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SANCTIONS IN ANTITRUST CASES

Paper by John M. Connor

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**GLOBAL ENFORCEMENT DIRECTED AT INTERNATIONAL CARTELS:
A CONCISE INTRODUCTION AND SUMMARY**

*-- Paper by John M. Connor * --*

Abstract

This paper addresses the following issues: i) To what extent have penalties increased in the last 26 years; ii) how severe are they; and iii) what is the evidence that they may be discouraging the formation or effectiveness of private cartels? The data employed to answer these questions are from more than 1300 international cartels discovered worldwide during 1990-2015.

Total corporate cartel fines imposed averaged less than \$100 million annually in the early 1990s. In the past five years, these fines have reached \$12 billion per year. Should current trends continue, annual fines will be \$40 to \$50 billion per year by 2020.

The geographic location of cartel fining is changing dramatically. In the 1990s, the United States and the EU accounted for 98% of the world's cartel penalties. However, during 2010-2015 the EU accounted for 44% of all penalties (half from the NCAs), the U.S. 35%, and the Rest of the World 21%. Fines imposed by the EC and the US Government are slow growing, whereas those imposed by the EU's NCAs are fast growing. Fines by ROW authorities are the fastest growing.

Corporate cartelists from Western Europe have paid almost half of all penalties in 1990-2015, and US companies one-third.

The major factor explaining the rapid increase in cartels discovered as well as cartel penalties is the growth in the number of mature antitrust authorities. Using the first year an authority successfully prosecuted an international cartel as an indicator, the number of such AAs rose from 3 in 1990 to 75 in 2016.

As of mid 2016, more than 1200 individuals have been suspects (targeted, indicted, etc.) for international price fixing by 38 criminal-law jurisdictions. Of these suspects, 44% have been punished (18% were fined only and 26% imprisoned). Because these data are a 2016 snapshot of cartel penalties, almost half of all indicted cartel suspects are "waiting." They are waiting to be found guilty, to be sentenced, or are fugitives evading sentencing by staying outside the prosecuting jurisdiction.

Cumulative private recoveries are large (\$59 billion), but still almost all generated by US courts. They are a significant source of deterrence in North America, two-thirds of all monetary penalties.

Private recoveries combine with fines to make North American Severity Ratios the highest in the world (about 33% of affected sales). The EU's NCAs are next highest (30%), while all other jurisdictions average in the 12% to 16% range.

While interesting, severity is not as relevant as the Recovery Ratio. The degree of severity is only loosely correlated with the Recovery Ratio. Under the most optimistic assumptions, deterrence cannot be attained if recovery is not above 100% of damages. The most precise empirical study of optimal deterrence, using conservative assumptions, examined 75 US-convicted international cartels. It concluded that penalties were on average one-fifth the size required to achieve optimal deterrence.

* This paper was written by John M. Connor, Professor Emeritus, Purdue University (jconnor@purdue.edu).

1. Introduction: The Issues

1. Price fixing may well be the world's second-oldest illegal profession, while combatting illegal global collusion is barely 20 years old.

2. Price fixing and bid rigging have been regarded as immoral – a type of fraud upon the public -- by theologians of many of the world's great religions (Foer et al. 2010). It was banned under the written laws of ancient China, Babylonia, Greece, Rome, revolutionary France, and many other nations and empires. A public trial in Athens in 386 BC charging merchants for collusively hoarding stores of grains and adding excessive mark-ups resulted in a guilty verdict. The English Parliament outlawed collusion in the London coal market several times beginning in 1710, but the UK did not levy a fine for price fixing until 2002.¹ The U.S. began fining corporate cartelists during 1900-1904, but U.S. fines on international cartels were delayed until about 1990 (Posner 1970: Table 20).² It appears that the European Commission was the first antitrust authority to fine an international cartel in 1969 (Connor 2012: fn. 55).³

3. Thus, in the course of human history, the use of monetary and penal penalties to discourage price fixing is a phenomenon that has developed during our lifetimes. The questions I address are: To what extent have penalties increased in the last 26 years; how severe are they; and what is the evidence that they may be discouraging the formation or effectiveness of private international cartels?

4. I shall show that penalties imposed by the world's antitrust authorities have exploded over the past quarter century in size, types, and geographic spread.⁴ However, the number of cartels being discovered each year is rising at an exponential rate faster than the rise in penalties. Moreover, the severity of cartel penalties is lower than the rates of cartel overcharges. This, and other evidence, tends to suggest that penalties have been inadequate to deter cartel formation and too low to dissuade price-fixing conduct.

2. The Upward Trend in Corporate Cartel Fines

5. Corporate fines for price fixing averaged less than \$100 million per year in the early 1990s, miniscule by current standards (Figure 1).⁵ In the past five years they have averaged \$12 billion annually. By 2015, fines imposed⁶ by antitrust authorities had accumulated to at least \$107 billion. By 2022, if fining trends continue, cumulative cartel fines will climb to at least \$225 billion (Figure 2).

¹ From a personal communication (Rodger 2016).

² The maximum U.S. price-fixing fine was \$5,000 from 1890 to 1954; the cumulative total paid was \$13 million in 1982 dollars (Gallo et al. 1994: Table 11). Although international cartels were convicted in the mid-1940s, no participants were fined in the U.S. until a subsidiary of a German manufacturer in 1990 in the *Specialty Steel Tubes* case.

³ Two global cartels, *Dyestuffs* and *Quinine*, were fined small amounts by today's standards (Connor 2012: fn. 55). However, the next global cartel punished by the EC was *Lysine* in 2000 – 31 years later.

⁴ A recent OECD Paper (2016) has a nicely detailed overview of the policies and practices of many antitrust authorities of the sanctions covered below.

⁵ All figures are developed from the Private International Cartels data set, which encompasses information on about 1300 alleged international, hard-core price-fixing schemes discovered during 1990-2015 by antitrust authorities worldwide. See Connor (2016) for a summary and description of the PIC data. Currencies are converted to nominal US dollars.

⁶ It is important to note that these are amounts announced, not necessarily collected by authorities. Increasingly common installment payments and appeals typically delay fine collections.

Figure 1. Cumulative Corporate Penalties, Regions or Jurisdictions, Semi-Decades

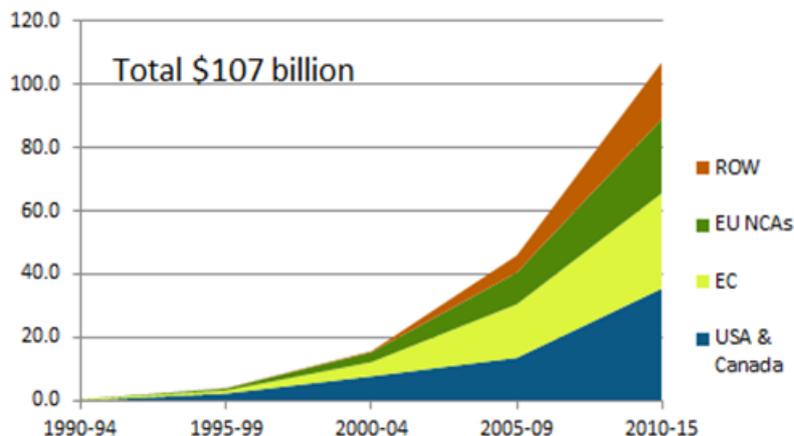
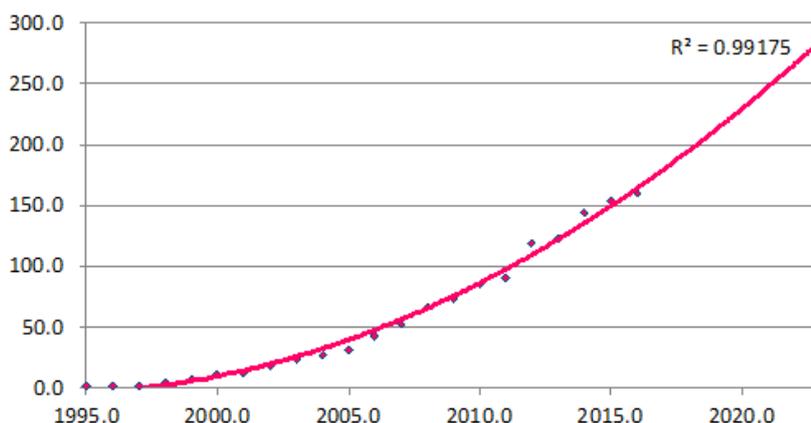


Figure 2. Trend in cumulative penalties projected to reach \$225 billion by 2022



6. The composition of the authorities imposing fines has been changing. Throughout the 1990s, the DOJ and EC dominated penalizing cartelists, and these agencies continue to announce record cartel fines every few years. Since 1989, the EU’s National Competition Authorities began to penalize international cartels with significant and increasingly larger fines -- well before the European Competition Network was officially functioning (Figure 3).⁷ Then, around 2005, cartel fining activity began to take off in the Rest of the World, with authorities in Korea, South Africa, and Brazil in leading roles (Figure 4).⁸ I expect these trends among the NCAs and ROW authorities to continue, because not only is the number of decisions increasing every year but also the amount of fines per decision is also rising.

⁷ In the United States, the parallel authorities, The States’ Attorneys General, have not kept pace. They account for a little under 5% of total fines on international cartels.

⁸ Articles that focus on these trends include Connor (2008, 2009, and 2015).

Figure 3. Intl. cartel fines imposed by NCAs (EU's National Authorities) 1989-July 2016

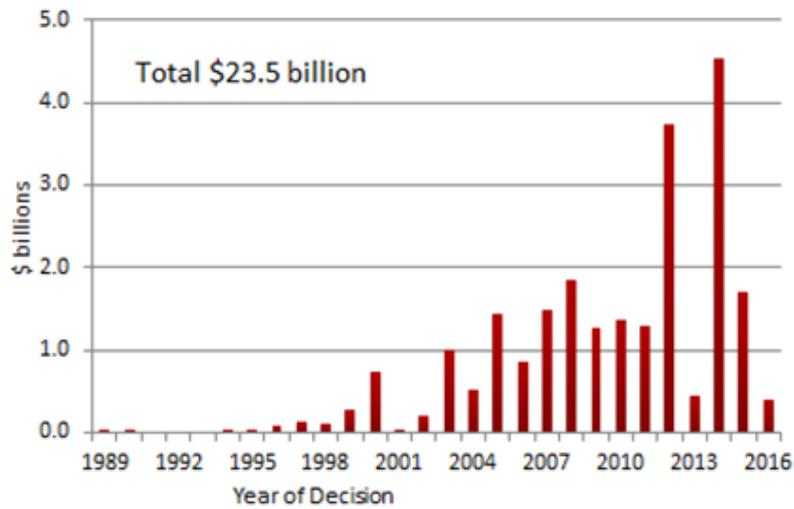
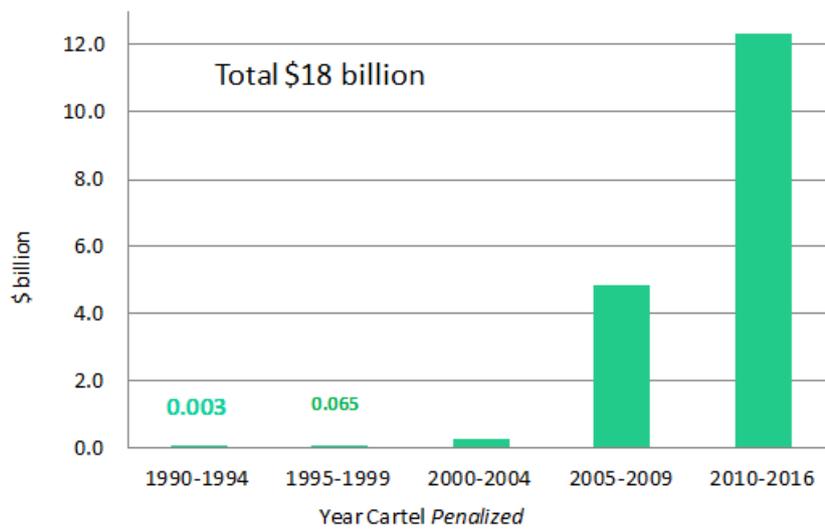


Figure 4. Total fines in ROW exploding

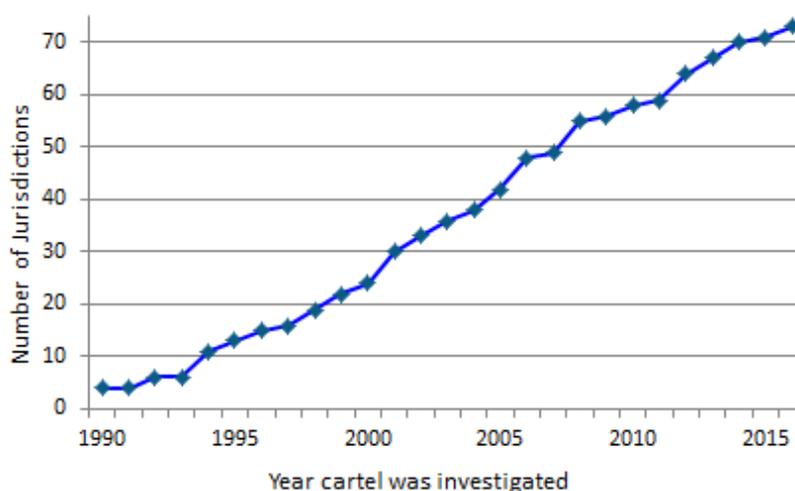


3. The Geographic Spread of Cartel Fines

7. It is well known that the number of countries with anti-cartel laws now exceeds 140, but having laws and acting upon them to defend competition in their economies is a different measure. Prosecuting international cartels is a great challenge because evidence and witnesses are often located outside the jurisdiction and because defendants tend to be heavily lawyered multinational companies with deep pockets. One reason fining cartels is a growth industry is because of the rising number of authorities that have developed the degrees of skill, maturity, and confidence needed to investigate complex international collusion.

8. In 1990, only three antitrust authorities in the world had convicted an international cartel.⁹ As Figure 5 shows, the number of antitrust authorities that have fined international cartels is now 25 times higher than in 1990.¹⁰ The latest addition to the list is a conviction of two South African insurance companies for price fixing by the Namibian Competition Commission. Going after cartels with foreign participants may be popular, with easily explained benefits. The major downside to cases brought by newer authorities is the inability to collect imposed fines: defendants are often assisted by the best law firms and economic consultancies, and appeals can seem interminable.

Figure 5. Number of antitrust jurisdictions prosecuting international cartels in climbing

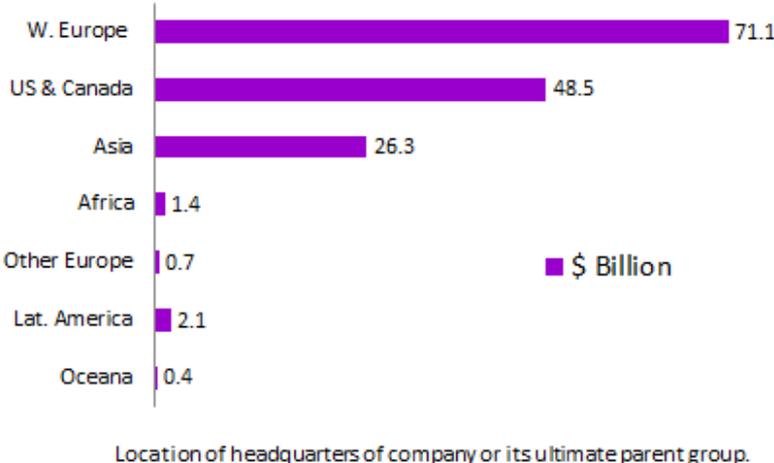


9. Although the agencies imposing cartel fines are growing geographically more diverse, the companies paying the fines are relatively concentrated in the most mature antitrust jurisdictions. Nearly half of all cartel penalties are paid by firms with ultimate parents headquartered in Western Europe; one-third is based in North America (Figure 6).

⁹ Up to 1990, to my knowledge, only the U.S. DOJ (*Tobacco* 1911 or *Steel Pipes* 1990), the EC (*Quinine* and *Dyestuffs* 1969), and Canada (*R. v. Container Materials Ltd.* 1942) had prosecuted international cartels. Then in 1992, the Japan FTC fined members of the *Vinyl Foodwrap* international cartel.

¹⁰ This figure counts only convictions with fines; consent decrees, warnings, and the like are not counted.

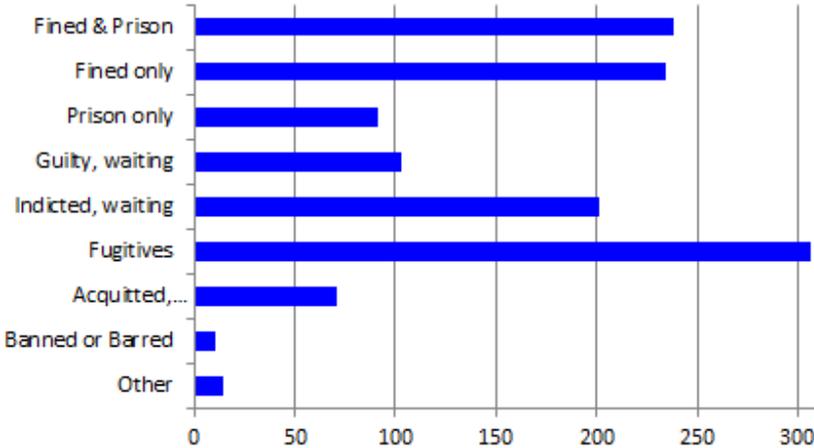
Figure 6. Corporate penalties are mostly imposed on EU & U.S. companies



4. Individual Cartel Penalties

10. More than a thousand cartel managers have been held liable for price fixing in more than a score of criminal-law jurisdictions. Punishment mainly takes the form of modest fines and significant imprisonment, which is growing more prevalent and onerous in the past decade. Figure 7 shows that as of July 2016 roughly 1269 executives have been targeted, arrested, indicted, or charged with price-fixing violations by 38 jurisdictions worldwide.¹¹ Fines or mandatory restitution were imposed on 37% of all suspects (and for about half was the sole punishment imposed); about 26% were imprisoned. Bans were rather unimportant, but are likely underreported. About 6% of cartel suspects have been freed after being acquitted, either because they were innocent or because of lack of evidence to convict.

Figure 7. Disposition of executive charged for international price-fixing



11. Brazil, Columbia, and Chile have been especially active in adding large numbers to the category of fined executives in recent years.

¹¹ The U.S. DOJ has penalized 1281 business persons for price fixing during 1990-2015, of which about half were involved in international cartels.

12. A large share of suspected cartel managers (24%) is waiting for disposition of their cases. Of these, 8% are guilty and awaiting sentencing; most will be fined or incarcerated, but a small share of them is being held as cooperating witnesses and, although guilty of collusion, will be released. Another 16% have been indicted by prosecutors, but have not yet been convicted or punished. As these data concern international schemes, many indicted cartel managers live outside the jurisdiction that is prosecuting the cartel; consequently, at least 24% of all suspects are “fugitives,” that is, awaiting sentencing that is unlikely to come.¹² Cartelists who choose to be fugitives are mostly safe in their home countries because extradition is rare.

13. Other types of individual penalties for price-fixers are difficult to well document. Many executives are fired by their employers after being convicted, but it is not clear that this happens to the majority. Debarment of directors directly involved in collusion is normal in only a few countries, mostly in Western Europe. A small-scale survey of cartel participants who confessed their guilt in the United States finds that a surprisingly large number of felons were either never fired or were re-employed after sentencing (Connor and Lande 2012).

14. The optimal balance between corporate and individual penalties that would best serve deterrence is a difficult (and little-researched) issue in criminal jurisdictions. With few exceptions, individual fines are miniscule when compared to corporate fines or the wealth of the payees.¹³ Moreover the opportunity cost of prison time tends to be a low monetary amount relative to the employers’ fines. Finally, price fixers seem to underestimate the true probability of being detected; if true, higher personal penalties are called for. Thus, as presently practiced in the United States, individual criminal sanctions have only small deterrence power; either higher monetary-equivalent sanctions are needed for individual cartelists or higher corporate fines.

5. Private Damages Suits

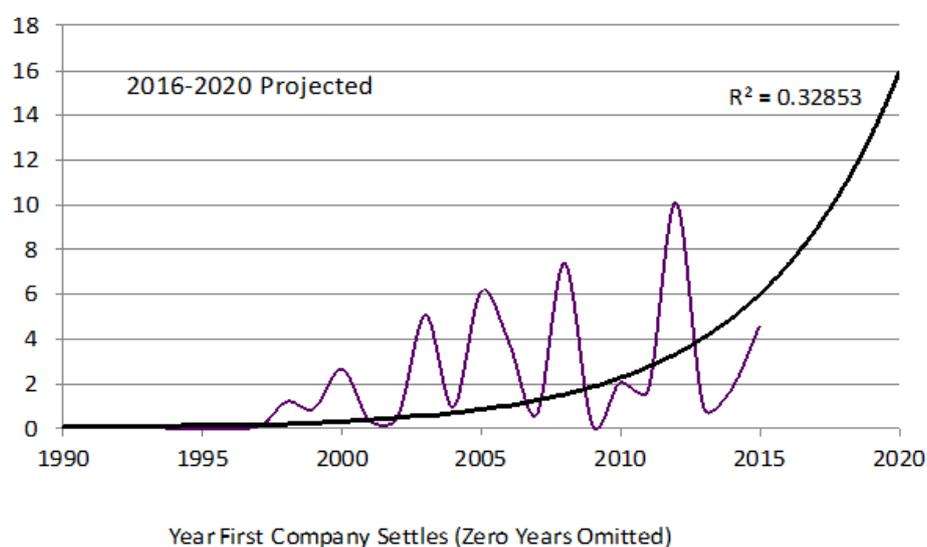
15. Private damages suits have become more frequent in many jurisdictions in the past decade, but it is only in the United States where they have a significant impact on international cartel deterrence. During 1990 to July 2016, announced private cartel settlements worldwide accrued to \$59.3 billion, of which 89% was awarded by U.S. courts (Connor 2016). These settlements amount to 54% of global fines imposed and an impressive 205% of U.S. federal government fines on international cartelists in the same period.

16. Huge, well publicized private settlements became quantitatively important beginning in the late 1990s, but they display a highly irregular time path. The annual path in nominal settlements rises and dips every few years (Figure 8). The long-term time trend for private settlements is, however, strongly exponentially rising.

¹² About 300 indicted individuals were fugitives, but this number includes charged individuals for whom no sentences can be located. Some of the 16% indicted but waiting for a court decision are also fugitives. Fugitives are an especially difficult problem for U.S. authorities (Connor 2011c). Some of the indicted executives will be freed after cooperating with prosecutors, but about one-fourth of the sample is simply waiting to be penalized.

¹³ In some cases outside the United States, employers pay fines for their executives. For 75 international cartels penalized in the United States, Connor and Lande (2012) determined that personal penalties were at most worth only 26% of the value of corporate fines and 5.5% of all cartel penalties.

Figure 8. Trend in U.S. private recoveries



17. An important feature of private U.S. damages cases is that follow-on suits comprise only half of the number of such suits; incredibly, three-fourths of the *value* of settlements does not follow government convictions (Connor 2016). Private litigants are winning cases that are more difficult to prove, and these cases that the Government did not prosecute involve very large damages.

6. Summing Up Cartel Penalties

- The world's newer antitrust authorities are increasing fines faster than the DOJ and EU, but from a lower base.
- Imposed fines reached at least \$120 billion by 2015.
- Amounts collected are far less than fines imposed in many jurisdictions.
- Emerging stars are several Brazil, Korea, and South Africa
- 38 antitrust authorities penalized 1269 business persons for international price fixing in 1990-2015.
- The length of prison sentences in 2000-2015 is 2.5 times as long as in the 1990s.
- By 2018-2021, private settlements will likely average \$16 billion yearly.

7. Cartel Penalties and Deterrence

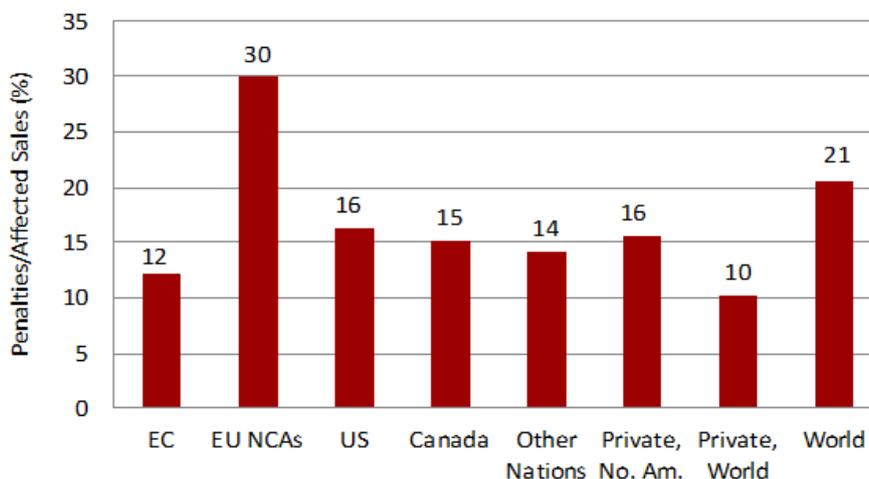
18. There are two principal indicators of the deterrence power of cartel penalties: (1) Severity Ratio and (2) Recovery Ratio. The Severity of penalties is the ratio of monetary penalties paid by violators divided by the affected sales of the cartel.¹⁴ The Recovery Ratio is the monetary value of all penalties imposed divided by the damages caused by the cartel.¹⁵

7.1 Severity Ratios

19. Severity ratios are usually available to antitrust authorities responsible for prosecuting cartelists, and in a large number of cases reliable estimates can be calculated by outsiders. Severity ratios are easily understood by non-specialists, and they are useful for making comparisons over time or for cross-jurisdictional comparisons.

20. Many jurisdictions have rules that *initially* compute cartel fines based on severity, often 10% to 30%. Most jurisdictions then adjust either up or down for corporate culpability. After leniency discounts and plea negotiations, severities fall. The worldwide mean severity of cartel fines is 21% (Figure 9). The severity of fines imposed by the EU's NCAs is relatively high – 30% of affected commerce in their jurisdictions. The U.S., Canadian, EC and ROW fines are roughly half of that level. However, in North America, the severity of both government fines and private settlements averages 33% to 34% of sales. (Private recoveries worldwide average only 10%, because this observation includes global cartels with large global sales, few of which are penalized by private suits outside of North America).

Figure 9. Mean severity of penalties on 662 international cartels, 1990-2015



¹⁴ Penalties include fines, mandatory restitution, private settlements in damages suits, and the monetary value of the opportunity cost of incarceration or other individual penalties (e.g., debarment) of cartel managers. “Affected commerce” in this paper is the value of sales generated by the cartel during the collusive period plus any spill-over effects on the market, such as sales under umbrella pricing by fringe firms. In many jurisdictions, affected commerce is a much shorter period (see OECD 2016: Box 2).

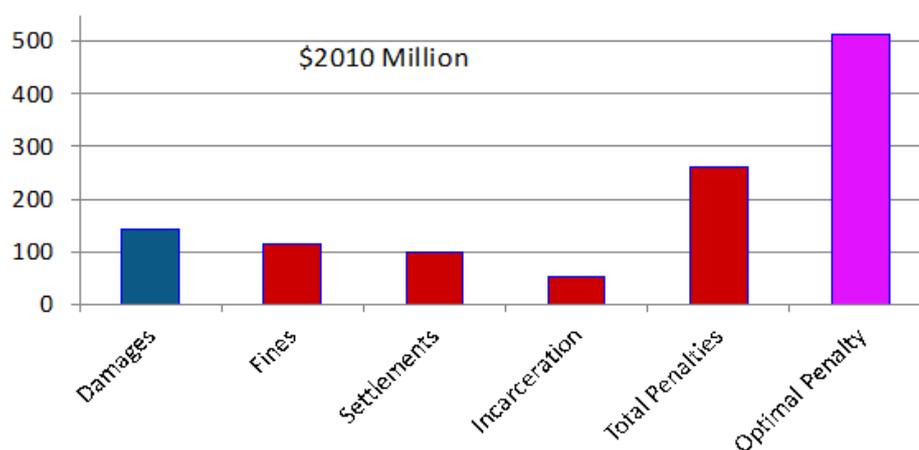
¹⁵ Damages are typically measured by the overcharges generated (an amount roughly equivalent to the illegal monopolistic profits made). Damages should include the deadweight losses, but these are more difficult to compute than overcharges. See Connor (2014).

21. An interesting pattern involves the severity of bid-rigging fines versus class price-fixing fines. The former schemes are on average fined *four times* as severe the latter. The main reason for this disparity appears to be the fact that government tenders are often targeted by bid riggers, and government authorities tend to deal harshly with price fixers when they are themselves the victims.

7.2 Recovery Ratios

22. Recovery Ratios speak more directly to deterrence than do severity ratios. Under the most lenient assumptions, penalties cannot deter an instance of price fixing unless the recovery ratio exceeds 100%. That is, at a minimum, penalties ought to disgorge all of the illegal profits made by cartel participants. And if the chances of being detected and convicted are less than 100%, the optimal penalties for deterrence will require a recovery ratio well above 100%. Unfortunately, recovery ratios are more difficult to compute and are available only for a minority detected cartels.¹⁶ An example of the computations needed to compute actual and optimal recovery ratios is shown for the well-documented global Lysine cartel (Figure 10).

Figure 10. U.S. damages, penalties, and the optimal penalty: the Lysine cartel



Note: Optimal penalty assumes 30% detection, 80% conviction probability.

23. When the Lysine analysis is extended to a sample of 75 international cartels that were penalized by U.S. authorities, actual penalties are determined to be one-fifth of optimally deterring penalties.¹⁷ Indeed, at most two of the 75 cartel prosecutions resulted in penalties that were close to optimal.

24. Recovery ratios are about the same as U.S. levels in the EU and its national jurisdictions. They show signs of increasing in the EU the past decade. Severity ratios are significantly higher for penalties on

¹⁶ In the PIC data set of international cartels has 1592 severity ratios for various jurisdictions (109 U.S., 54 Canada, 138 EC, 243 EU NCAs, 178 ROW, 179 from private suits, and 691 “total sales”). Out of 872 cartels with monetary damages, 691 cartels (79%) have at least one positive severity ratio estimate. In addition, 85 cartels (9.7%) had zero severity ratios, almost all punished with consent decrees, cease-and-desist orders, warnings, or other nonmonetary sanctions. However, there are only 277 cartels (32%) with positive recovery ratios.

¹⁷ Details of the data sources and computations are in Connor and Lande (2012). Optimality generously and optimistically assumes that discovery rates are 30%.

global cartels (median 44%) than for non-global cartels (21%), but show signs of decline since 2000. (Recovery ratios are too few in the ROW to make sensible generalizations).

7.3 *The Dangers of Over-Deterrence Are Exaggerated*

25. In many jurisdictions, record-high cartel fines are announced every few years. Attorneys who have represented corporate cartelists often complain that they are aware of clients that have been penalized in excess of optimal-deterrence levels. However, when pressed for numerical details, the attorneys cite confidentiality as a reason for not giving specifics. Rather, they cite the theoretical maximum penalties that can be imposed in a criminal jurisdiction like the United States, which can reach eight times the overcharges generated by the cartelist.¹⁸

26. Can such anecdotal evidence be believed? Yes, it is possible that prosecutors have overreached in a small number of historical cases. Recall that my own research on U.S. cartels found two out of 75 that hovered very close to the optimal penalty level.

27. However, there are a large number of real-world factors that suggest that under-deterrence of cartelization is the norm. First, we know that serial collusion by certain companies is very high – some large cartelists have been fined 30 or 40 times for price fixing in the past 20 years. True recidivism is less common but still frequent. Second, affected commerce in a jurisdiction -- the number used almost everywhere to impose cartel penalties – is typically underestimated by prosecutors because the number must be defended in court if the penalty is appealed.¹⁹ Third, there is rarely any adjustments required for penalties to be paid by defendants to allow for general inflation or the time value of money, i.e., “prejudgment interest.” Cartelists have strong financial incentives to delay the decisions of cartel authorities and courts. Why? Because recipients of antitrust penalties in effect lend price fixers their overcharges for many years for free! Fourth, there is never any compensation for the dead-weight losses due to collusion – harm to the market mechanism itself. Fifth, claims of over-deterrence are framed from an ex post perspective. These assertions typically fail to consider that the probabilities of discovery and of conviction are certainly less than 100%.²⁰

¹⁸ U.S. Government criminal fines can be as high as double the overcharge; direct private plaintiffs are due treble damages in federal courts; and with 100% pass-through, indirect buyers can extract additional treble damages.

¹⁹ Prosecutors often do not know when a long-running cartel began operating, so duration is cut short. They eliminate minor products or regions for which the evidence is not as strong.

²⁰ The probability of detection is likely 15% to 30%; conviction after detection in the U.S. is about 80%. In theory, these probabilities are subjective forecasts held by the cartel managers at the time of cartel formation. If they underestimate the likelihood of being uncovered or found guilty (a common psychological condition of criminals), they are *risk-loving*, not risk-neutral. With risk-loving actors, optimal penalties rise relative to the standard assumption

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