpose of suppressing price or non-price competition may sometimes be declared *per se* violations of the Sherman Act. They are probably legal in homogenous-product industries with good price information if (1) the practice does not alter the parallel pricing that would emerge without it anyway or (2) the removal of the practice would not improve market performance. If the practice has no legitimate business purpose, its adoption is probably *per se* illegal. Moreover, even if the practice can be defended as an efficient one, injured parties in a civil case might argue that the harm caused them outweighs any efficiencies.

Extraterritoriality

Unlike the competition laws of some other countries, the Sherman Act permits the prosecution of conspiracies in restraint of trade that occur outside U.S. territory so long as those acts affect U.S. trade and commerce. This "extraterritoriality" provision of U.S. antitrust law often remained entirely theoretical because of practical barriers to gathering evidence or serving subpoenas abroad, but in recent years bilateral treaties or protocols have allowed for greater cooperation among the world's many antitrust agencies. The extent to which extraterritoriality applies to global cartels became an issue in several U.S. suits in 2000-2005 against members of global cartels. Many legal scholars argue that companies that purchased cartelized products outside U.S. borders ought to be allowed to sue for damages in U.S. courts because raising prices domestically was *intrinsic* to the success of collusion abroad (Bush *et al.* 2005). For the moment, the courts have taken the view that concerns about "judicial burden" and "negative comity" have trumped the need for stronger penalties to deter global cartels (Davis 2002, Fox 2005).

European Union Rules

Until after World War II the United States was nearly alone in the world in having a strong commitment to anticartel enforcement (Wells 2002). National laws outlawing price fixing were passed in the late 1940s in Japan and Germany as part of the occupation policies of the Allies to prevent the reappearance of concentrated economic and political power in those former Axis countries. Although the Japanese antitrust laws were weakened in the 1950s, those in Germany were strengthened just before the Treaty of Rome that created the European Economic Community (EEC) was signed in 1957. Like the interstate commerce clause of the U.S. constitution, the EU's competition laws were designed to preserve the smooth functioning of a customs union that is evolving into a single market. By the 1960s, the competition laws of the United States and the EEC (now part of the European Union) had become the world's two great legal templates (ICN 2005b:14).

In language not unlike that of the Sherman Act, article 85 of the Treaty prohibits agreements and concerted acts in restraint of trade, when that trade is between member countries of the European Union. "Agreements" in EU parlance are roughly equivalent to overt conspiracies in the U.S. tradition: written or oral agreements or joint announcements about conditions of sales. "Concerted practices" are forms of business cooperation based on mutual understandings or exchanges of information, i.e., tacit agreements (Venit 1996).

All forms of naked cartel behavior are considered serious infringements of EU competition rules. Allegations of price fixing are handled by the EC as an administrative proceeding. There is no concept of price fixing as a criminal justice matter under EU competition law. Some scholars have taken the position that criminal proceedings are inherently superior in deterring cartels because there are likely to be fewer enforcement errors than in an EC-style administrative system (Schinkel and Tuinstra 2004). The EC has in the past issued "bloc exemptions" to companies, industries, or trade associations that have inquired about the legality of certain practices; such negative clearances are no longer made. EU law does not permit personal penalties and has no provisions for mandatory divestiture of companies.

The European Commission's Directorate-General for Competition (DG-COMP) is the world's second most powerful antitrust authority.[8]

[8] The DG-COMP has about 500 professionals, half the Antitrust Division's number, but has had broader legal responsibilities (state subsidies, issuing negative clearances, etc.) than the Division. Moreover, the U.S. DOJ has available investigators from the FBI, whereas DG-COMP staffs its own probes. On the other hand, the national competition authorities of

DG-COMP has dedicated anti-cartel units. The DG-COMP has the power to demand information from potential violators in writing and to conduct on-premise surprise inspections. These are now standard practice in cartel cases. Unlike the U.S. system of criminal law, the EU employs an administrative law system (ICN 2005b). The powers and procedures of the DG-COMP resemble those of the U.S. Federal Trade Commission.[9] EU law treats antitrust violations solely as civil infractions by business entities.[10] After a lengthy investigation that relies mainly on written documents, if there is probable cause the EC issues a Statement of Objections to the putative violators. The accused companies have the opportunity to reply in writing or in a brief oral hearing. If a violation is deemed to have occurred, a draft decision is circulated to a committee of experts for comments. The final decision must be approved by the Commissioner for Competition and voted on by the full Commission. Adverse EC decisions can involve enjoining conduct, voiding contracts, or fining corporate transgressors. Once issued, the decision is often successfully appealed to the EU courts. The EC's decisions take an average of four years after U.S. prosecutions are announced for the same international cartel (Connor 2003: Table A.3). Individual conspirators are not personally liable for monetary penalties or prison sentences.

Harding and Joshua (2003) conclude that "... European law has over [1980-1990] caught up with American law" (p.270) in the sense that cartels are now subject to "categorical censure". Since the 1970s "... the classic price-fixing, market-sharing cartel has... been driven underground and become strongly prohibited... "(p.229). EU legal thinking has evolved by integrating the common-law concept of conspiracy to prosecute cartels (Joshua and Jordan 2004). In 1998 the EC issued guidelines for the calculation of price-fixing fines that explained practices being followed during the 1990s (*ibid.* p. 242). Moreover, in 1996 the EC issued its first leniency notice, which was revised in 2002 in a way that closely mimicked the U.S. policy. Therefore, by the late 1990s, the EU had also developed a set of government anticartel sanctions for corporations that were similar to those in the United States and Canada (*ibid.* pp. 216-222). EU law has no provision

the EU are much larger (up to 300 employees) than the typical U.S. state attorney general's office.

9 Like the FTC, the EC competition directorate investigates allegations of antitrust violations, holds hearings in which defendants can present their side of the case, makes an initial determination of guilt, recommends sanctions, has those decisions approved by the full commission, and may have its decisions appealed by the guilty parties to two higher courts.

10 Besides the USA and Canada, nine other countries provide for criminal sanctions: Austria, Germany, France, Norway, Ireland, Slovakia, Japan, the UK and South Korea. Australia is considering such laws (Hammond 2002).

for private antitrust suits, but there is gathering steam for compensatory suits in the national courts of the Member States. There is also a debate as to whether EU competition law should be criminalized (Wils 2001).

Canadian Law

Canadian federal competition law dates from 1889, but was rendered ineffective by court decisions until the tough Competition Act was passed in 1986 (Ross 2004). Now Canada treats price fixing as a serious criminal offense. Antitrust allegations are investigated by the Canadian Competition Bureau. Section 45 of the Act makes price-fixing conspiracies that "unduly lessen competition" illegal. Although this sounds like a rule-of-reason approach to enforcement, naked cartels are as a practical matter prosecuted by the Ministry of Justice as *per se* offenses. Under Section 47 of Canada's law, covert bid-rigging is a *per se* violation. Finally, there is a special section (46) that empowers the Ministry of Justice to indict cartels that have operated outside of Canadian territory; prosecution under this section requires Canadian affiliates of multinational corporations to turn over evidence that may be held abroad; conviction may result in unlimited fines. Efficiency defenses are not permitted.

In 1992 a new Canadian law approved the use of civil class actions for plaintiffs to seek single damages. Within ten years follow-on damages suits for price fixing became "a virtual certainty (Goldman *et al.* 2003: 3). Unlike the messy U.S. procedures, recoveries for both direct and indirect buyers are handled simultaneously.

Prosecuting International Price Fixing

This section examines the general policies and procedures followed by the world's major antitrust authorities when confronted with allegations of illegal cartel conduct

Modern international cartels -- those discovered since 1990 -- have distinct characteristics, many of which make them more difficult to prosecute (Griffin 2002, Hammond 2005c). Although they operate with full knowledge that they are breaking the laws of several nations, cartel members view those laws with a mixture of utter contempt and fear of U.S. detection. As a result they make extraordinary efforts to avoid U.S. territories and to cover up and destroy evidence of meetings. Industry trade associations are convenient for covering up conspiratorial meetings. In recognition of the key industry positions attained by East Asian manufacturers in many lines of business since 1960, most modern cartels have

had to include Asian corporations as members. Companies outside the United States are unlikely to have adequate antitrust-compliance training for their employees (Kolasky 2002). Typically, international cartels have sought to control markets in what business marketers call The Triad – North America, Western Europe, and the most industrialized nations of East Asia. This *global reach* in price fixing means that buyers are unable to find lower prices in distant markets and are therefore less likely to complain to antitrust authorities. The involvement of top executives is a common feature because of the delicate negotiations needed to agree on worldwide market allocation schemes and to renegotiate periodically those allocations. Underlings are unlikely to become whistleblowers when collusive schemes are legitimized by company leaders. The use of precise score sheets to chart adherence to share agreements, third-party verification of reported sales, compensation for under-quota members, and threats by leading firms that cow smaller participants − all of these are techniques that discourage defections into the arms of antitrust authorities.

At the same time modern international cartels do face greater risks of detection and punishment than cartels in the early 20th century. Since the adoption of effective anticartel enforcement by Canada and the European Union in the mid 1980s, international cartelists have had to weigh the benefits of monopoly profits against some probability of being apprehended and punished for collusion.[11] Moreover, U.S., Canadian, and European antitrust authorities implemented new policies and procedures in the 1990s that significantly increased the probability of detection and the harshness of penalties directed at international cartels. These authorities reallocated enforcement resources toward prosecution of such cartels, increased cross-authority coordination, adopted more effective automatic leniency and "amnesty plus" programs, imposed higher corporate fines, and in some jurisdictions applied individual criminal penalties (Connor 2001, OECD 2002, Wils 1998, ICPAC 2000, Spratling 2001, Klawiter 2001, Kolasky 2002). Beginning in the late 1990s, speeches of top antitrust officials began to acquire a tone of triumphantisim rather than concerned calls for reform in the face of a cartel onslaught (Hammond 2001b, Monti 2002, Pate 2003, Klein 1999). Economists previously critical of antitrust enforcement because of the presumptive natural fragility of cartels and because of its excessive public and private costs concede that prosecution of cartels is an eminently rational pursuit for governments (Shughart and Tollison 1998).

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[11] The story of the increasingly effective EU prosecution of cartelists told in Harding and Joshua (2003). Canada, Australia, and South Korea have taken harsh actions against international cartels since 1990. Opinions vary about the dedication of Japan's FTC to fighting cartels (First 1995, Chemtob 2000).

Monetary fines are frequently imposed on convicted corporate cartel participants, but the limits on such fines or the ways that they are calculated also vary. Anticartel statutes often specify absolute upper limits on the size of corporate fines, such as the $10-million statutory maximum for Sherman Act violations in the United States during 1990-2005. The United States and other jurisdictions have upper limits based on a percentage of "affected sales," that is, sales in the cartelized market during the conspiracy period.[12] Usually the sales concept is geographically or temporally restricted. The percentages mostly fall in the 5 to 20% range. Typically, national cartel fines are based solely on national sales during the affected period. However, the EU fine structure allows the Competition Directorate to recommend fines up to 10% of a violator's *global* annual sales in all its product lines; U.S. law also permits the use of global sales if a fine based on U.S. sales were to grossly understate the seriousness of the offense. The United States, Canada, and Germany place no limits on the length of the affected period, but other jurisdictions limit the sales from which to calculate the fine to three years or even one year. Beginning in 2000, the UK Office of Fair Trade was authorized to assess fines on cartels as high as 30% of sales for three years.

U.S. Government Suits

Price-fixing suits may be brought by federal or state antitrust agencies or by private injured parties. The Department of Justice has sole authority under the Sherman Act to bring criminal charges against alleged corporate or individual price-fixers, but civil indictments may be launched by any of the parties just mentioned. The procedures available to the DOJ for prosecuting criminal defendants are quite different from civil cases. The procedures for civil indictments are all fairly similar for plaintiffs, whether government agencies, state attorneys general, or private injured parties. However, the U.S. Federal Trade Commission only infrequently launches civil cases against cartels. The form and substance of civil antitrust suits pursued in state courts are quite similar to those in federal courts (O'Connor 1996).

Historically, federal antitrust agencies usually opened most investigations after receiving credible complaints from citizens; less commonly, the agencies' staffs might open an investigation on the basis of press reports. Since the late 1990s amnesty applications have accounted for the majority of cartel cases. After a preliminary staff analysis that affirms the possibility of a violation and confirms that the market has imperfectly competitive characteristics, a more formal investigation is

[12] Belgium, Italy, Finland, Sweden, and Spain follow the EU rule of 10% of a group's annual sales. Greece allows 15%, Austria single overcharges, and Denmark has no upper limit (*Financial Times* August 10, 1999:6).

opened. Determining the feasibility of a market to support price fixing is called screening (Dick 1995).

For a criminal case, when emerging evidence evaluated by DOJ lawyers and economists becomes strong enough, a grand jury will be established with the approval of the Assistant Attorney General for Antitrust (Victor 1998). Most grand juries are set up in major cities where the Division has field offices. Although under the supervision of a judge who ensures that federal rules of procedure are followed, the grand juries are very much tools of a prosecutor. The juries issue subpoenas and hear testimony that is almost always kept secret. Citizens on grand juries can ask questions of those testifying, but their main role is to restrain over-zealous prosecutors. Grand juries usually do not interview the targets of an investigation, but do hear individuals who might provide useful testimony in a trial.

Foreign companies are immune to U.S. subpoenas, unless they have U.S. subsidiaries or sales offices. Grand juries have no authority to compel appearances from companies or persons resident outside the United States. Subpoenas can only be served on persons residing in the United States or to businesses that are registered in U.S. territory. Therefore, in the case of global cartels, the DOJ may seek the voluntary cooperation of foreign residents or companies. Testimony may be taken in third countries, sometimes in U.S. embassies. In potential criminal matters, the DOJ may seek the assistance of foreign ministries of justice under mutual assistance treaties. Joint criminal antitrust investigations can be conducted with a few countries.

If probable cause is established to the satisfaction of the prosecutors, the jury will vote on whether to indict companies or individuals or to request search warrants from a local magistrate. Warrants will be issued only if a sworn DOJ statement asserts "probable cause" of criminal activity. Requesting search warrants for antitrust matters was rare until the 1990s. Searches and seizures of documents are carried out in "raids" by the Federal Bureau of Investigation (FBI). The final action of the grand jury, after reviewing testimony and seized documents, is to vote on whether to hand down indictments for specific persons or companies.

When both sides in a case have had sufficient time to prepare their positions, lawyers from each party will attempt to negotiate a mutually acceptable deal prior to a grand jury vote on indictments or prior to the start of court testimony. Nearly all U.S. antitrust cases, both criminal and civil, are settled out of court. A smaller number may even be settled in the midst of formal court hearings, but once guilt has been decreed by judge or jury the only matter subject to negotiation is the severity of the sentence. In criminal cases, prosecutors have a great deal of discretion over which charges to make, the time period of the alleged crime, and how many persons in the

conspiracy to charge. The wording of an indictment on a guilty plea agreement can be crucial in determining both the immediate criminal penalties and future civil liability. The plea agreement can include advantageous language on "the scope and duration of the alleged conspiracy" (Victor 1998:501).

If a company decides to explore the possibility of cooperating with prosecutors and pleading guilty before trial, prosecutors may agree to grant amnesty to the company or to immunize all but a few of the company's employees from indictment. If the company's cooperation comes at an early stage in the multiparty negotiations and the testimony offered is helpful in prosecuting other co-conspirators, all employees may be immunized, subject to full and continuing cooperation with prosecutors.

Since 1978, the DOJ has had a Corporate Leniency Policy that offers full amnesty on fines for companies that are the first to alert the agency about a cartel, so long as the company did not initiate the cartel and no government investigation was in progress. In 1993 an improved policy made amnesty applications automatic for qualified cartelists and grants immunity to all the company's directors and employees (Spratling and Arp 2005). The decision to apply is a complex one; the benefits of U.S. amnesty have to be weighted along with the chances of amnesties in multiple jurisdictions, civil liability, shareholders' suits, and enhanced fines for *not* applying (Zane 2003).

Leniency less than full amnesty may also be negotiated. Prosecutors can also promise to seek reductions in the size of the fine normally required by the U.S. Sentencing Guidelines, subject to court approval. Before concessions are offered, prosecutors need to know in advance how much cooperation they can expect. The degree and type of cooperation is outlined in a proffer letter presented by defense counsel to prosecutors. The second company to offer cooperation in cartel cases can expect to receive about a 60 to 80% discount from the maximum fine. After two defendants agree to plead, the rest typically have no useful new information about the conspiracy, so their ability to bargain is much reduced. Nevertheless, those arriving third or later that agree to plead guilty and cooperate have also been rewarded with substantial discounts from the guideline fines. Immunity agreements usually contain conditions about the degree of continuing cooperation that permit prosecutors to revoke the immunity of a guilty party that becomes recalcitrant. Leniency agreements are rarely overturned by the courts.

Another revision of the leniency policy ("amnesty plus") in the late 1990s extended full amnesty to a company that does not quite meet the aforementioned conditions but instead offers evidence of a cartel in another line of business for which there is no DOJ investigation. If a company qualifies for the Amnesty Plus program but fails to report its second

offense, the DOJ's "Penalty Plus" policy is to seek the maximum fine possible. Discounts are justified by the conservation of prosecutorial resources. Without the offer of downward departures in corporate and personal penalties, many more labor-intense courtroom battles would have to be fought by the government.

Until 2004, DOJ prosecutors could not directly offer relief to defendants from civil damage suits by injured buyers. Even those firms that received amnesty for their cooperation with the government were liable for civil penalties equal to three times the overcharges paid by direct buyers. However beginning in 2004, the leniency program was made more attractive to potential applicants by granting amnestied companies a reduction in *civil* liabilities from treble to single damages. All other members of a cartel are still subject to treble damages.

Guilty pleas or court decisions become *prima facie* (incontestable) evidence of a conspiracy in a civil indictment; moreover, even if an alleged member of a cartel is not indicted or found innocent in a trial, the company can still be made to pay civil damages because in a civil proceeding the standard is the "preponderance of the evidence," not "beyond a reasonable doubt." However, the wording of a company's guilty plea can affect the size of a civil damage award, as can the content of testimony in the rare price-fixing trial. When a criminal investigation is completed, most of the evidence collected that is relevant to assessing a cartel's overcharge is turned over to the plaintiffs during discovery; all the testimony and evidence collected for presentation at trial will become available to the plaintiffs as well. In international cases, documents turned over to non-U.S. antitrust authorities may be ordered to be made available to U.S. plaintiffs (Goldman *et al.* 2003). This evidence may bear on the size of the economic injuries. For these reasons, it is usually to the plaintiffs' advantage to delay settling until most criminal matters are completed.

Although the law and rules of legal procedure give government prosecutors great powers, it must not be forgotten that they bear the burden of proof when a case goes to trial. Moreover, the standard of proof – "beyond a reasonable doubt" – is a very high barrier to surmount. The difficulty of prosecuting criminal international conspiracies is even greater because of problems in gathering evidence outside national borders.

U.S. Prosecution before 1990

Perhaps the first lawsuit by the U.S. government against a global cartel was *U.S. v. American Tobacco et al.* that was filed in 1907 and decided by the Supreme Court in 1911 (ICPAC 1999). There were 94 U.S. defendants and two UK tobacco companies listed as defendants in this massive price-fixing case. One of the indictments brought against

the tobacco firms was that they had agreed to a geographic division of world markets for tobacco products. The American Tobacco monopoly was broken up into several entities and all the defendants were enjoined from allocating world geographic markets in the future. For many years after *American Tobacco* there were few international cartel cases launched by U.S. prosecutors (Klein 1999).

In the 1940s, U.S. prosecutors brought a number of cases against international cartels, some of which involved criminal charges. Most of these cases involved allegations of global market-allocation agreements. Estimates made by scholars writing in the late 1940s place the number of documented international cartels operating prior to World War II at around 179 (Edwards 1944). The principal type of company in these cartels was European manufacturers, but U.S. companies had joined about 60% of those cartels. In the 1930s, cartels were believed to control approximately 40% of world merchandise trade. These mostly Euro-centric cartels operated quite openly, unhindered by concerns of legal prosecution. Among the global cartels indicted for price fixing by the U.S. DOJ were those selling aluminum, dyes, light bulbs, nylon, titanium, tungsten carbide, roller bearings, and precision instruments (ICPAC 1999). Many of these cases involved leading U.S. and European manufacturers engaged in naked price-fixing conspiracies in globally traded products with substantial sales.

Such cases became rare for about 40 years after the early 1950s. The U.S. antitrust agencies continued to prosecute price fixing and bid rigging, but nearly all cases were domestic in scope.

> "For about half a century antitrust did not concern itself with international cartels – either they were not there, or the enforcers could not find them" (Davis 2002: 1).

Commentators on the U.S. antitrust laws were convinced that antitrust could declare victory over price fixing:

> "The elimination of the formal [overt] cartel remains the major achievement of American antitrust law" (Posner 1976:39).

Perhaps the only important international price-fixing case during this period is the well-known uranium cartel, prosecuted in 1975 as *In re Westinghouse Electric Corp. Uranium Contracts*. Most of the few remaining international cartel cases focused on more sophisticated collusive

mechanisms, such as patent pooling.[13] Caves (1996) attributes the pause in discovered global cartels after the early 1950s to several factors. First was the successful prosecution of many global cartels by U.S. antitrust authorities during the Truman administration. Second, the adoption of antitrust laws in a score of industrialized countries immediately after World War II probably had some deterrence effect on the formation of cartels. Third, the largest U.S. manufacturers shifted their behaviors from cooperative to relatively aggressive behavior in the 1950s. They opportunistically invested in the war-ravaged economies of Europe and Asia and broadened their product lines. U.S. foreign direct investment combined with the rapid recovery of major companies in the industrial sectors of Europe and Japan caused global concentration to decline in most industries. Finally, the mix of industries shifted away from homogeneous primary materials and intermediate inputs towards those making differentiated consumer or high-tech capital goods. The latter industries have less incentive to form cartels.

The 1980s were a period of greatly reduced antitrust enforcement. Partly for ideological reasons, the sizes of the two big federal antitrust agencies were cut substantially (Preston and Connor 1992). While there was a continuing commitment to prosecution of domestic price fixing, there was little desire by the new leadership to move the agencies in the direction of novel legal territory by prosecuting global price fixing, even if evidence of such conspiracies had been presented. While the reduced resources of the DOJ managed to bring a respectable number of price-fixing cases each year, they were in economic terms little cases.

Price-fixing enforcement patterns shifted markedly during the Reagan-Bush presidencies in 1981-1992 (Connor 2001: Table 3.1). First, the mix of price fixing cases was altered considerably. Cases against trade associations, which had formerly comprised about a quarter of all price-fixing cases, practically disappeared. Moreover, the proportion of "other" cases, in which the victims were mostly corporate buyers, dropped to less than half of the historical proportion. These types of cases were replaced by allegations of bid-rigging conduct. The bid-rigging cases mostly concerned companies conspiring against government buyers in small geographic markets. Beginning in 1995, a shift toward fewer but larger cases aimed at price fixing by large corporations is apparent.

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[13] The *Singer* cases (1963) involved a conspiracy to pool patents on sewing machines to eliminate Japanese imports into the U.S. market. The *Canadian Radio Patents* case (1962) was similar. The *Quinine* case (1975) involved an arrangement whereby one European company would bid for U.S. government quinine stocks, but would subsequently share its stock with non bidders (ICPAC 1999).

Changes in U.S. Policy in the 1990s

There was a clear change in antitrust priorities at the federal level in 1993, the first year of the Clinton administration. President Clinton's newly appointed head of the DOJ's Antitrust Division, Anne K. Bingaman, announced the shift in a speech given in October 1993.[14] Bingaman (1993) stated that enforcement of international-cartel prosecutions and greater international antitrust cooperation were necessary because of the increasingly global reach of the U.S. economy. Although unknown to those in the audience, Bingaman would follow her words with actions by pursuing five big criminal cartel cases that, because they went to trial, would illustrate the pitfalls and the promise of pursuing global cases.

The first case, the prosecution of General Electric Co. and De Beers Consolidated for price fixing in the global market for industrial diamonds, was an unmitigated defeat for the government. The last, the lysine case, would be cited as a triumph for the Department.[15] When Bingaman made her 1993 speech, the Antitrust Division knew that its year-old investigation of the lysine cartel was turning up strong evidence of a vast global conspiracy.

The *Industrial Diamonds* case was litigated during November-December 1994 but ended with a dismissal by the presiding judge after the government's case was presented. Analysis by the *New York Times* and *American Lawyer* mention the government's lack of preparation and relatively small team as factors in the government's loss, but the major failure seems to have been the absence of a key witness and documents held by a South African alleged corporate conspirator. Three of the four defendants failed to appear at trial and refused to cooperate in pre-trial discovery. As a result, the government was unable to show that prices were exchanged by the two defendants.

The loss of *Industrial Diamonds* was the cause of considerable criticism of the Antitrust Division's thrust towards prosecution of global cartels. Critics charged that big international cases might drain the Division of resources, much as happened in the 1970s when it tackled two big

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[14] While Bingaman graciously gave credit to her predecessor, James F. Rill, for initiating some global cartel investigations, there seems to be little evidence that global price fixing was a high priority during 1989-1992. One or two cases were under investigation in 1992.

[15] Joel Klein, head of the Antitrust Division from late 1995, sometimes cites the *Plastic Dinnerware* cartel as an important transitional case. From 1994 to 1996, 14 guilty pleas were obtained (five corporate, nine individual) in this $100-million-per-year industry. It was precedent-setting because of the large fines (more than $40 million) and the prison sentences for two Canadian executives, the first foreigners imprisoned for Sherman Act violations (Klein 1999). However, the cases were not global in scope.

monopoly cases. Getting documents and witnesses located abroad was likely to be a continuing problem, especially for criminal cases. Critics like William F. Baxter were unsympathetic to pursuing global cartels:

> "[The DOJ] started off with unrealistic ambitions [and a] crusading notion that there's lots and lots of violations . . . The larger companies are well counseled and don't get into the kind of trouble that the Antitrust Division is looking for. So, instead they go after the little companies . . ." (*New York Times* October 22, 1995, §3, p.1).

As prognostication, Baxter's statement is found wanting.

A second international cartel case, *Plastic Dinnerware,* ended in June 1996 with a total of five corporations and nine executives pleading guilty to criminal price fixing. The fines were large ($40 million) and the executives received prison sentences of from four to twenty-one months, the last probably the stiffest ever meted out in a U.S. price-fixing case up to that time. The case is also notable for resulting in sentences for two Canadian citizens, the first foreigners to be sent to U.S. prison for Sherman Act violations.

A third international case was the DOJ's prosecution of a cartel in *Thermal Fax Paper*, a product used in small capacity facsimile machines by households and small businesses. The global industry was comprised of five dominant manufacturers: Appleton Papers, Inc. of Wisconsin, Elof Hansson AB of Sweden, and three Japanese companies (Mitsubishi Corp., Nippon Paper Industries Co., and New Oji Paper Co.). By April 1996, five manufacturers, two paper wholesalers, and six individuals had either pleaded guilty or been indicted for criminal price fixing. Two of the companies and most of the individuals resisted pleading guilty because all of the conspiracy meetings were held in Japan in 1990-1992 and because most of the executives resided in Japan. The resisting defendants argued that the Sherman Act did not apply to offshore conspiracies, a position supported in a brief submitted by the Government of Japan but rejected by a U.S. court of appeals. Japan bases its brief on *comity* – the idea that U.S. antitrust laws cannot be applied if doing so would upset harmonious international relations. Waller (2000) suggests that *Fax Paper* settled the issue of comity in the context of international cartels.

The largest U.S. supplier and its vice president, refused to plead guilty. The *Appleton Papers* case was tried before a Wisconsin jury in early 1997. Without tape recordings of the alleged telephone calls, the government was forced to rely on the testimony of one of the convicted Japanese conspirators to make its case. While the prosecution's witness did

his best, juries tend to view convicted felons that have received "handsome plea bargains" as no better than "mob enforcers turned stool pigeons" (*American Lawyer April 1997:66*). Performance at trial is a "persistent weakness at the Antitrust Division," with a conviction rate of only about 20% *(ibid*).

Bingaman and the Division persevered throughout 1995 and most of 1996 with modest results from their global-cartel strategy. The October 1996 guilty plea of Archer Daniels Midland Co. for lysine and citric acid price fixing changed all that. On virtually her last day in public office, Anne Bingaman was able to enjoy the fruits of four year's labor and a return to the widespread respect for the antitrust laws that had been the mission of her administration.

U.S. Government Sanctions

The DOJ has a panoply of sanctions that can be imposed on guilty cartelists. Injunctions or cease-and-desist orders can prohibit certain conduct, but this is rarely used for naked cartels. A form of corporate probation is also possible but seldom seen. Structural relief, such as mandatory divestitures or restructuring of governance structures, can be undertaken, but most courts are loath to order such extreme measures. The most common U.S. Government sanctions are corporate fines, individual fines, and incarceration of responsible managers.

For 65 years after the Sherman Act first became law, the fines on corporations were modest because the violations were misdemeanors. Until amended in 1955, the maximum statutory fine the courts could impose was $5,000 per count (Connor 1997). Prior to 1960, the average corporate fine in federal price-fixing cases was less than $100,000 (Posner 1976). Moreover, corporations were frequently allowed to plea *nolo contendere* ("no contest") rather that "guilty." The former plea reduced the company's exposure to civil suits because it was not *prima facie* evidence of a crime having been committed that could be used in follow-up civil proceedings. In general, firms regarded the fines and decrees as minor nuisances equivalent to corporate parking tickets (Fuller 1962).

Agitation by government prosecutors, members of the antitrust bar, and other antitrust experts got the attention of Congress. The maximum fines for Sherman Act violations were increased in 1955 and 1974. In 1974, the maximum *corporate* fine became $1 million. In 1990, on the centennial of the Act, the maximum corporate criminal fine was raised to $10 million per count. In 1998, the Assistant Attorney General for Antitrust testified before the Senate Judiciary Committee that the size of the economic injuries being caused by cartels in the 1990s required another increase in the

statutory maximum (Klein 1998). He proposed that it become $100 million per company. That recommendation was made law in 2004.

Two changes in federal sentencing rules have allowed prosecutors to seek higher corporate fines. First, beginning in 1987 the courts have been obliged to apply the U.S. Sentencing Guidelines to companies that plead guilty or that are convicted by trial (Connor and Lande 2006). Prosecutors prepare a brief for the court that explains how the guidelines apply to the particulars of the case at hand; at a sentencing hearing after conviction at trial, the defense will submit a brief that will argue for lower culpability. These guidelines require that the government calculate a "base fine" equal to 20% of the company's net sales in the cartelized market; if prosecutors have reason to believe that the cartel raised prices by much more than 10% due to the conspiracy, it may propose a higher percentage figure. Then the base fine is multiplied by a "culpability score" that rises with the number of aggravating factors (e.g., the company initiated the conspiracy or acted as the cartel's enforcer) and falls with mitigating factors (e.g., it left the conspiracy voluntarily). In many recent cartel cases the culpability multiplier has ranged from about 1.5 to 4.0.[16] That is, the Sentencing Guidelines typically specify fines equal to 30 to 80% of affected sales However, prosecutors can and usually do request large downward departures from the fines implied by the Sentencing Guidelines if the company has offered even minimal cooperation with the government's investigation. The discounts granted by the courts are frequently in the 50 to 90% range.

Second, violations of the Sherman Act were categorized in 1974 to be federal *felonies* rather than misdemeanors. A corporation convicted of any federal felony (fraud, tax evasion, price fixing, etc.) is subject to a conceptually simple fine structure: the larger of either twice the harm caused to citizens or twice the illegal gains. In the case of price fixing, twice the harm is double the overcharge, and this is always larger than twice the gain.[17] These felony price-fixing sanctions are usually referred to as the "alternative fine statute" (18USC §3571). The felony-law alternative will result in a larger maximum fine than the Sentencing Guidelines whenever the overcharge is greater than 40% of sales. One-third of all cartels achieve overcharges of 40% or higher (*ibid.* Table 5). One disadvantage of the twice-the-harm approach is that in a litigation situation the prosecution would have to present expert economic testimony of the size about the company's overcharge during the sentencing phase, and the defendant would

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[16] To be more precise, there are two multipliers specified for each level of culpability. The top end of the fine range is double the low end. For prison sentences, the guideline range is narrower.

[17] Some would argue that the injury also includes the dead-weight social loss (Hovenkamp 1998). In any case, profits will be less than the overcharge because collusion is not a free good.

be obligated to rebut the government's estimate. The Sentencing Guidelines require only company sales, about which there is usually little debate.

It is not clear when the courts should implement the felony standard instead of the Sentencing Guidelines in criminal cases, except in cases where the overcharge is significantly higher than 10%. From the point of view of deterrence effect, a defensible rule would be to calculate both fines and choose the larger.

The first time that the U.S. government's use of the alternative fine provisions came to the attention of the antitrust bar was in October 1996 when the Archer Daniels Midland Co. agreed to pay a $100 million fine for two price-fixing counts. A corporate defense counsel believes that beginning in 1996 "[t]hat . . . is what the government is going to be pushing in every case" (Victor 1998: 502). In fact, the "two-times rule" has been invoked to impose high fines on corporate price fixers scores of times since 1996. Beginning in 2005, a Supreme Court decision (*Booker*) rendered the Sentencing Guidelines advisory rather than mandatory; consequently, the DOJ began to rely upon the alternative sentencing provision for all cartel fines above $100 million.

Sentences for *individuals* who are convicted for price fixing also fall into three categories. First, during 1990-2004 the statutory limit for persons was $350,000 and three years' prison time; in 2004 the maximums became $1 million and ten years in prison. Second, the Sentencing Guidelines suggest that fines ought to be from 1 to 5% of affected sales, up to the statutory cap. Prison time is determined by a long list of specific aggravating and mitigating factors that result in a range of months within which the sentencing judge chooses. Third, fines may also be calculated under the so-called alternative sentencing provision. In the last case, fines of up to $25 million can be imposed on individuals if the cartel's overcharge is large enough. The alternative fine standard was first successfully litigated in 2000. Again, there is some ambiguity in the law as to when the alternative fine provisions can or must be used in criminal cases.

Most penalties for price fixers are the result of pre-trial bargaining between prosecutors and defendants. To avoid a protracted trial but also obtain a conviction, prosecutors will offer "downwards departures" from the guidelines to induce defendants' cooperation. Because the U.S. Sentencing Guidelines already take into account corporate leadership, recidivism, and economic impact, the standard for awarding varying "downward departures" below the guidelines range to cartel participants is simple but not transparent: the degree of corporate cooperation in the government's investigation.

Besides formal downward departures from the Sentencing Guidelines, which must be approved by a federal judge in an open sentencing hearing, there are other tools available to prosecutors to sweeten the deal

for a corporate whistle-blower. One such option concerns the identity of the corporate entity to be named in the plea agreement. Although it is the stated policy of the DOJ to charge both a parent firm and its subsidiary if both engaged in the conspiracy, the DOJ has the flexibility to charge only a subsidiary if it wishes. This option is particularly critical in the case of global cartels because multinational participants often have only minimal assets in the county prosecuting a cartel. Because judges are loath to fine a company in excess of its net assets or ability to pay from revenues, charging a company's small sales office rather than the parent organization can place a very low upper limit on a company's fine. In addition, a company can benefit from the phrasing of its guilty plea agreement, a document that carries the weight of *prima facie* evidence in derivative civil suits. The agreement may use language that defines the cartelized market in a narrow way or minimizes the length of the conspiracy period. In other words, the precise description of the illegal activity can reduce the implied size of the overcharge and, hence, a firm's liability for civil damages.[18] An uncommon concession is for the DOJ to negotiate a favor from another government department for a company willing to plead guilty. An example is failing to disbar a guilty company from signing sales contacts with the federal government. Finally, numerous concessions may be extended to employees of the conspiring companies. For executives residing outside the United States, the DOJ can offer a convicted felon a right that is normally taken away, the ability to cross U.S. territorial borders.

Cartel Sanctions: Canada and the EU

Canada has had since 1990 an upper fine limit of C$10 million for price-fixers, but this limit applies only to domestic conspiracies (Low and Wakil 2004, Low 2005). There is no cap on fines for international price fixers. While there are no written fining guidelines, by the late 1990s corporate fines followed a predictable pattern. The first company to plead guilty and agree to substantial cooperation with the government would be fined 10 to 12.5% of its Canadian affected sales. The second firm or group of firms to plead guilty and agree to cooperate would be fined 20% of sales. Cartel participants that came forward well after the second wave and uncooperative firms were required to pay 30%. Only an inability to pay or the occasional amnesty might cause a departure from this fine schedule.

In the EU since the passage of the Treaty of Rome, corporate members of cartels have been subject to maximum fines of 10% of sales in

[18] Some cease and desist orders are crafted in ways that resemble house arrest or a suspended prison sentence for an individual. Capital punishment for corporations (i.e., fines that lead to bankruptcy) is pretty much off the table.

the year prior to the year in which the EC makes its decision. Harding and Joshua (2003) state that EU fines are supposed to incorporate both compensatory and punitive components, and that the latter is to serve deterrence (p. 240). The EC's fines can be based on the *global* sales of an offending firm in *all* its lines of business, but in practice cartel fines tend to be correlated with a violator's EU sales in the affected line of business only (Connor 2001: 401-407).

The EU adopted guidelines in 1998 for calculating firm-by-firm fines (Harding and Joshua 2003: 240-252). First, the EC considers the "gravity" of the offense. Although a matter of discretion, cartels are usually placed in the "very serious" category, which is the highest of three levels of antitrust infringements. Cartels with large damages that are geographically widespread add to the gravity. The fine calculations base for the most serious infringements start at €20 million. Second, to account for disparities in the power of fines to deter, relatively large companies are fined more than smaller participants: in several global cartels, companies in the upper half of the cartel's size distribution had their fines doubled. Third, fines are increased by 10 percentage points per year for each year the cartel is effective. Fourth, these three factors result in a base fine (called a "basic amount") for each company that is adjusted for culpability; upward for cartel leaders and downwards for various mitigating factors.[19] Fifth, under the EU's Leniency Notice, violators are given 10% to 50% discounts for their degrees of cooperation. In a few cases, amnesty has been granted. Finally, after applying the last five steps, the Commission ensures that fine amount does not exceed 10% of global sales in the year prior to the date of the decision.

The EC's 1998 guidelines for cartel fines give an exaggerated impression of the degree of precision of the process in practice. Moreover, firms can and usually do appeal the EC fines to the European Court of First Instance, where they often receive modest downward adjustments. Nevertheless, the fines meted out by the EC for 15 cases of global price fixing during 1990-2003 reached an impressive $1,852 millions (Connor 2003: Appendix Tables 11 and 12). The first global cartel fined in the 1990s was lysine.[20] This fine of nearly $100 million was the fifth largest ever imposed

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[19] Similar to U.S. practice, mitigating factors include playing a purely passive role, non-implementation of the agreement, immediate termination after discovery, and good prior antitrust training programs.

[20] The EC's lysine investigation was launched one year after the FBI raids were publicized and four years after the FBI's probe began. The EC's decision was announced on July 27, 2000, four years after the DOJ's convictions. This count of global cartels excludes three shipping conferences fined in 1992 and 1998: the previous largest fines on the TACA conference were reduced to zero by a 2004 decision of the European Court of First Instance.

EC and the first of 11 global-cartel fines up to mid 2003. In 2001, decisions were reached in four huge cartel cases with total fines of $1,115 million (together with other antitrust fines, DG-COMP imposed €1.8 billion in fines in 2001). In 2002, the EC announced an historic decision to fine four companies $250 million for global price fixing in the market for the amino acid methionine; this is the first time since 1990 that the EC has prosecuted a global cartel prior to a U.S. conviction.

Suits by Private Parties

The United States

The 1914 Clayton Act authorized private suits for treble damages and reasonable legal costs (Hovenkamp 1999). The idea of making injured companies or individuals into civil prosecutors was consistent with ancient traditions of English common law that were absorbed into American jurisprudence, yet the United States is one of the few countries in the world that permits private citizens to prosecute antitrust violators for substantial compensation.[21]

Treble-damage awards provide for compensation (the overcharge), for the costs and risks of private investigation and legal costs, and a punitive component.[22] By specifying that plaintiffs should be awarded settlements equal to *triple* the economic damages inflicted by defendants, Congress intended private parties to inflict punitive sanctions on antitrust violators so as to deter those violators (specific deterrence) and their potential imitators (general deterrence) from repeating their illegal behavior. In addition, the award of treble damages was intended to deny conspirators the fruits of their illegal conduct (the monopoly profits) and to compensate victims for overcharges on their purchases, the costs of investigating possible

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21 Since 1990 Australia, the U.K., Germany and Canada have introduced laws permitting private antitrust suits for single damages.

22 There is a lively debate in the law-and-economics literature over the desirability of treble damages suits. Papers published in the 1970s and 1980s expressed concern that treble damages would encourage buyers to delay suing price fixers in order to increase their legal recoveries – a perverse incentive. Other researchers have suggested "neutral" welfare consequences; that is, private suits result in pure income transfers with no social welfare impacts. The latest word in this stream of the literature is Besanko and Spulber (1999). Their game-theoretic model with apparently reasonable assumptions deduces that treble damages generally leads to positive welfare increases if the probability of conviction and the multiple of damages recovered are high enough.

violations, and legal costs. Because the burden of proof is on the plaintiffs, single damages would in many cases lead to awards that were less than the illegal profits obtained by conspirators.[23] Moreover, given that legal costs are typically 10 to 30% of the treble damage awards, plaintiffs would recover much less than their injuries had Congress specified that only single damages could be recovered. Treble damages are high enough to provide a reasonable incentive for private parties to bring suits that have some deterrence effects. More than treble damages could lead to frivolous suits or the use of antitrust suits to harass rivals (White 2000). Even the most jaundiced observers of class actions concede that follow-on private actions are needed for deterrence (Baker 2004: 383).

Not all conspiracies in restraint of trade cause compensable harm to buyers or sellers. It is possible for a cartel to be formed with every intention to manipulate a market for the cartel's benefit and yet fail miserably in the enterprise. Ineffectual conspiracies are illegal and are prosecutable by the government, but they would not invite civil treble-damages suits because no direct harm could be demonstrated.

When private plaintiffs believe a price conspiracy was effective, they face three tests.[24] They must prove in court that price fixing *occurred,* using as a standard of proof "reasonable certainty." In addition, plaintiffs must establish that compensable harm was the *direct result* of the conspiracy. The weight of the evidence, must demonstrate that the price effects did not derive from some other market conditions. Finally, plaintiffs must have a reasonable basis on which to base their claims concerning the *size* of the damages, which is where expert economists come into the picture. Therefore, although the standard of proof (i.e., the preponderance of the evidence) is lower for civil cases than for criminal cases, the amount of evidence that must be prepared to be presented in court is greater and often more complex. The list of additional challenges facing plaintiffs in international cases is quite long (Adams and Metlin 2002). Many civil cases are settled prior to or during actual court proceedings through negotiated settlements.

Direct buyers that believe they are victims of a cartel must first file suit in their local U.S. District Courts, often without knowing about similar allegations in other court districts. Tipped off by press reports of a government investigation or simply suspicious behavior by sellers, buyers may approach a lawyer to try to interest the law firm in filing a suit in the court

[23] Legal practice does not allow defendants to subtract the extra costs associated with operating a cartel from the extra profits made. Nor can the fines and damage awards be counted as costs of doing business for income tax purposes.

[24] There is a fourth test that is usually not an issue. Plaintiffs must show that the last violation occurred no later than four years prior to filing the case.

district where the alleged violations took place. Alternatively, price-fixing suits may be instigated by attorneys who learn of grand-jury investigations, possible plea bargains, or impending government indictments. These attorneys then try to identify groups of purchasers who may have been harmed by the conspiracy, alert them about possible settlements the buyers might receive, and sign them up as clients. In either case, as soon as at least one purchaser and one antitrust lawyer judge the suit winnable, a suit is filed alleging price fixing that names the product, defendants and gives other facts about the alleged illegal acts.

The announcements of criminal indictments or convictions will bring more injured parties forward as plaintiffs because of the publicity itself and because the chances of winning a favorable settlement increase. However, not all civil cases tag along after criminal ones. There are many more private antitrust cases filed in federal courts than there are cases brought by public prosecutors (White 1988). Occasionally, private parties may bring even price-fixing cases that the government has decided not to investigate or litigate.

Since changes in federal rules of procedure in the 1970s, treble-damages suits scattered across several court districts have been consolidated by the courts into "multi-district litigation," more commonly known as class actions (Calkins 1997).[25] If a panel of judges determines that the alleged violations and defendants are similar enough, the suits filed in multiple U.S. federal court districts are gathered up into one action assigned to one supervising federal judge. The location is often chosen for the convenience of the plaintiffs or defendants but the workload of the court district is also a consideration. The class-action route is particularly important when the buyers are mostly small companies or consumers.[26] This process allows many scattered claims to be unified. It enhances efficiency by spreading the more or less fixed costs of litigation over a greater potential settlement amount.

Launching a class-action suit is chaotic. For the plaintiffs' law firms, there is often great uncertainty about the odds of winning a settlement and the prospect of negotiations and litigation against typically well financed defense counsel with no compensation for up to five years or more. Nevertheless, as more and more information becomes available about the dimensions of the conspiracy, its time span, and the identities of the conspirators, dozens or scores of law suits may be filed all around the

[25] Federal class-action suits were made much easier to file after important amendments to federal court procedures in 1966.

[26] The class action *In re Domestic Air Transportation Antitrust Litigation* (N.D. Ga. 1993) had 12.5 million air travelers as plaintiffs. The presiding judge must also be satisfied that plaintiffs' counsel have a feasible plan for contracting all potential award recipients.

country. As soon as the number of plaintiffs begins to stabilize, their counsel will negotiate a common set of allegations and petition the courts to consolidate their many cases into one or a few cases.

Usually within a year or so of the first filing, the supervising judge will "certify" the federal class, that is, determine that all the plaintiffs have standing to sue for damages from the same set of defendants. The judge assigned the consolidated case holds hearings to certify that the plaintiffs are numerous and have similar complaints. Next, the judge chooses one or a very few lead counsel to represent the class. The lead law firm may be proposed by a majority of plaintiffs' counsel, may be appointed by the judge upon application, or may win the right in an auction.

Most private civil antitrust suits are filed by plaintiffs who are able to convince a law firm to take the case on a contingency basis. After a case is filed in court, evidence is gathered by both sides under a process called "discovery." During discovery, plaintiffs will demand business records or other evidence from defendants relating to a conspiracy. Moreover, defendants or others that may have relevant information are required to be deposed under oath. If economic or technical evidence is to be presented in court, the written opinions of testifying experts on both sides will be exchanged followed by rebuttals from each; the experts may be deposed as well. In big cases, dozens of experts may be employed to develop briefs and affidavits, but only the testifying experts may be deposed by the opposing sides.

The decision to join a suit as a plaintiff may not be an easy one for many companies. Buyers who sue face the disruption of what often times is a comfortable supplier relationship. Moreover, because cartels arise in concentrated industries, the number of alternative suppliers is severely limited. Suppliers that have been identified as cartel participants typically are desperate to hold on to their market shares in the tumultuous conditions following disclosure, so they may renegotiate better supply conditions with loyal customers. The improved contract terms have the effect of making buyers more reluctant to sue. Although long shunned by major corporations, class actions are increasingly being joined by leading firms that have decided that turning down potentially large recoveries was not in their shareholders' interest (Crawford 2004).

If a negotiated settlement is proposed prior to a trial (or the conclusion of a trial), the judge holds a "fairness hearing" in which the defendants and class counsel will present arguments and evidence that the settlement amount is "fair and reasonable." This is a fairly elastic standard, particularly if the hearing is scheduled without any prior criminal guilty pleas.

Finally, after approval of the settlement, members of the class may agree to take a prorated share of the settlement (net of legal fees and costs),

or they may opt to leave the class. The opt-outs file individual suits but usually try to settle later for larger recovery rates, though some may not settle out of court at all. If no settlement can be negotiated, the class action may go to trial and be heard by a jury or, if the defendants prefer, a judge only.

Indirect buyers are those who did not purchase from members of a collusive group yet were injured because a direct buyer passed on all or some of its overcharge when it resold the product (or sold a product containing some of the monopolized goods). If a direct buyer absorbs the entire overcharge, then indirect buyers are unharmed, but most economic models conclude that direct buyers pass on from 50 to 100% of their overcharge. It is possible that a direct buyer may use the occasion of a cartel-generated price increase to raise its price by a percentage that exceeds the original overcharge percentage (Cotterill *et a1. 2000*). Since a 1977 Supreme Court decision captioned as *Illinois Brick,* indirect buyers have had no standing in federal court to sue in price-fixing cases. However, about half of the states do permit indirect-purchaser suits, whether as single or class plaintiffs, and the Supreme Court has decided that the states were within their rights to do so. Indeed, multi-state classes of indirect buyers can be formed. Virtually all of the states have antitrust laws that allow civil antitrust litigation to be decided under principles and procedures that are very similar to federal law.

The final type of plaintiff is the state itself. The Federal and state governments can be parties to suits by virtue of being a direct purchaser from a cartel, but the more interesting case relies on the legal principle of *parens patriae.* Rooted in English constitutional law, this principle allows states to sue in federal court in its sovereign capacity on behalf of its citizens (Calkins 1997). There are *parens* suits that predate the formation of the Republic. A couple of high court decisions in the early 1970s threw into doubt the power of states to invoke *parens patriae* to recoup treble damages from price-fixing conspiracies for their corporate or individual citizens. However, in 1976 Congress enacted Section 4C of the Clayton Act to make such state authority explicit. The clear intent of Congress was to make state attorneys general consumer advocates in the area of antitrust enforcement in recognition of the fact that consumers often have no other recourse to obtain compensation for antitrust injuries. Section 4C empowers state attorneys general to file civil antitrust actions in federal court to seek treble damages for consumers and intermediate buyers that reside in their states. The attorneys general may negotiate or litigate settlements individually or as groups; when litigating as a group, the states essentially form a federal class of plaintiffs.

Private antitrust suits provide complementary deterrence with public prosecutions. Civil class-action suits are a vehicle especially suitable

for permitting small buyers – small firms or consumers – to win relief against price-fixing conspirators. The conspirators are mainly large, powerful corporations in highly concentrated industries. Their great wealth and access to legal resources generally brings a David-and-Goliath aspect to antitrust class actions. Some conservative legal writers view private enforcement as superior to public enforcement because the former operates by market-like incentives (Posner 1976).

Yet, there are many legal commentators that have misgivings about class-action treble damages suits. The theoretical liability facing criminal price fixers in the United States seems to be high. Combining the maximum U.S. liability facing corporate price fixers from government and private prosecutions after 1990 was *six to ten times* the cartel's overcharge. However, the actual monetary sanctions are almost always much lower multiples of damages. In the case of international cartels operating outside North America, fines are even lower proportions of the harm caused.

In part, the debate over the desirability of class-action treble-damages suits reflects a wider debate on the social benefits of treble damages themselves. Some believe triple damages to be unnecessarily high to deter (Easterbrook 1986), while others argue that plaintiffs often receive at most single damages (Lande 1993). If plaintiffs really do get close to single damages, then civil penalties alone provide virtually no deterrence because only a small portion of all conspiracies are discovered and prosecuted. The best economic study of this issue concluded that only 13 to 17% of all illegal U.S. cartels are caught (Bryant and Eckard 1991). If true, then six-times the overcharge is required to deter price fixing. Moreover, buyers who had to exit a market because of cartel-elevated prices are rarely compensated (Page 1996). Calkins (1997:441) suggests that the rise in successful government prosecutions makes the need for supplemental deterrence from civil cases much less justifiable. However, in the three global cartels examined below, it will be shown that the criminal fines imposed in the United States were less than one-half of the best estimates of actual overcharges, so the case for "supplemental" civil punishment would appear to be still strong.

Private Suits in Canada and Europe

Canada is one of the few jurisdictions outside the United States with effective private antitrust remedies (Goldman *et al*. 2003). As in the United States, private actions usually follow upon government indictments. Introduced in 1976, private suits were little used until Ontario issued formal class-action rules in 1992. Now at least four other provinces have such laws, but plaintiffs from any part of Canada may join a provincial

suit. “The situation in Canada increasingly reflects that of the United States and, in the event of a conviction of and international price fixing case in the United States … the commencement of one or more class actions in Canada … is now a virtual certainty” (*ibid.* p. 7).

Complementary private suits in the national courts of the EU have been encouraged by decisions of the European Court of Justice since at least 1976, spurred in part because of low deterrence of cartels in Europe. Under EC Regulation 1/2003, national courts are authorized to use EU competition rules to award “damages to the victims of infringements” (Olsen 2005). Nevertheless, a study commissioned by the EC found that private antitrust litigation is “totally undeveloped” in the EU (Ashurst 2004). Obstacles to this route include the inability of private parties to obtain evidence gathered by the DG-COMP (unless published), the “loser pays legal fees” rule, and disappointingly small damages awards. Although U.S. law has clearly inspired EU antitrust decentralization, adoption of treble damages seems unlikely at this juncture. Perhaps the most likely scenario is that the UK or Ireland, jurisdictions with generous discovery rules, will become the legal fora of choice for EU plaintiffs (Olsen 2005).

Estimating Damages

Figure 3.1 illustrates the degree of overlap between economic concepts of injury and the legal treatment of damages in the case of an effective price-fixing conspiracy. There are five potential groups that may be harmed by price-fixing. (Although illustrated by a case of raising the selling price of a finished product, the analysis also applies to cases where cartels collude to reduce the price paid for input).

The first and clearest case of damages occurs in the case of actual *direct purchasers* who pay an inflated price called the overcharge (rectangle A in Figure 3.1). Direct buyers of lysine spend P_mQ_m during the conspiracy, which generates “excess” or “monopoly” profits of $(P_m\text{-MC})Q_m$. Under economic reasoning the entire monopoly profits rectangle A is an income transfer from buyers to the cartel and should be considered damages, but under legal standards only the upper portion of the rectangle $(P_m - P_c)Q_m$ is recoverable as damages. Direct buyers have had standing to recover the overcharge since the first federal case was decided.

A portion of the overcharge is passed on to the indirect buyers of products containing the monopolized product Q. For example, hog and poultry farmers who buy prepared animal feeds containing lysine are harmed by a higher price of animal feed. Indeed, if an indirect buyer has a

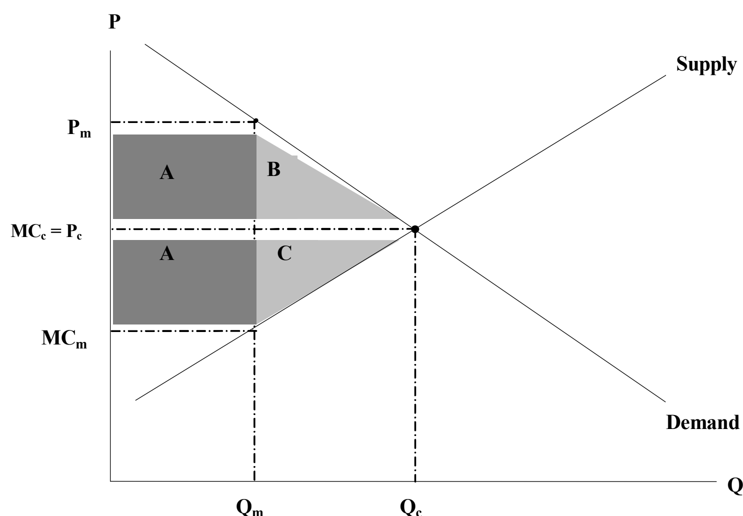

Figure 3.1 Welfare Effects of Collusion.

"cost-plus" contract with a feed manufacturer, all of A is passed on to the farmer. With other purchasing methods, rectangle A usually shrinks depending on the location of the *derived* demand and supply curves. In some cases, however, the overcharge on consumers can be larger than the direct overcharge. Under many state antitrust statutes, indirect overcharges are recoverable in state courts, but since the famous *Illinois Brick* decision of the Supreme Court in 1977, no standing is given to indirect buyers in federal courts. Since 1977, bills have been introduced in Congress each year trying to overturn the *Illinois Brick* ruling, but none has yet passed. If federal law did permit indirect-purchaser damages to be awarded, then a good case could be made for awarding only *lost profits* to direct buyers (Hovenkamp 1998:652).

A third group of buyers may be harmed. If a cartel does not enroll all the producers in an industry, it may happen that nonconspirators ("fringe" firms) raise their prices toward the monopoly price P_m (the "umbrella" effect). Direct buyers from noncartel sellers are harmed, while the fringe firms enjoy serendipitous excess profits during the conspiracy period. There is no Supreme Court ruling on standing this case, but while U.S. District Courts are split on the issue, the majority have allowed standing for this type of injury. Thus, cartel members are liable to pay damages even to direct buyers of output sold by nonparticipating sellers.

A fourth group harmed by price-fixing is those forced to buy inferior substitutes or those who reduce their purchases in response to a higher price. This injury is represented by the consumer portion of the dead weight loss (triangle B in Figure 3.1). Dead weight losses are social losses because both producers and consumers incur harm. Although well accepted as a loss in economic theory, the parties incurring dead weight losses generally have been denied standing. One basis for denial is the legal reasoning that treble damages are meant to deny conspirators the fruits of their illegal conduct, but the dead weight loss is not a gain to conspirators. In addition the courts view these losses as "remote" and identifying which non-buyers are injured a speculative exercise. Many legal commentators believe actual calculation is problematic, but formulas available are quite feasible to apply. However, the courts might allow damage claims if parties can show "a regular course of dealing with the conspirators" during non-conspiracy periods. The dead weight loss should be computed when assessing penalties in *public* prosecutions even when they are not permitted in private antitrust suits.

The last injured group is those suppliers of factors of production to the conspirators who lose sales or income due to output contraction. This corresponds to triangle C in Figure 3.1, the supply side of the deadweight loss. The courts do not usually allow standing for such parties, such as workers forced into unemployment, because the injuries are viewed as indirect or remote. A clear exception is that standing is allowed for employees who were fired because they refused to participate in price-fixing arrangements or became whistle blowers.

Estimation of the overcharges to direct buyers is in principal straightforward. $P_{m,}$ the actual price paid by buyers, and $Q_{m,}$ the volume sold during the conspiracy can be obtained from the business records of the plaintiffs or more conveniently from the cartel members during pre-trial "discovery." Other information required is $P_{c,}$ the price that would have governed sales "but for" the illegal conspiracy and the length of the conspiracy period.

Determination of the unobserved "but for" price P_c is often the most contentious area of expert opinion (Connor 2004b). The correct level of P_c can be calculated in five ways: 1) finding a "yardstick," i.e., a price in a comparable geographic area or industry with no conspiracy; 2) the "before and after" approach (that is, examining price levels immediately before or after the known conspiracy period); 3) assuming that gross margins remain constant; 4) econometric simulation of demand and supply relationships to obtain the competitive price (a dummy variable can be inserted to model the conspiracy period); and 5) information on cost of production by the conspirators (proprietary information on production capacity, utilization,

variable costs, and fixed costs of manufacturing and distribution). In the case of cartels, the defendants are not entitled to presume that they had collective market power prior to their conspiracy. That is, the competitive price is normally the appropriate but-for price (Hovenkamp 1998:660).

In proving the extent of damages incurred by plaintiffs in civil conspiracy cases, the intent of the conspirators must be sharply distinguished from the degree of success in fixing prices. Strictly speaking, even an admission of guilt by the conspirators does not imply that the market's price was affected as intended. For example, conspirators may believe that their initial increase in list prices immediately caused transaction prices to rise, whereas market factors were in fact responsible. Thus, an appropriate damage analysis must be neutral with respect to either allegations or admissions by the defendants.

The Question of Timing

As mentioned previously, in permitting civil treble-damages suits, Congress envisioned that such suits would follow criminal indictments and convictions obtained by federal antitrust agencies. This is the historical pattern observed in most civil antitrust suits. The great advantage to civil plaintiffs is their ability to enter criminal guilty pleas or verdicts as *prima facie* evidence in civil litigation. However, it may be in the defendants' interests to offer civil settlements after being indicted but before they enter their guilty pleas. Defendants might wish to settle early to avoid bad publicity or to remove an impediment to a planned merger. Defendants may also offer early settlements to private antitrust plaintiffs because to do so would significantly reduce the size of the award compared to what they expect to pay after their pleas are entered.

Early settlement offers become beneficial to defendants when during plea bargaining it becomes apparent that the probability of indictment and successful prosecution is quite high. In the months proceeding making their pleas, defendants have a significant information advantage over the plaintiffs who harbor great uncertainty about the size of the expected settlement. Since the federal sentencing guidelines for criminal antitrust violators began to be implemented, guilty pleas are often accompanied by information on the defendants' overcharges or the size of the market's sales affected by the cartel. Once this information becomes public, plaintiffs' uncertainty about an appropriate minimum settlement amount is greatly reduced and, consequently, their bargaining position is enhanced. In other words, what might appear to be a generous settlement offer prior to guilty pleas becomes far less tempting after the prosecution lays out its justification for the fines levied in open court.

Forensic Economics

The role played by economic analysis in antitrust policy-making, public-agency prosecutions, and private litigation has greatly expanded in the last 30 years or so (Einhorn 1993, Coate and Klein 1996, Connor 2006d)). U.S antitrust agencies have scores of industrial organization economists on their rosters. These economists have had strong influence on antitrust enforcement since the mid-1970s. "Chicago School" ideas and the "New IO" movement affected the merger, vertical power, and price discrimination areas, but attitudes toward price-fixing did not alter very much if at all (Shepherd 2000). The major change in thinking may have been the issue of whether much observed collusion is achieved tacitly and the role of facilitating practices in collusion (and therefore putatively legally) (Hay 2000, Gertner and Rosenfield 1998). Perhaps the greatest contribution of economics to cartel policies was the use of game-theoretic concepts in the design of the U.S. Corporate Leniency Program (Kovacic and Shapiro 2000).

Private damages suits almost invariably require the services of forensic economists experienced in antitrust legal proceedings. Essays by forensic economists demonstrate the wide array of techniques employed to solve concrete legal questions, the stimulation that law cases provide for new research ideas, and the satisfaction that arises from influencing high-stakes legal battles (Slottje 1999). Consulting economists have been witnesses in antitrust trials since the 1960s (Kwoka and White 1994). Many are academics or solo practitioners, but recent decades have seen the rise of large economic consulting firms that specialize in regulatory or antitrust matters.

In the prosecution of cartels with sufficient evidence of an explicit agreement, the *per se* rule implies that the role of economic analysis will be limited mainly to rough estimates of the overcharge as a basis for negotiating the fine. If a criminal trial is held, defendants may engage economists as advisors to provide arguments as to the ineffectiveness of the cartel. Even though evidence on the issue should be irrelevant, defense counsel will try to sow doubt about price effects in the jury. When only circumstantial evidence of an agreement is available, the testimony of economists may be needed to assist a jury in inferring the existence of an explicit agreement. During the sentencing phase of a criminal trial the size of the monopoly overcharge or dead-weight losses may require economic opinions to guide the presiding judge.

In treble-damages cases, the role of forensic economists is often crucial because the size of injuries is the main issue to be decided or negotiated. The limited sophistication of juries or non-specialist judges will put a premium on simple analytical approaches and on the persuasive skills of testifying experts. While more advanced theoretical or empirical points

will often be presented in expert opinions, these exercises will often serve only to confirm opinions reached by simpler means or to neutralize the weight of the evidence presented by the other side during trials or negotiated settlements.

International Cooperation

Traditionally, when an antitrust agency needed information located beyond its territory, it could rely on either diplomatic channels or letters from a judge called rogatory requests (ICPAC 2000). National sovereignty made responses to such requests purely voluntary on the basis of comity. Prior to the 1980s, requests for antitrust assistance through these channels were often turned down because of national concerns about foreign interference with national firms, trade secrets, or substantive differences in legal principles. These difficulties were recognized as early as 1930 by the League of Nations (Decugis 1930). In the late 1940s, U.S. prosecution of the rubber, potash, and quinine cartels did not lead to parallel actions by European antitrust agencies in the countries in which the cartels were hatched (Edwards 1967). A 1948 U.S. antitrust suit (*U.S. vs. De Beers Consolidated*) failed mainly because the U.S. locked jurisdiction over cartel participants.

Many sticky issues remain, but several DOJ prosecutions of global cartels have involved cooperation with the antitrust agencies of other countries (Davis 2002). Since the early 1980s, DOJ investigations of global price fixing have been relatively unhindered by national blocking statutes abroad that prevented some corporations with headquarters outside the United States from providing documents or depositions even when the firms wished to cooperate. Foreign antitrust units are increasingly imitating the successful investigations or prosecutions initiated by the U.S. DOJ and offering material assistance under various international agreements. Compulsory document sharing and extradition issues are still divisive.

One relatively new development has been the signing of formal bilateral antitrust agreements. The first was signed by the United States and Germany in 1976. By the end of 1999, the United States had six more agreements of this type with Australia (1982), Canada (1984), the EU (1991), and 1999 with Israel, Japan and Brazil. They are not treaties but rather agreements by the Executive Branch of the U.S. government with the ministries of other countries. The purposes of these bilateral agreements include enforcement cooperation, information exchange, regular meetings, technical assistance, and mechanisms for dispute avoidance. Confidential information cannot be shared under these bilateral agreements, so in 1994 Congress passed the International Antitrust Enforcement

Assistance Act (IAEAA). The IAEAA permits U.S. antitrust agencies to engage in reciprocal exchange of confidential information with foreign antitrust agencies, except for merger filings. The first IAEAA agreement was signed with Australia in 1999. While exchanges under the IAEAA can occur for either civil or criminal cases, the United States has much more experience with a far larger number of Mutual Legal Assistance Treaties (MLATs). These treaties, which encompass only criminal matters, must be approved by the U.S. Senate. At the end of 1999, the United States had entered into 30 MLATs and another 20 or so were awaiting Senate approval (ICPAC 2000). The Antitrust Division of the DOJ reports many positive experiences in using MLATs, with nearly all such cases involving global price-fixing investigations. Article 15 of the North American Free Trade Agreement requires cooperation and some rudimentary harmonization of antitrust laws among the three signatories. In general, U.S. and foreign antitrust officials favor continuation and deepening of these various bilateral arrangements.

One issue currently facing U.S. antitrust officials is the extent to which the country should cooperate in multi-lateral solutions to antitrust enforcement. Perhaps the first successful international antitrust agency was the 1951 European Coal and Steel Community (ECSC). ECSC rules cover price fixing, mergers, and dominant firm behavior. Although not its principal objective, the ECSC has preserved and increased European competition in the coal and steel markets (Edwards 1967). Indeed, the success of the ECSC was a major stimulus to the formation of the European Economic Community (EEC), to which the ECSC belongs, and the inclusion of competition laws in the 1957 Treaty of Rome.

The General Agreements on Tariffs and Trade (GATT) was recently replaced by the World Trade Organization (WTO). Most of the work of the WTO's small secretariat has been directed at resolving bilateral trade disputes, but the agency is interested in sponsoring international antitrust rules. While not all of the WTO's 135 members have antitrust laws, several observers have recommended that the WTO make the development of global antitrust laws a priority. The EU proposed a binding WTO agreement on hard-core cartels (Evenett 2003). U.S. officials seemed disinclined to cooperate on such a broadening of the WTO's mission. ICPAC (2000) suggested that the WTO needed to expand its expertise in antitrust and then confine itself to government restraints on competition, not private ones, except where private practices may restrain international trade.

Cartel Sanctions

The focus of this section is on the outcomes of cartels prosecutions, especially the monetary and penal antitrust sanctions that have been imposed on discovered private international cartels since January 1990 (Connor 2004a, Connor and Helmers 2006). Monetary sanctions include *fines* imposed by antitrust authorities on both corporations and individuals. Monetary sanctions also include *recoveries* made by direct and indirect buyers of cartelized products that have brought private actions; most often these payments are made as a result of settlements made out of court prior to trial, but in a few cases are litigated judgments of a trial judge or jury. Private recoveries usually do not include the legal fees of defendants, which may be substantial but are almost never revealed. However, payments made by defendants to settle private class-action suits do include the legal fees and costs incurred by plaintiffs in prosecuting their cases.

An informal survey of the Web sites of 34 of the world's antirust authorities by the author in 2005 found statistics suggesting a great deal of activity in cartel enforcement. Every site showed some cartel investigations, filings, or decisions in process. Counting the peak year during 1990-2002, these 34 agencies were handling or had disposed of a total of no less than 2,600 cases of alleged horizontal restrictions. Except for a couple of new authorities with large backlogs, every authority with a time series had upward trends.

A more authoritative confidential survey of 18 of the largest antitrust authorities reports on cartel enforcement for the years 2001-2003 (ICN 2005a: 56). Using apparently consistent definitions, this survey found that there was an annual average of 199 cartels cases decided, of which 59% carried monetary penalties. Corporate penalties totaled $1.5 billion per year ($4.3 million per firm), and individual penalties $5.5 million ($127,000 per person). Prison sentences averaging 21 months of incarceration were being handed down to 21 persons each year (almost all by the U.S. courts).

The sanctions data discussed in this section cover only what Evenett *et al*. (2001) call "Type I" and the OECD calls "hard-core" international cartels. *International* cartels are those that have participants from two or more countries; the qualifier does not refer to the geographic scope of the cartel's agreement. *Type I* or *private* cartels are those that operate without the protection of national sovereignty. Thus, legally registered export cartels are not private, nor are cartels established by parliamentary statutes or by treaties among nations. Private cartels may contain state-owned or controlled corporations, but if such cartels can be prosecuted under the antitrust laws of any jurisdiction, they are considered private schemes. Connor (2004a) examines only those international cartels that

were "discovered" between January 1990 and July 2003. By *discovered* it is meant that they were prosecuted by a recognized antitrust authority, found liable for damages in a private suit, pleaded guilty to a criminal indictment, or agreed to pay damages in an out-of-court settlement.[27] The choice of 1990 is somewhat arbitrary, but is meant to capture the beginning of the current level antitrust sanctions in the United States, the EU, and Canada.

Cartel Fines in the United States

The DOJ's notable success in prosecuting international cartels after 1995 may be traced to several amendments to the law and improved investigatory techniques (Connor 2001, Baker 2001). First, the Sherman Act's penalties were steadily increased by amendments in 1955, 1974, 1987, and 1994 (Connor 2003: Table 8). In 1974, maximum corporate fines were increased twenty-fold and participation was made a felony. In 2004 the maximum statutory fine was increased to $100 million and the maximum prison sentence from three to ten years. Second, around 1993 an enforcement policy shift took place in the DOJ that placed a higher priority on investigating international antitrust violations and that instructed the FBI investigators to employ all the tools of their trade to collect evidence.[28] Armed with enhanced powers to sanction firms and their managers, prosecutors bargained hard to obtain confessions and to "flip" conspirators into useful witnesses against their co-conspirators. Prosecutors became sophisticated in their use of amnesty, leniency, or other blandishments to induce cooperation by exploiting the Prisoners' Dilemma. Third, the DOJ has introduced a number of methods of cooperating with other jurisdictions (ICPAC 2000, Pate 2003). Protocols between agencies permit sharing of information; Mutual Legal Assistance Treaties facilitate joint investigations; other bilateral treaties have legalized extradition of cartel managers; and regular meetings of enforcement officials have fostered the exchange of effective enforcement techniques.

Prosecutions of international cartels have become the top priority for the DOJ. Prior to 1995 less than 1% of the corporations accused of criminal price fixing were foreign-based firms; after 1996, more than 50%

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[27] By "prosecuted" I mean to include payments of civil penalties for violations of competition regulations as in the EU, criminal indictments, and announced formal investigations. The latter typically result in fines or guilty pleas.

[28] Prior to 1993 the FBI had treated price fixers with the gentleness accorded a shoplifter, and price-fixing fines had been cheerily paid with all the embarrassment associated with a parking ticket. But after 1992, price-fixing probes had all the trappings of a major conspiracy by the worst types of organized criminals (Eichenwald 2000).

were non-U.S. corporations (DOJ 2004, Hammond 2005). Fines imposed on global price fixers escalated steeply from 1996 to 1999, with new record amounts collected nearly every year. In 1999 alone, the $900-million-plus collected from international price fixers was far more than the entire previous 108 years of U.S. antitrust enforcement. From 1996 to early 2006 the amount the DOJ collected criminal fines surpassed $3 billion, of which more than 90% originated from international cartels. The use of personal fines and prison sentences has also escalated; since 1995, the U.S. government has sent more than 120 executives to prison for price-fixing, and one-third of them were foreign national from nine countries. The average prison term doubled in 2000-2005 compared with the late 1990s. Several persons indicted for international price fixing have been apprehended by INTERPOL and are awaiting extradition.

The DOJ's amnesty programs are increasingly the major source of international-cartel indictments. In 1996-2003, amnesty applications have led to more than 70% of the cartel fines collected. Half of the 100 criminal probes being conducted by the Antitrust Division in 2003 were investigating allegations of international price fixing. Moreover, the "Amnesty Plus" program is responsible for half of these international probes. Hammond (2001) provides an example of how the "reverse contagion" model works in international-cartel cases; the lysine conviction led to the citric acid cartel, which led to the sodium gluconate cartel, and so on to net five cartel convictions. The "Penalty Plus" program has also yielded some results; in one case a firm that neglected to report its involvement in a cartel was required to pay a fine equivalent to 70% of its affected sales.

Historically, the DOJ sought prison sentences for individuals in a minority of price-fixing cases. Prior to 1974, when price fixing was a misdemeanor, the upper limit on prison time was one year, imprisonment had been imposed in only eight corporate price-fixing cases, and very few convicted price fixers served more than 30 days. Since 1974, about half of all individuals convicted of criminal price fixing receive prison sentences and the average length had tripled. The rate was 23% all price-fixing cases during 1970-1999 (Connor 2001: Table 10). But in the case of *global* cartels, the DOJ obtained prison sentences in 50% of the cases since 1995. Half of the prison sentences are at the felony level of more than 12 months. On average, about three executives plead guilty or are indicted per global cartel. As of 2003, about 30% of the indicted executives not yet sentenced were residing outside the United States and were fugitives; another 10% were U.S. citizens awaiting trial (Connor 2003: Appendix Table 10). The share of long sentences imposed on the cartel ring leaders is particularly striking. In the one case where the managers resisted making deals for pleading guilty, the lysine cartel, the three ADM executives lost at trial and were sentenced to a collective 99 months in prison; ADM's Vice Chairman was

the first person in antitrust history to receive the then maximum 36-month sentence.

The executives who are fined or imprisoned for global price fixing by the U.S. DOJ are often at or near the top of their corporate management structures. Yet, in general the fines collected from individual criminal conspirators are modest compared with their corporate salaries (Connor 2003: Appendix Table 10).[29] The median fine is $50,000. Some non-U.S. companies pay the fines for their convicted executives.

One reason for foreigners' willingness to serve time in U.S. prisons is that if they reside or even *pass through* countries that have criminal statutes for price fixing, they may be extradited to the United States (Nanni 2002). The United States has explicit treaties with Canada, Ireland, and Japan that permit extradition for antitrust violations, though these are rarely invoked.[30] In 2002, Interpol added U.S. antitrust fugitives to its "Red Notice" watch list for the first time. When foreign executives plead guilty for price fixing, they are frequently granted the right of free passage across U.S. borders for their cooperation.

If there is a criticism to be leveled at DOJ fining practices, it is the tendency to award unnecessarily generous discounts to cartel participants that have little to offer prosecutors. The amnesties for the first to plead guilty seem well justified. So too are the 70 to 80% fine discounts for the second firm in a cartel to come forward and cooperate (Spratling 2000). Should the remaining members of a cartel refuse to plead and opt for a trial, prosecutors might well need the complementary testimonies of witnesses from two firms in order to prevail at trial. But offering discounts of 50 to 70% off the maximum fines for procrastinators who offer minimal cooperation seems too great a reward. In the vitamins cartels a large number of such firms got high discounts (Connor 2006b).

In summary, the financial penalties applied by the U.S. DOJ to global price fixers in the late 1990s were unprecedented in their harshness. Despite an increasing number of amnesties, average corporate fines for members of global cartels in the late 1990s were many times higher than

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29 However, there are two noteworthy examples of high fines paid by the ringleaders of global cartels. The first was a fine of $10 million paid in 1998 by the German Chief Executive Officer of SGL Carbon, the instigator of the graphite electrodes cartel. He paid a fine well above the statutory cap of $350,000 to avoid a prison sentence. Second, in 2002, the Chairman of Sotheby's art auction house was convicted at trial for fixing the fees for selling precious works of art. His fine of $7.5 million was the first litigated example of the alternative fine statue being applied for price fixing. This statute permits personal fines of up to $25 million, depending on the size of the overcharge caused by the cartel's operations.

30 In 2004 the first Japanese manager was extradited for a criminal cartel offense.

the fines collected in 1990-1996, but declined significantly after 1999. While individual fines remained modest on the whole, managers of global conspiracies were more than twice as likely to receive prison sentences as managers of domestic conspiracies, and the length of the sentences has remained high since about 1998. The main reasons for the escalation in fines in the late 1990s were the extraordinary escalation in legal standards, the expanded size of the markets affected, the high overcharge rates, the longevity of many of the conspiracies, and, if truth be told, the rising intolerance of the judicial system for thieves dressed in expensive suits. This rise is especially notable in light of the fact that, correcting for inflation, average corporate fines were essentially unchanged for the first 90 years of the 20th century.

European Union Fines

The competition unit of the European Commission (EC) has also pursued a rising number of investigations of alleged cartel violations since the 1980s (Connor 2004a). Almost all price-fixing cases pursued by the EC are international, i.e., the corporate participants hail from two or more EU nations and involve schemes that significantly affected trade between the member states of the EU. However, the great majority of these cases have involved companies and geographic areas totally within the jurisdiction of the EC.

Five changes in the nature of anticartel activity may be noted in Europe after 1995. First, the EC has become deeply involved in investigating and prosecuting *global* cartels for the first time. Second, the EC has for the first time formally and extensively investigated international cartels with the direct cooperation of antitrust authorities outside the EU. There are about 20 examples of such joint investigations (*ibid.* Table 7). U.S.-EC joint efforts are the most common, the first 1997. In 2000, the first global cartel investigation involving four jurisdictions was launched. Third, the competition directorate was reorganized in 1998 to create a special unit devoted to anticartel activity; a second unit was established in 2002 (Monti 2002:1-2). Fourth, the 1996 and 2002 leniency programs were highly productive. From 1996 to 2001, more than 50% of all conspiring companies received leniency for their cooperation. In early 2002, the EC was receiving two leniency applications per month (*ibid.*). Fifth, the EC issued a set of fining guidelines that "…embodied a sea change in the Commission's methodology for setting fines and a doctrinal shift of massive proportions" (Joshua and Camesasca 2004:1).[31]

[31] In late 2006 yet another set of fining guidelines was adopted by the EC. Instead of gravity, the basic amount of fines will be based on a proportion of the violators' sales and the duration of the offense.

Prosecution of cartels has involved an intensification of effort and greater harshness of sanctions after 1995. The EC's first decision against a secret cartel was adopted in 1969 (Monti 2002).[32] The total amount of cartel fines imposed from 1969 to 1995 was €500 million in 33 cases (i.e., about 1.4 cases and $23 million per year on average). From 1996 to 2001, 24 cartel decisions were handed down and €2800 million in fines were imposed on 160 companies. In February 2002, a revised leniency program was implemented that offered quicker decisions on discounts and the possibility of full immunity. In 2002 alone 9 cases were decided with fines of €1038 million (approximately $980 million). The EC's anticartel activity in 1995-2004 has comprised more than 90% of all the fines imposed since the EU was formed.

In addition to global cartels, the EC has been busy with cartels that functioned only within its jurisdiction. A few operated within one member state (Connor 2003: Table 17). The number and size of the EU regional cartels is close to that of the global cartels. Total fines imposed ($1,797 million) was only slightly less than those imposed on the global cartels. The total of EC fines on all types of international cartels up to 2004 is above $4 billion, which is almost double the DOJ's total over the same period.

The temporal pattern of the EC's international cartel fines is shown in Connor (2004: Figure 4). The years 2000-2002 were clearly banner ones; the years 2000-2002 account for 73% of the 1990-2003 total. The 2001 peak year for the EC follows that of the DOJ's by two years. However, the size of the fines in 2003-2005 appeared to be slowing relative to 2002.

DG-COMP has an uneasy relationship with the EU courts that supervise its decisions, namely, the Court of First Instance and the European Court of Justice. On appeal, from 1992 to 2005 these courts reduced the fines on more than 100 companies belonging to 13 cartels. Small adjustments were made for miscalculations under the Commission's fining guidelines for such things as the dates of the violations. The largest reductions were granted for procedural blunders: signatures by the wrong officials (€65 million in fines overturned), late submissions to the courts (€101), and failure to permit defendants to refute the evidence (€273).

[32] The Quinine cartel of six undertakings was fined ECU 500,000 in July 1969 and the dyestuffs cartel a week later (ECU 490,000). However, the EC proceeded cautiously thereafter by fining only five cartels in the 1970s and 16 in the 1980s (Burnside 2003).

Court-mandated adjustments of cartel fines have always reduced the amounts imposed by the EC. The mean reduction in fines for the appellants was 57%; however, because not all members of the cartels appealed their fines, the mean reduction per cartel was 39% and the *median* reduction in fines per cartel is only 7%. Although modest, the size and frequency of the reductions have increased over time. From the first successful appeal (*Polypropylene* in 1992) to 1998, only four appeals were successful, with reductions averaging 10%. But nine cartels were awarded mean reductions of 47% in 2000-2005. As a result, an increasing number of violators have been encouraged to appeal their fines (Geradin and Henry 2005).

European analysts have been critical of the EC's vast discretion in setting fines (Korah 1997). Large discounts have been awarded to companies that made low monopoly profits, were first time violators, and cooperated with the EC's investigation. Korah (1997) suggests that there is an unwritten rule that non-EU firms get lower reductions than those headquartered in the EU. EC competition Commissioner Karl Van Miert rejected a U.S.-style point system as "too transparent" for violators (Alchin 1999). Perhaps most interesting was Van Miert's view that EC fines should be proportionately higher than parallel U.S. fines because Europe has no tradition of individual criminal liability for competition law offenses. This "U.S. plus" rule was applied to members of the lysine cartel in May 2000, but since then only inconsistently.

The 1998 cartel fining guidelines, for all their superficial rigor, are ultimately opaque and capricious (Joshua and Camesasca 2004). They were designed in response to judicial criticism to incorporate rules that varied fines according to the gravity, duration, and intentionality of the offense and proportionality across violators. One stated objective is to serve deterrence, but to do so without directly using affected sales to calculate base fines. The reason that EC fines are unpredictable is that the number of euros chosen as the "start point" for the fine calculations appears to be arbitrary. That figure is supposed to be related to gravity (i.e., the nature of the offense, market impact, and geographic extent), but the figure is also increased for large companies, and sometimes a special multiple for "deterrence" for single companies. There is some inconsistency in the creation of size categories and in applying deterrence multipliers. In the *Pre-Insulated Pipes* cartels the starting-point amounts were €1 million for the firms in the smallest of four size categories and €20 million for the largest; in addition the largest firm was slapped with a 150% premium "for deterrence." Thus, the starting points varied in a 50:1 ratio. The rest of the calculation is mere arithmetic to account for duration, culpability factors, and leniency, plus a check that the final fine does not exceed 10% of sales.

Even the worst offenders receive a 10% leniency discount for simply ceasing to collude after they were caught.

Canada

Canada and the EU have the most active anticartel regimes outside the United States Connor (2004a). In the 1990s, the price-fixing cases brought by the Canadian Competition bureau were increasingly international in scope. There were only two global cartel cases prior to 1997, but during 1997-2000, 64% were international conspiracies. Antitrust enforcement resources are rather modest in Canada, so about four-fifths of its global cartel convictions have followed U.S. investigations. Canada has had a mutual assistance antitrust agreement with the United States since 1991 and an extradition treaty that applies to criminal antitrust matters.

The Canadian Competition Bureau (CCB) together with the Ministry of Justice enforces criminal laws similar to those in the United States. The CCB is a small agency that cooperates closely with the U.S. DOJ, and its prosecutions tend to follow those in the United States by less than a year (Connor 2003: Table A.3). Naked cartel violations are crimes treated in effect as *per se* illegal acts.[33] Persons can be fined and imprisoned, but this power is used quite sparingly. As in the United States, the CCB has imposed record antitrust penalties since the 1990s. Fines typically represent 20% of Canadian affected sales.

Canadian cartel-enforcement policy shifted in the mid-1990s. Prosecution of large global cartels began in 1998 with the lysine and citric acid cases (Connor 2003: Tables 15 and 15A). The fines imposed on these two cartels were almost double the amount the CCB had collected from all other cases in 1990-1997. By mid 2003, Canada had collected US$85 million in fines from 11 global cartels. Of the 11 cartels, nine followed U.S. convictions and the other two EU sanctions. The setting of cartel fines by the CCB is fairly straightforward; except for amnesty applications, a high proportion of corporate cartelists are fined 20% of Canadian affected sales or slightly lower (Low 2004:19). Questions of degrees of culpability receive minimal attention.

Only one person, the CEO of a Canadian vitamin manufacturer, has received a prison sentence for price fixing, and this was commuted to community service. This sentence of 90 days was the first such punishment in many years. Three more cartel managers, from Germany, Switzerland, and Japan, have paid large fines for their roles in the citric acid, vitamins

[33] A separate Competition Tribunal can impose divestment or cease-and-desist orders. Canadian laws do not explicitly make cartels *per se* illegal; if a suit is filed, the prosecution must present evidence of monopoly power (Low 2004).

and sorbates cartels. They paid a fines totaling $750,000, which were the third-largest fines in Canadian antitrust history.

In addition to global cartels, the CCB fined 20 corporations a total of $9 million for *regional* price fixing. Each of the six international cartels involved manufactured products, some of them imported. Nearly all of the companies fined were non-Canadian, which reflects the very high share of Canada's manufacturing sector that is foreign owned. The three international cartels convicted in 1991-1993 (compressed gasses and two forest insecticides) operated solely in Canada, but the remaining three cartels (fax paper, choline chloride, and sodium erythorbate) were jointly prosecuted with the DOJ in 1994-2001.

Canada does not automatically prosecute all global cartels that are found guilty in the United States. At least eight such convictions have had no Canadian follow-up. For example, four food-ingredient cartels with relative small affected sales fined by the DOJ in 2001 (e.g., maltol, nucleotides) have not been prosecuted in Canada. In four other cases (fine arts, carbon fiber, magnetic iron oxide, and the 3-tenors CD), the U.S. prosecutions were quite lengthy and difficult; the Canadian Department of Justice seems to have passed on indicting in order to conserve its resources for cases easier to win.

Although Canada has a relatively small national market and many of the convicted firms sold cartelized products only through exporting (thus, owning few if any assets in Canada that could have been seized in the event of nonpayment of fines), it has been able to mount a surprisingly effective anticartel campaign using very slim enforcement resources, simple rules for fines, and minimal involvement of Ministry of Justice lawyers. Canada is a model for many smaller industrialized countries that have tough anticartel laws on their books yet have small enforcement resources. Unlike many other areas of law enforcement, the returns to Canada's treasury far exceed the outlays.

EU Member States

Beginning in the mid-1990s, the EC began to discuss the decentralization of competition-law enforcement (Rodger and MacCulloch 1998). One direction involves the transfer of additional enforcement authority from Brussels to the national competition authorities (NCAs) of the member states of the EU. Allowing a national court to handle somewhat localized alleged violations became possible in 1993, so long as the EC declares the case to lack "Community Interest." Devolution of EC antitrust enforcement was prompted mainly by ". . . the lack of resources afforded DG-COMP to carry out into tasks" (*ibid.* p.580), but the process has been slow because of the lack of trained professionals in the national agencies.

In 2003 DG-COMP and the NCAs formed the European Competition Network that meets regularly to share information and negotiate the allocation of cases. Most of these cartel prosecutions have been pursued under the national antitrust laws of the member states, but NCAs are allowed to use EU law. The Netherlands has prosecuted an international cartel using Article 81 of the EU Treaty.

About 40 international cartels have been fined by European national antitrust authorities from 1997 to 2003 (Connor 2004a: 262).[34] The average fine imposed per cartel was $38 million, and the median about $11 million. These 51 cartels comprised 29% of the data set.[35] More than 350 companies (one-third of them foreign) were fined a total of $1,446 million by mid-2003. The total fines imposed is somewhat less than either the EU or United States, but an impressive amount given the restricted size of these national economies and the relatively few years of active enforcement.

Italy tends to be the most aggressive European NCA in prosecuting international cartels. The first international cartel to be fined by a European NCA was the glass-containers industry, a case reported by the national antitrust authority of Italy in July 1997. As of 2003 Italy had prosecuted 16 international cartels. Italy's rate of discovery has steadied to about two cases per year since 1999, but the national antitrust authorities in the Netherlands and France have become newly energized. All of the Netherlands's authority's cases were launched since mid-2001, shortly after its investigative powers were strengthened. Much of its work in the early 2000s was consumed by a major scandal involving hundreds of construction companies that rigged bids on Dutch government building projects. The new found assertiveness of the French national authority is also impressive given that council's formal subjugation to the Ministry of Finance.

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34 Besides all the usual journalistic sources, information on these cases was supplemented by visiting the web sites of more than 25 national authorities, many of which have extensive translations into English. Another important source was these agencies' annual reports to the OECD, which tend to highlight most of the bigger cartel cases. Convictions by national authorities in the early 1990s are not as well documented as in more recent years.

35 The type of cases prosecuted differs somewhat from those in the EU and North America. A relatively large share of these cases involved government bid-rigging schemes; sales of drugs or diagnostic devices to national health programs; asphalt, concrete, and other public construction services; fuels purchased for the military; and retail gasoline distribution, many of which followed recent privatizations of national petroleum companies and withdrawal of government price regulation.

Most of the NCAs have a large measure of independence from government ministries.

Japan and Korea

The passage of Japan's Antimonopoly Act (AMA) in 1947 followed two decades of economic nationalism during which the government actively encouraged and enforced cartel agreements (Schwartzman 1993). The AMA was alien to Japan's regulatory culture (First 1995). The 1947 law had weak sanctions and was undermined by the creation of the Ministry of International Trade and Industry (MITI), which was in the 1950s authorized to form cartels in "depressed industries." Japan's Fair Trade Commission (JFTC) had no subpoena powers, could not recommend prison sentences, and could issue only limited cease-and-desist decrees. If companies violated the decrees, the Japanese courts had no contempt powers to sanction them.

In the late 1960s, the JFTC's political position began to improve with the increasing support of academics and consumer organizations. Its actions against the petroleum cartel in the early 1970s were popular and effective. In 1974, the High Court in Tokyo found the cartel guilty of *criminal* price fixing, a first for Japan. In 1977, the Antimonopoly Law was amended, allowing civil "surcharges" (fines) for violations and granting divestiture powers to the JFTC for the first time. Under diplomatic pressure from the United States, in 1991, the JFTC pushed through legislation that raised the mandatory cartel surcharge for manufacturers from 1.5% of company sales for up to three years to 6% of sales.[36] The JFTC strongly prefers negotiated "warnings" to levying surcharges (Fry 2001). Japan's law also permits individual and corporate criminal penalties and single-damages private suits, but both are rare. "Japan's system cannot really be said to be focused on deterrence," concludes DOJ official Chemtob (2000: 9), a position with which the JFTC (2003) agrees. An oddity of Japan's sanctions is that members of bidding rings who did not win a bid cannot be surcharged.

Although it has a reputation for lackadaisical antitrust enforcement, Japan's Fair Trade Commission (JFTC) has not been inactive in prosecuting cartels. In the ten fiscal years from 1989 to 1998, the JFTC issued a total of 259 "legal measures." These are administrative actions that include recommendations, cease-and-desist orders, or fines. Of the 259 actions, 73% were directed at cartels (ICPAC 2000). Fines, the JFTC's most potent sanction, totaled 47 billion yen (about 250 million yen per cartel or

[36] In 2006 after a major political battle the surcharge for manufacturers was raised to 10% of sales. As before, it is mandatory and nondiscretionary.

roughly $2 million).[37] Actions against international cartels are unusual. Despite the initiating of regular meetings with U.S. and EU antitrust officials in the 1990s, the JFTC's record on cartel fines shows no upward trend (Uesugi 2004).

Japan's weakness stands in stark contrast with the younger but far more aggressive Korean Fair Trade Commission (KFTC). Established in only 1981 and with an administrative structure similar to the JFTC, the KFTC has the political will to take frequent and strong measures to control cartel behavior. In its 2001 report to the OECD, the KFTC reports that it had taken 332 corrective measures against cartels in its first 20 years, including 76 surcharges on members of cartels (Shin 2002). From 1996 to 2000, the KFTC imposed $349 million in fines; in 2005 it assessed a record $251 million in fines. In more recent years this Asian tiger has been unafraid to sanction members of large global cartels; in 2002, the KFTC imposed fines of $8.5 million on six companies guilty of graphite-electrodes price fixing and $3.1 million on six vitamins manufacturers. The KFTC may be the first antitrust authority to offer bounties to whistle-blowers for information leading to the conviction of a cartel (*Korea Herald* August 31, 2005).

Weaknesses in Korea's cartel enforcement include an overly broad mandate, a business culture antithetical to the antitrust idea, few civil damages suits, an absence of class actions, and questions about the administrative independence of the agency from political interference.

Other Nations

In 1990-2003, there were 11 international cartels cases generated by eight non-EU countries (two of them, Hungary and the Czech Republic later joined the EU) (Connor 2004a). Most European cases have involved cartels that fixed prices inside their national borders.[38] Most of the remaining cases are also national-scope conspiracies. The only global-cartel cases prosecuted by a national authority outside North America and the EU were lysine, vitamins, and graphite electrodes. Mexico imposed a negligible fine on a couple of the lysine conspirators in the late 1990s, and Australia fined a few of the leading vitamin manufacturers.

Australia has had an antitrust law since 1974 that makes price fixing a *per se* criminal offense, but its effectiveness in combating cartels has

[37] Because not all cartels are fined, the average may be higher. Of those cartels fined, the affected Japanese sales amount to between 0.8 and 4.7 trillion yen or up to $40 billion. Criminal sanctions are almost unknown.

[38] One exception is the Grey shrimp case in the Netherlands, in which fines were imposed on German and Danish fishing cooperatives.

been limited by low fine limits (about $7 million) (ABA 2001). However, big changes are afoot as a result of two institutional changes. In 2003, the Australian antitrust authority implemented a corporate leniency policy on the U.S. model, which by 2005 was generating monthly applications. By late 2004 more than 100 suspected cartels were under investigation. After years of study, amendments were passed in 2005 that raised the maximum fine to the larger of A$10 million or treble damages. No sooner was the ink dry, and the antitrust authority proposed a US$318 million fine on a paper company that allegedly organized an international cartel (*Australian AP* December 21, 2005).

Fines across Jurisdictions

The fines imposed by the United States, Canada, and the EU are roughly proportional to the sizes of the affected markets' sales in the respective jurisdictions. In the 16 overlapping cases of global cartels available, government anticartel fines were highest in the United States, 4% lower in the EU, and about 6% of U.S. levels in Canada (Table 3.1). Even more impressive is the high degree to which fines were correlated in size between jurisdictions. The simple correlation between the U.S. and EC fines was +0.94, between the U.S. and Canada +0.97, and between the EC and Canada +0.98. Thus, corporate members of global cartels can use their fines imposed by the U.S. DOJ, usually the first to act, to predict with a high degree of certainty what their fines will be a year or two later in the EU and Canada. More importantly, these data show that despite large differences in stated fining policies, the practical outcomes highly similar.

Table 3.1 Global Cartels with Corporate Fines Imposed by U.S., EC, and Canada, 1996-2005

Cartel	U.S.	EU	Canada
	Million nominal U.S. dollars		
Lysine	92.5	97.9	11.5
Citric Acid	110.4	120.4	7.9
Vitamins	906.5	756.9	64.0
Sodium gluconate	32.5	51.2	1.6
Graphite electrodes	436.0 [e]	172.0	15.5
Sorbates	132.0	162.3	5.1
Nucleotides	9.0	21.1	--
Vitamin B3	29.7	--	2.5
Isostatic graphite	15.4	51.0	0.4 [+]
Fine art auctions	52.9	20.1	--
Methyl glucamine	5.0	2.83	0.34
MSG	15.0	21.1	--

(*continued*)

Table 3.1 (*continued*)

Carbon cathode block	2.09	--	0.51
Carbon electrical products	18.3	122.7	0.7
Art auction houses	52.9	20.1	--
Organic peroxides	10.0	85.2	--
Total	1920.2	1719.7	108.8

Sources: Connor and Helmers (2006).
-- = as of 2005, zero fines by this jurisdiction
e = Estimated
Note: Only global cases for which two or more jurisdictions have imposed fines.

Given the near absence of private antitrust litigation in Europe and considering the size of the EU's market, the total liabilities of cartelists operating in Europe are overall quite a bit lower in practice than an otherwise identical violation punished under U.S. or Canadian laws.

The UK and the Netherlands have responded in the late 1990s with new laws that have strengthened their local competition-law institutions. Progress in using private antitrust suits in national courts has been slower. One problem is that, unlike the United States, unpublished information gathered and analyzed by DG-COMP officials cannot be shared with private plaintiffs who would like to initiate follow-on actions. Several decisions of the European Court of Justice starting in 1976 have encouraged the use of national courts by private parties, but the few cases brought have resulted in disappointing, weak remedies or penalties. A 1993 EC notice also encouraged private cases where the EC believes there is a lack of "Community interest," a rather vague standard. Many questions relating to standing and sanctions are unresolved. The new UK law (effective March 2000) specifically encourages private antitrust suits, but it appears that indirect buyers will not have standing to sue. Multiple damages seem unlikely to be awarded in any Member State.

Private Settlements

Despite a thorough search of business and legal news sources, satisfactory information could be gleaned about only 17 private U.S. federal-court settlements or trials in 1990-2003, where the defendants were alleged members of international cartels (Connor 2004a). Nine were global and eight were regional NAFTA area cartels. Counting the main vitamins case as one observation, information is available on 47% of U.S.-prosecuted global cartels and 36% of the NAFTA regional cartels. Of the remainder, some have private suits pending resolution, some have been settled but were not newsworthy, and a small number had no private suits filed (e.g.,

in the USAID-construction case the federal government was the only injured party).

Private parties recovered at least $3.5 billion in the nine global cases (from $1 million in sodium gluconate to more than $2 billion in vitamins). Defendants in the eight regional cartels paid about $550 million to plaintiffs, the largest being cosmetics ($199 million) and choline chloride ($147 million). Even though both types are based on only U.S. affected commerce, the average global settlement was eight times as large as the average regional settlement.

Are these recoveries big or small? There are three ways of measuring the relative size of these private rewards: the ratio of the recovery to affected sales, to the overcharge, and to the government's fine (Table 3.2). Private settlements were roughly double the U.S. government fines. The median settlement rate for the 17 private cases was 13% of affected sales, with the global types four times as high. The median settlement rate as a proportion of the overcharge was 29%, and the global cartel median was 2.6 times as high. The median dollar settlement was about $92 million, but the median global-cartel suit settled for 1.75 times as much. By most measures, global cartels typically yielded settlements that were significantly higher than regional cartels. Although these cartel settlements recovered higher proportions of affected sales than typical domestic price-fixing cases a decade or two ago[39], the typical international-cartel settlement is still far below the triple damages envisioned by the framers of the Sherman Act.

Table 3.2 Size of Private U.S. Antitrust Awards, International Cartels 1990-2003

Ratio	Global	Regional
	Percent	
Median settlement/median government fine	175	206
Median settlement/affected commerce	18	1.3
Median settlement/overcharge	76	29

Source: Connor (2003: Appendix Table 6; Tables A.2, A.6, A.8, and A.12)

[39] Cohen and Scheffman (1989) provide a useful historical benchmark for actual U.S. price-fixing fines. From 1955 to 1974, the average fines amounted to only 0.4% of the cartel's affected sales. During 1974-1980, when the maximum corporate fine was raised to $1 million, the average price-fixing fines rose to 1.4% of affected commerce. On average, corporations received 86% discounts from the base fine in 1974-1980. A comparable survey of 1988 fines reported average price-fixing fines of only $160,000 per company, which was a mere 0.36% of the overcharges (Sheer and Ho 1989). Thus, while the fines on "regional" cartels remain about the same as formerly, the fines imposed on modern international cartels are many times higher than the fines imposed earlier on domestic price-fixing conspiracies.

There is little to be said about private cartel suits outside the United States. These types of suits are permitted in Mexico, Australia, and the national courts of most EU member states, but are rare in practice (Connor 2001: 89, 529-530). These jurisdictions typically permit only single damages, have high burdens of proof, do not permit broad discovery by plaintiffs, require losers to pay legal costs for both parties, do not permit class actions, and have low chances of substantive recoveries.

Outside the United States, Canada has the most active legal system for private antitrust suits (Goldman 2003). This activity was made possible by a 1992 law that permitted class actions. Buyers of citric acid in Canada were awarded $6 million, which is a relatively low 2% of the amount received by buyers in the United States.[40] Several other Canadian suits in the early 2000s resulted in large settlements against international cartels. In 2005, Canadian buyers of vitamins were awarded more than $100 million in compensation.

There is no provision for private compensatory suits under EU law. Some Member States have laws that permit private suits for single damages in their national courts, but such suits remain "rare" (Harding and Joshua (2003: 238). The few private actions that have been brought in the EU have faced highly uncertain outcomes and numerous practical barriers, such as the absence of class actions. Similarly, a handful of EU nations (UK, France, Ireland, Norway) have criminalized price fixing and the EU seems to be moving slowly in that direction (Wils 2005), but instances of incarceration seem to be unknown (Harding and Joshua: 258-262).

The absence of private suits outside of three countries has a negative effect on deterrence of global cartels, because only about one-fourth of the injuries caused by such cartels occur in North America. Foreign buyers who purchase their exports in the United States already have standing. At present buyers in other parts of the world have no recourse for private compensation in their local court systems. One possible remedy is to allow foreign buyers standing to sue for treble damages in U.S. courts (Adams and Bell 1999), but so far U.S. courts have for reasons unrelated to deterrence not permitted such suits.

Concluding Comments

Chapters 4 to 12 of this book examine the operations, economic effects, and legal consequences of the lysine, citric acid, and vitamins cartels. As many commentators have noted, the discovery of the lysine cartel in 1992

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[40] Sales of citric acid in Canada during the conspiracy were about 7% of those in the United States, and overcharge rates were about the same.

and its prosecution in 1996 proved to be the "tip of the iceberg." Out of public sight below the waterline, the U.S. DOJ was investigating about 25 more alleged international cartels in a variety of industries.

Since 1994 more than 60 global cartels have been revealed to the public, and in most cases the prosecutions and investigations are completed. As in the three cases covered in depth in this book, the U.S. DOJ's lead in prosecuting more global cartels has been followed by private civil suits in North America and by government actions in Canada, Europe, and elsewhere. Brazil, Japan, South Korea, Australia, and several member states of the EU have increasingly active anticartel agencies. However, the three jurisdictions with heretofore the most consistent legal responses to global cartels are the United States, Canada, and the EU.

The deterrence effectiveness of the highly touted monetary sanctions imposed on international cartels in the past decade may in fact be in part chimerical. The apparently large size of government fines is distorted by one overwhelming case – the global vitamins cartel. The failure of compensatory private suits to take hold outside of North America and the near absence of large fines in most Asian jurisdictions also casts doubt on the power of current penalties to deter recidivism by international cartels. Other than the United States and the United Kingdom, few nations have increased their maximum corporate or individual sanctions in the past decade. Without significant increases in cartel detection, in the levels of expected fines or civil settlements, or expansion in the standing of buyers to seek compensation, international price fixing will remain rational business conduct.