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The
Antitrust
Bulletin

Symposium:
Cartel Penalties:
Effective Deterrents
or License Fees?

Cartel sanctions and deterrence

TERRY CALVANI* AND TORELLO H. CALVANI**

I. INTRODUCTION

The economic and legal literature on competition law and policy is robust. Almost every topic has attracted the attention of scholars and policy makers. The subject of antitrust sanctions, and, in particular, their deterrent value, has been an exception.¹ While subjects like

* Of Counsel, Freshfields Bruckhaus Deringer LLP US. Former Member, Board of Directors (holding the criminal cartel portfolio) of An tÚdarás Iomaíochta (Competition Authority of Ireland) (2002–05); Commissioner, U. S. Federal Trade Commission (1983–2000).

** Associate, Baker & Hostetler LLP.

AUTHORS' NOTE: *We wish to express our gratitude to Diane Tuomala and Brian Edstrom of Freshfields Bruckhaus Deringer US LLP for their very gracious and invaluable assistance in putting this issue together. Any mistakes are our own. The views expressed in this introduction and in the articles that follow do not necessarily reflect the views of either Freshfields Bruckhaus Deringer US LLP or Baker & Hostetler LLP or of any of their respective members. The discussion of cartel sanctions in the Introduction draws on Terry Calvani & Torello Calvani, Custodial Sanctions for Cartel Offences: An Appropriate Sanction for Australia?, 17 COMP. & CONSUMER L.J. 119 (2010).*

¹ This is not to say that the subject has completely escaped attention. The early literature includes RICHARD POSNER, *ANTITRUST LAW* 266–86 (2d ed. 2001); WILLIAM BREIT & KENNETH ELZINGA, *THE ANTITRUST PENALTIES: A STUDY OF LAW & ECONOMICS* (1969); and William Landes, *Optimal Sanctions for Antitrust Violations*, 50 U. CHI. L. REV. 652 (1983).

merger policy and predatory pricing have drawn vigorous examination and debate, the topic of whether cartel sanctions provide sufficient deterrence has been largely ignored. This began to change within the past decade with the publication of articles² and the hosting of symposia on the topic.³ In this issue we gather a collection of articles from scholars around the world that address the issue of cartel sanctions.

Deterrence is the generally accepted rationale for public antitrust sanctions.⁴ The law and economics literature⁵ suggests that a violation can be deterred if the value of a sanction imposed, such as a fine, exceeds the expected gain associated from the violation adjusted by the probability that the sanction will be imposed.⁶

Both monetary and custodial sanctions, set appropriately, should provide the appropriate level of deterrence. Nonetheless, we submit

² See John Connor & Robert Lande, *How High Do Cartels Raise Prices? Implications for Reform of Antitrust Sentencing Guidelines*, 80 TUL. L. REV. 513 (2005); Julian Clark & Simon Evenett, *The Deterrent Effects of National Anticartel Laws: Evidence from the International Vitamins Cartel*, 48 ANTITRUST BULL. 689 (2003).

³ One of the first such programs was organized at the University of Amsterdam by one of the contributors to this issue, Maarten Pieter Schinkel. See CRIMINALIZATION OF COMPETITION LAW ENFORCEMENT: ECONOMIC & LEGAL IMPLICATIONS FOR THE EU MEMBER STATES (Katalin Cseres, Maarten Pieter Schinkel & Floris Vogelaar eds., 2006) [hereinafter CRIMINALIZATION OF COMPETITION LAW ENFORCEMENT].

⁴ We do not address the private restitutionary objectives associated with private rights of action except to the extent that they are relevant to deterrence. Restraint and rehabilitation have little application in a cartel context, and we do not address retribution.

⁵ See generally A. Mitchell Polinsky & Steven Shavell, *The Economic Theory of Public Enforcement of Law*, 38 J. ECON. LIT. 45 (2000).

⁶ This assumes risk neutrality on the part of the offender. It should also be noted that some scholars, notably Gary Becker and William Landes, would focus on net harm inflicted on others, thus permitting the offender to commit efficient violations where the total net benefits exceed the total net costs while deterring only inefficient violations. See Gary Becker, *Crime and Punishment: An Economic Approach*, 76 J. POL. ECON. 169 (2001); Landes, *supra* note 1. We do not treat this difference in approach because it is our experience that “efficient breach” is exceedingly rare in the universe of cartel cases.

that monetary penalties generally should be preferred over incarceration because the former contribute to the exchequer while the latter impose a cost. Moreover, we suggest that liberal societies *ceteris paribus* ought to prefer sanctions that impose the least cost to human liberty.

Brazil, Canada, Estonia, Ireland, Israel, the Republic of Korea, Japan, Russia, the United States, the United Kingdom, and now Australia criminalize price fixing.⁷ Table 1 reflects both the maximum terms of incarceration and the history of its actual imposition.

Table 2 shows the number of months of imprisonment in the United States by year for the past ten years. In 2004, the maximum term of imprisonment was increased to ten years.⁸ As new cases are decided under the enhanced penalties, the average sentence can be expected to increase.

If monetary fines ought to be preferred, why do these jurisdictions use custodial sentences?

Those in favor of criminalization generally make three arguments. First, while monetary sanctions might in theory be preferred, in practice fines are seldom sufficient to deter. Moreover, even if fines sufficient to deter could be imposed, they would create politically unpalatable external costs on others. Second, monetary fines are generally imposed on the company, but the company's employees, who actually engage in cartel behavior, face incentives different from their employer. Furthermore, it would be difficult to devise a deterrent monetary fine for individuals and even more difficult to impose one. Lastly, the cost of monetary fines often is borne by less culpable entities and individuals.

The first argument is essentially an argument that fines are too low to deter. In a set of articles, Wouter Wils, an early critic of the

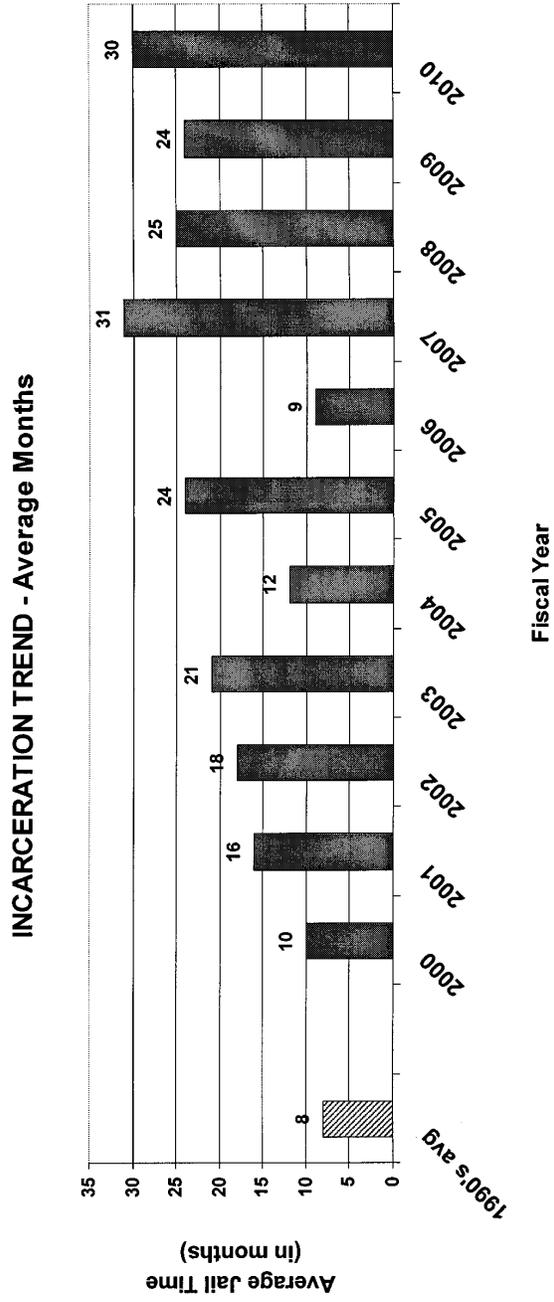
⁷ For a discussion of these laws and their enforcement history, see Terry Calvani & Torello Calvani, *Custodial Sanctions for Cartel Offences: An Appropriate Sanction for Australia?*, 17 *COMPETITION & CONSUMER L.J.* 119 (2010). Germany, France, and Spain provide for custodial sanctions in limited circumstances.

⁸ Antitrust Criminal Penalty Enhancement & Reform Act of 2004, Pub.L. No. 108-237, § 215(a), 118 Stat. 661, 668 (2004).

Table 1
Jurisdictions with Custodial Sentences (Individual Sanctions)

Country	Maximum Sentence (years)	Served	Notes
Australia	10	new	Australia criminalized cartel conduct as of July 24, 2009, and it is too early to expect a record of cases for offenses that occurred after that date.
Brazil	5	none	Discussion of Brazilian cartel enforcement often cites a record of the imposition of custodial sanctions. This is misleading, as it includes persons detained for interrogation during an investigation. Sentences have been imposed on others, but those are under appeal and none have been served.
Canada	14	none	All sentences, save one, have been suspended or commuted to community service. One person served a short term of imprisonment for cartel conduct accompanied by violence.
Estonia	3	none	
Ireland	5	none	All sentences have been suspended.
Israel	5	yes	Israel has sentenced numerous convicted cartelists to prison, but most sentences have been suspended. Seven have actually served terms of imprisonment with seven months being the longest.
Republic of Korea	3	none	All sentences have been suspended.
Japan	3	none	All sentences have been suspended.
Russia	7	new	Although the Russian experience is not very transparent, there is no evidence of convictions under the law.
United States	10	routine	Only the United States imposes significant custodial sentences with regularity. See table 2.
United Kingdom	5	new	In 2008, a Crown Court imposed custodial sentences of more than two years' imprisonment on three individuals in the first case to arise under the Enterprise Act. A subsequent criminal prosecution resulted in dismissal, but other investigations are pending. We await future developments to see whether custodial sentences will become the norm in the U.K.

Table 2
Months of Imprisonment in the United States



deterrent effect of monetary sanctions, observed that competition authorities fail to successfully identify and prosecute all cartels.⁹ Indeed, the evidence suggests that only a fraction are identified and prosecuted.¹⁰ Thus the fine—to deter—must be adjusted to reflect the probability of detection.¹¹ Focusing on the European Commission, Wils argued that fines would have to be dramatically higher (in the range of 150% of annual turnover) to deter.¹² In reaching this conclusion, Wils assumed a price increase of twenty percent,¹³ a profitability

⁹ See, e.g., Wouter Wils, *Is Criminalisation of EU Competition Law the Answer?*, in CRIMINALIZATION OF COMPETITION LAW ENFORCEMENT, *supra* note 3, at 60; Wouter Wils, *Does Effective Enforcement of Articles 81 & 82 EC Require Not Only Fines on Undertakings but also Individual Penalties, and in Particular Imprisonment?*, in EUROPEAN COMPETITION LAW ANNUAL 2001: EFFECTIVE PRIVATE ENFORCEMENT OF EC ANTITRUST LAW 411–50 (C.D. Ehlermann & Isabela Atanasiu eds., 2003).

¹⁰ See Peter Bryant & E. Woodrow Eckard, *Price Fixing: The Probability of Getting Caught*, 73 REV. ECON. & STAT. 531 (1991), where the authors concluded that thirteen to seventeen percent of cartels were detected and prosecuted. See also Emmanuel Combe, Constance Monnier & Renaud Legal, *Cartels: The Probability of Getting Caught in the European Union* (Bruges European Economic Research Paper No. 12, 2008), available at <http://www.coleurope.eu/template.asp?pagename=BEER> (finding more recently that the probability of detection in Europe ranged from 12.9% to 13.3%).

¹¹ See JEREMY BENTHAM, AN INTRODUCTION TO THE PRINCIPLES OF MORALS & LEGISLATION (1789), where Bentham observed that deterrence requires a penalty that reflects the probability of detection and punishment. More recently, Judge Posner reminds us: “The correct fine under the assumption of risk neutrality is calculated by dividing the social cost of the violation by the probability of apprehension and punishment.” POSNER, *supra* note 1, at 269. Posner suggests that most public corporations are likely to be risk-neutral. *Id.* For a discussion of the relevance of risk neutrality, see A. Mitchell Polinsky & Steven Shavell, *The Optimal Tradeoff Between the Probability & Magnitude of Fines*, 69 AM. ECON. REV. 880 (1979).

¹² See Wils, *Is Criminalisation*, *supra* note 9, at 79. Wils’s calculation also assumes that cartels have a five-year duration. *Id.*

¹³ *Id.* This assumption was based on a study by the Organisation for Economic Co-operation and Development (OECD) with twelve observations finding a median overcharge of 12.75%, and on a much more comprehensive study by John M. Connor that collected and analyzed 770 overcharges from cartels discovered in the past two centuries and concluded that the median

increase of ten percent,¹⁴ cartel duration of five years,¹⁵ and a probability of detection of thirty-three percent.¹⁶ Unfortunately, many companies would be unable to pay such a fine.¹⁷ Indeed, one study suggests that close to sixty percent of firms would be unable to pay an optimally deterrent penalty and avoid bankruptcy.¹⁸ Liquidation would impose significant external costs, such as employee redundancy,

surcharge was 25%. See John Connor, *Price-Fixing Overcharges: Legal and Economic Evidence*, 22 RES. LAW & ECON. 59 (2007). In a parallel article, Connor and Lande note that “the lynchpin of modern criminal fines—the . . . assumption that cartels raise prices by 10% is supported by a surprisingly small amount of evidence.” Connor & Lande, *supra* note 2. Importantly, they conclude that the median overcharge was 27% (20–21% for domestic U.S. cartels and 33–34% for international cartels). Focusing on the period 1991–2004, they find that the overcharge is 17–18% for domestic U.S. cartels and 25% for international cartels.

¹⁴ See Wils, *Is Criminalisation*, *supra* note 9, at 79–80.

¹⁵ See *id.* at 79 n.109. Yet it should be noted that analyses of cartel duration find periods longer than five years for certain types of cartels. For an examination of cartel durability, see John Connor, *Private International Cartels: Effectiveness, Welfare & Anticartel Enforcement* (Purdue Ag. Econ. Working Paper No. 03-12, 2003).

¹⁶ In the earlier article, Wils used a probability of detection of sixteen percent. This was based on the work of Bryant & Eckard. See Bryant & Eckard, *supra* note 10.

¹⁷ Using the assumptions above, Wils concludes that the “cartel members would each have gained over the whole duration of the cartel 50% of their annual turnover in the products concerned by the violation.” He continued:

Even if they had retained these profits until the fine was imposed, these would only pay one third of the fine of 150 per cent of annual turnover
It is more likely that these profits would not have been retained but rather would have been paid out in taxes, dividends, salaries and wages.

Wils, *Is Criminalisation*, *supra* note 9, at 80.

¹⁸ See Catherine Craycraft, Joseph Craycraft & Joseph Gallo, *Antitrust Sanctions and a Firm's Ability to Pay*, 12 REV. INDUS. ORG. 171 (1997). Recently, a company has claimed bankruptcy, stating that it was forced to do so by virtue of “high” fines imposed on it for cartel offenses in Europe. See Nikki Tait, *European Cartel Fines Questioned*, FIN. TIMES, Sept. 19, 2009, available at <http://www.ft.com/cms/s/0/3e2d637c-a4a8-11de-92d4-00144feabdc0.html#axzz19RJ5dU6Q>.

decrease in the tax base, and injury to suppliers. Liquidation may also result in the further concentration of the market. Confronted with these externalities, Wils argues that it is unrealistic to expect policy makers to impose deterrent fines.¹⁹

The second argument is essentially one of agency. Prices are fixed by individuals—not corporations. Such agents confront different incentives than those of their employers.²⁰ Accordingly, sanctions should be focused on the individual actors. However, there are practical problems in imposing fines sufficient to deter individuals. First, courts may have a difficult time conducting a cost-benefit analysis for an individual.²¹ Second, the individual likely would be unable to pay such a fine, and third, it would be difficult to make certain that the individual was not reimbursed by the company that benefitted from the anticompetitive conduct.

¹⁹ Although we have not considered the marginal deterrent effect of private remedies, it should be noted that private rights of action do not appear to be effective deterrents. In the vitamins cartel, for example, “the total antitrust fines *and* penalties are estimated to be at most \$7.5 billion. But . . . the best estimates of the cartel’s monopoly profits . . . are \$9 to \$10 billion. Thus, the criminal and civil justice systems of the globe have failed to recover all of the cartel’s illegal profits.” John Connor & Darren Bush, *How to Block Cartel Formation and Price Fixing: Using Extraterritorial Application of the Antitrust Laws as a Deterrence Mechanism* 47 (Mar. 29, 2008), available at <http://ssrn.com/abstract=1156469> (emphasis added). While patently inadequate, the number is even punier when the probability of detection or punishment is considered.

²⁰ See Katalin Cseres, Maarten Pieter Schinkel & Floris Vogelaar, *Law & Economics of Criminal Antitrust Enforcement: An Introduction*, in *CRIMINALIZATION OF COMPETITION LAW ENFORCEMENT*, *supra* note 3, at 7–8, where the authors observe that the corporate governance literature shows that managerial incentives are often difficult to reconcile with corporate profit maximization objectives. The former often value objectives other than firm profits, including personal monetary gain, status, and perquisites. Accordingly, the authors conclude that a corporate fine may not hurt those actually responsible for the breach of law. *See also* OECD, *REPORT ON THE NATURE & IMPACT OF HARD CORE CARTELS & SANCTIONS AGAINST CARTELS UNDER NATIONAL COMPETITION LAWS* 63 (2002).

²¹ Cseres and her co-authors observe that determination of the proper utility cost-benefit analysis would be difficult, and require, among other things, a better understanding of “cartel sociology.” Cseres, Schinkel & Vogelaar, *supra* note 20, at 10.

The third argument is that the fines ultimately may be imposed on the victims of the cartel. Perhaps this is a less significant objection, but the fines initially paid by the cartel sometimes will be repaid to the cartel by future consumers of the products in question.²² These arguments lead many to conclude that fines are insufficient and need to be augmented by custodial sentences in order to adequately deter cartel behavior.²³

* * *

The work by Wils and others has sparked serious interest in the subject of cartel sanctions and their deterrent value. If custodial sentences provide better deterrence, then one would expect to find less cartel activity in those jurisdictions that have criminalized cartel conduct. Senior U.S. officials have asserted this to be the case. For example, Deputy Assistant Attorney General Scott Hammond, a contributor to this volume, has compared recent cartel activity in the United States and elsewhere, and observed that

[t]he best evidence of its impact is the fact that we have detected international cartels that fix prices everywhere around the world except in the U.S. . . . They have avoided extending the cartel activity to the lucrative U.S. market because they feared detection and going to jail.²⁴

U.S. officials conclude that U.S. custodial sentences have prompted cartelists to avoid including the United States within the cartel. These conclusions by the U.S. authorities support the position that custodial sentences work and are necessary weapons of competition enforcement agencies that are seriously interested in deterring cartel behavior. Nevertheless, data supporting these conclusions

²² Cf. Office of Fair Trading (OFT), Case No. 98/05/2006 (filed Nov. 20, 2006), available at <http://www.oft.gov.uk/?OFTwork/?competition-act-and-cartels/ca98/decisions/schools> (involving an alleged cartel exchange of tuition fee information resulting in a fine being imposed on the respondent schools).

²³ See also OECD, POLICY ROUNDTABLES: CARTEL SANCTIONS AGAINST INDIVIDUALS 2003, at 8 (2005), available at <http://www.oecd.org/dataoecd/61/46/34306028.pdf>.

²⁴ Peter Scott, *Go Directly To Jail*, GLOBAL COMPETITION REV., Nov. 2008, available at <http://www.globalcompetitionreview.com/features/article/12010/go-directly-jail/>.

would be even more persuasive. We recognize the confidentiality issues, but hope that such data will be disclosed to the public at some point.

Three objections to custodial sentences are sometimes voiced. First, some have suggested that the danger of false positives is simply too great.²⁵ This criticism would have traction if custodial sentences were imposed without sufficient safeguards to protect and insure the right of defense. However, those jurisdictions that impose such sentences do so within the context of their criminal process.²⁶ In the United States, only “naked” price fixing (which we define to include market allocation, bid-rigging, and output restrictions) is criminally prosecuted, and any serious doubt as to possible cognizable efficiencies relegates the case to civil proceedings.

Second, others have argued that such penalties are inconsistent with social and legal norms.²⁷ Proponents of this view argue that competition law is regulatory and not *malum in se*,²⁸ to which we make two responses. Most jurisdictions today impose criminal sanctions on “regulatory crimes,” and the distinction, even if valid, does not preclude custodial sentences.²⁹ More importantly, price fixing is appropri-

²⁵ See, e.g., Cseres, Schinkel & Vogelaar, *supra* note 20, at 10.

²⁶ In most jurisdictions, criminal conviction requires proof beyond a reasonable doubt, a level of proof higher than a preponderance of the evidence. Moreover, there are additional safeguards against self-incrimination and higher evidentiary standards in many countries.

²⁷ For another criticism of criminalization, see Andreas Reindl, *How Strong Is the Case for Criminal Sanctions in Cartel Cases?*, in CRIMINALIZATION OF COMPETITION LAW ENFORCEMENT, *supra* note 3, at 110, where the author suggests that there are not sufficient data to make the case for increased sanctions and that criminalization would impose both direct costs on the exchequer and indirect costs on society. He emphasizes the point that although such sanctions might be effective in the United States, Europe confronts different social and legal norms.

²⁸ See Caron Beaton-Wells & Brent Fisse, *Criminalising Serious Cartel Conduct: Issues of Law and Policy*, 36 AUSTL. BUS. L. REV. 166, 187–88 (2008), where the authors argue that the core harm is the subversion of the competitive process and not the intention to obtain a benefit.

²⁹ Australia, for example, criminalizes “insider trading.”

ately characterized as theft.³⁰ Legislatures essentially have created a property right in buyers to purchase goods and services free of collusion by sellers. When price fixing is viewed as theft or fraud, it is appropriate to punish such behavior similarly to other forms of white-collar crime such as embezzlement. As Mr. Justice McKechnie of Ireland recently observed, cartel offenses are “odious” conduct: “They cause a transfer of consumers’ money to themselves. They are offensive and abhorrent, not simply because they are *malum prohibitum* but also because they are *mala in se*.”³¹

Finally, some argue that the increased rights of defense associated with criminal prosecutions render criminal cases more difficult to win than civil or administrative proceedings. As a result, deterrence, rather than increasing, will diminish.³² This view surfaced in Australia during discussions of the proposed legislation.³³ It is true that rights of defense are greater in criminal cases, but that does not necessarily mean that the marginal prosecutorial cost exceeds the marginal deterrent benefit. We suggest that the U.S. experience demonstrates that

³⁰ Former OFT Chairman Sir John Vickers put it this way: “Since hardcore cartels are like theft, criminalization makes the punishment fit what is indeed a crime.” John Vickers, Chairman, Office of Fair Trading, Policy for Markets and Enterprise, Address Before the British Chamber of Commerce 4 (Mar. 31, 2003). See also Joel Klein, Assistant Att’y Gen., U.S. Dep’t of Justice, Address at the ABA Antitrust Section Spring Meeting: The Antitrust Division’s International Anti-Cartel Enforcement Program (Apr. 6, 2000), in which he stated that price-fixers were “well-dressed thieves.”

³¹ *D.P.P. v. Duffy*, [2009] IEHC 208 (Cent. Crim. Ct.). A 2003 report of the OECD concluded: “‘Hard core cartels are the most egregious violations of competition law.’ This conduct, which includes agreements among competitors to fix prices, restrict output, submit collusive tenders or share markets, ‘injures consumers . . . by raising prices and restricting supply.’ ” OECD COMPETITION COMMITTEE, SECOND REPORT ON EFFECTIVE ACTION AGAINST HARD CORE CARTELS 3 (2003) (quoting OECD, RECOMMENDATION OF THE COUNCIL CONCERNING EFFECTIVE ACTION AGAINST HARD CORE CARTELS 1998 (1998)).

³² The Government of New Zealand concluded that higher standards associated with criminal prosecutions would lead to fewer cases and less deterrence. See OECD, *supra* note 23, at 21.

³³ See, e.g., Beaton-Wells & Fisse, *supra* note 28, at 175.

the additional costs associated with strong rights of defense are nonetheless outweighed by the additional deterrent value.³⁴

II. CONTENTS OF THE ISSUE

This issue contains contributions by scholars, government officials, and practitioners and concludes with an interview of a businessperson recently released from prison for cartel conduct. Each contributes to the central theme of cartel sanctions and deterrence. Together, the articles examine, develop, and debate the question of whether and what type of sanctions deter cartel conduct. Each is given a brief overview below.

A. Deterrence and Detection of Cartels: Using All the Tools and Sanctions

In their article *Deterrence and Detection of Cartels: Using All the Tools and Sanctions*, Gregory J. Werden, Scott D. Hammond, and Belinda A. Barnett of the Antitrust Division of the U.S. Department of Justice discuss the enforcement tools and sanctions used in the United States and explain how these tools work together to deter and detect cartels. Because cartels have no legitimate purpose and are property crimes akin to burglary or larceny, there is little risk that enforcement will deter efficiency-enhancing horizontal conduct. (The authors make it quite clear that U.S. criminal enforcement focuses exclusively

³⁴ *But see* POSNER, *supra* note 1, at 266–86; BREIT & ELZINGA, *supra* note 1; Richard Posner, *Optimal Sentences for White Collar Criminals*, 17 AM. CRIM. L. REV. 409 (1980) (for the contrary view that monetary fines are superior to custodial sentences). Although Judge Posner is a very serious student of American antitrust law, the factual predicate for his view is wrong. In his most recent exposition of this view, Judge Posner states: “imprisonment is imposed so rarely in antitrust cases that its deterrent effect may be slight.” POSNER, *supra* note 1, at 270. Judge Posner goes on to observe correctly that even draconian penalties will not deter if they are imposed with insufficient frequency. *Id.* at 217. In support of his thesis, Judge Posner relies on sentencing data from 1970 to 1999, from which it appears that few convicted price fixers actually serve prison sentences. The table and the figure demonstrate that this is no longer true. Breit and Elzinga similarly conclude that custodial sentences cannot deter until judges are willing to impose such sentences on convicted business executives. *See* BREIT & ELZINGA, *supra* note 1, at 30–43. Obviously things have changed.

on hard core or “naked” offenses that pose no risk to cognizable efficiencies.) For effective deterrence, the authors believe monetary sanctions alone against corporations and individuals will not suffice. A fine sufficient to deter would be too large for a corporation to pay, would be borne in part by people who did not participate in the cartel, and may even weaken competition. Therefore, the authors argue that effective deterrence requires a combination of civil and criminal sanctions, including the criminal prosecution and imprisonment of culpable individuals. Imposition of custodial sentences sends a unique message that cartel conduct serves no legitimate purpose and only serves to rob consumers of the benefits of competition.

Werden, Hammond, and Barnett discuss the significant array of investigative tools available to the Antitrust Division that are unavailable to private litigants. For example, the Antitrust Division may empanel grand juries, which can call witnesses and subpoena documents. They note that the Antitrust Division has empanelled more than one hundred active grand juries in recent years. Importantly, the authors discuss the Antitrust Division’s most important tool: the leniency program. Under the program, both corporations and individuals are granted leniency in return for coming forward and cooperating in the investigation and prosecution of the cartel. The authors argue that the leniency program provides a strong incentive to come forward because “the likelihood of detection is substantial” and because individuals who do not come forward are “regularly sentenced to prison.” One could debate whether or not the likelihood of detection is substantial, but it is hard to argue against the success of the leniency program. Amazingly, over ninety percent of fines imposed for Sherman Act violations since 1996 can be traced to investigations assisted by leniency applicants.

The authors acknowledge that civil actions brought by private litigants help deter and detect cartels. After all, plaintiffs successful in antitrust actions against cartels are awarded attorneys’ fees and treble damages. But the authors vigorously dispute the view taken by some that private civil litigation is a more effective deterrent.³⁵ The

³⁵ See Robert Lande & Joshua Davis, *Comparative Deterrence from Private Enforcement and Criminal Enforcement of the U.S. Antitrust Laws*, 2011 B.Y.U. L. REV. (forthcoming), available at <http://ssrn.com/abstract=1565693>.

leniency program helps to detect and disrupt cartels, while the criminal convictions obtained by the Division facilitate follow-on civil damage litigation.

B. The Myth of Overenforcement

The next article focuses on the record of the European Commission (the Commission). In their article entitled *Fines Against Hard Core Cartels in Europe: The Myth of Overenforcement*, Professors Emmanuel Combe and Constance Monnier analyze the fines imposed by the Commission on cartels to determine whether such fines are optimal. (Combe is a professor at the University of Paris I Pantheon-Sorbonne, at ESCP Europe Business School, and is a member of the board of the Conseil de la Concurrence; Monnier is a professor at the University of Paris I Pantheon-Sorbonne.) The authors concede that the European Commission has cracked down on cartels in recent years. In 2008, the Commission imposed its highest fine ever on a cartel, and for three consecutive years, the fines imposed by the Commission have totaled more than 2 billion euros. According to the authors, the higher fines stem from a change in European antitrust policy, with the Commission imposing larger fines in order to disrupt and deter cartel conduct. This change has produced a reaction, with many arguing that the higher fines create a risk of overenforcement. Combe and Monnier's statistical analysis refutes this claim.

The authors analyze sixty-four convicted cartels in the European Union from 1975 through 2009. They compare the fines imposed on a company with that company's illicit gain from the cartel and the cartel's estimated probability of detection. Combe and Monnier found that half the fines imposed fell below the company's illicit gain. Thus, the fines generally fell very short of optimal deterrence even if one were to make the unrealistic assumption that all cartels were detected. With a fifteen percent probability of detection, Combe and Monnier found only one instance in which a fine sufficient to deter cartels was imposed and twelve in which the fine exceeded the restitution level. They conclude that the fines imposed by the European Union were suboptimal, and, given the current level of fines imposed by the Commission, there is no risk of overenforcement. Furthermore, Combe and Monnier conclude that penal

and civil sanctions may be a useful complement to the fines imposed on convicted cartels.

C. U.S. Policy and Practice in Pursuing Individual Accountability for Cartel Conduct: A Preliminary Critique

Unquestionably, the U.S. Department of Justice has led a movement towards individual accountability for cartel conduct through the application of criminal sanctions, including prison sentences, for individual offenders. Many commentators, ourselves included, have praised the Antitrust Division's efforts to eradicate cartels from the U.S. and global economy. Professors Caron Beaton-Wells of the University of Melbourne and Brent Fisse of the University of Sydney argue that the U.S. enforcement record has escaped critical scrutiny and question the extent to which individual accountability is reflected in current U.S. policy and practice.

The authors argue that it is questionable whether individual accountability is pursued or achieved in the United States. In doing so they explore why general deterrence and individual accountability are not the same. They also note that U.S. officials assert that individual criminal sanctions are necessary to disrupt and deter cartel conduct. Yet despite record-level prosecutions, cartels still occur.

Focusing on U.S. prosecutorial discretion in both the leniency and plea bargain contexts, Professors Beaton-Wells and Fisse observe that many individuals will not be prosecuted and that corporate fines against their employers will not result in internal disciplinary action. The number of persons "carved out" of plea bargain protection generally is small and the number of individuals protected in leniency applications may be large. Professors Beaton-Wells and Fisse conclude that, given the influence of the U.S. model worldwide, a detailed empirical study of the effects of individual criminal sanctions is warranted.

D. Problems with Prisons in International Cartel Cases

In a contribution that assembles a database of almost all individuals indicted for price fixing in the United States from 1990 through 2009, Purdue University Professor John Connor reviews much of the

literature relevant to corporate sanctions for antitrust violations as well as the Department of Justice's current policy on prison sentences for executives involved in cartels. Professor Connor raises several problems inherent in a deterrence policy that relies heavily on prison sentences as a means of disrupting and deterring cartels, especially international cartels. For example, many of the executives involved in international cartels reside outside of the United States; many of them will not submit to U.S. jurisdiction and cannot be extradited to the United States. In a survey of 228 individuals who had been indicted by a U.S. court for participating in an international price fixing conspiracy from 1990 through 2009, the author finds that 47 individuals are currently fugitives outside the United States.

Even with individuals found within the United States, Professor Connor notes that it is not easy to convict an individual who exercises his or her right to a jury trial for price fixing. Out of 228 executives indicted for cartel conduct, most negotiated guilty pleas. Of the twenty-eight executives who elected to go to trial, juries convicted only fifteen. Professor Connor concludes that several problems characterize contemporary U.S. cartel enforcement: the rising number of fugitives, losses at trial, an ambiguous record on increased custodial sentences, and a failure to eliminate no-jail-time guilty pleas.

One additional value of the Connor contribution is the data collection that we hope will be the basis for further work in this area. Having said that, the increased number of fugitives may not be a real problem. Whether an increase in successful extraditions will decrease the percentage of fugitives remains to be seen. We suspect that it will, although extradition for cartel offenses probably will not be commonplace anytime in the near future.³⁶ Losses at trial are to be expected. One would expect cases of clear liability to settle, whereas executives and their counsel may go to trial where the parties' views of the likely outcome diverge. Moreover, and as Connor notes, jury trials in which coconspirators provide evidence in return for leniency are never easy. While the amnesty program has been a great weapon in the U.S. arsenal, it is not costless.

³⁶ The editors also query whether there may be a "backlash" in Congress and elsewhere if foreign jurisdictions seek to extradite Americans for competition offenses.

E. Cartel Deterrence: The Search for Evidence and Argument

University of Aberystwyth Professor Christopher Harding, in *Cartel Deterrence: The Search for Evidence and Argument*, examines how best to measure the deterrent impact of cartel policies and sanctions. He concludes that cartel sanctions are notoriously difficult to measure and assess and that this complicates the debate over whether enforcement agencies impose optimal sanctions for cartel conduct.

The criminal nature of cartel conduct creates an obvious problem: because it is an illegal conspiracy and hidden from view, it is very difficult to quantitatively measure its incidence. Indeed, the author believes that accurate data on the extent and nature of cartel conduct do not exist. Nonetheless, the Harding contribution interestingly surveys the literature in this regard. This literature includes case studies in particular industries, including models on cartel stability and formation, business and legal advisor surveys, and evidence of diversion of illegal activity from one jurisdiction to another. (Interestingly, one study has found that the Vitamins Cartel raised prices more in countries without effective enforcement regimes.) Together, the different methodologies discussed provide opportunities for further study on how best to measure the deterrent impact of different cartel policies and sanctions

F. Deterrence and the Impact of Calculative Thinking on Business Compliance with Competition and Consumer Regulation

We now turn to the first of two articles that use surveys to measure the impact of sanctions on compliance and deterrence. Australia is the most recent addition to the list of countries that have adopted custodial sentences for cartel conduct. Professor Christine Parker of the University of Melbourne and Professor Vibeke Lehmann Nielsen of the University of Aarhus, in *Deterrence and the Impact of Calculative Thinking on Business Compliance with Competition and Consumer Regulation*, developed a model to test how Australian businesses respond to different sanctions under Australia's competition and consumer protection law.

Competition authorities almost universally subscribe to the view that substantial sanctions for offenses like price fixing are necessary to deter given the probability of detection. However, Professors Parker

and Nielsen believe logic and evidence show that increased sanctions do not necessarily deter cartel conduct. The authors conducted a survey to measure the costs and gains incurred by a company to comply with competition law. They contacted over 2300 Australian businesses to ask about the businesses' experiences with compliance and with enforcement by the Australian Competition & Consumer Commission. Based on their survey, the authors conclude that higher sanctions alone are unlikely to lead to optimal compliance. The authors found that variation in the risk of detection and variation in the perceived costs and benefits of resources devoted to compliance are more important than the severity of the sanction. Indeed, draconian sanctions may not be useful if there is little risk of detection and punishment.

G. The Deterrent Effect on Antitrust Sanctions: Evidence from Switzerland

With the revision of the Swiss Cartel Act on April 1, 2004, the Swiss Competition Commission has gained considerable new enforcement powers, which include the ability to conduct dawn raids and impose substantial fines. In a contribution by scholars from the Centre for European Economic Research in Mannheim, Kai Hüschelrath, Nina Leheyda, and Patrick Bosechorner, in their article *The Deterrent Effect of Antitrust Sanctions: Evidence from Switzerland*, survey Swiss antitrust lawyers and firms to examine whether and to what extent the revision has affected cartel activity. The survey results show that the revision has had a deterrent effect in Switzerland but has also created a fair amount of uncertainty regarding the reach of the new enforcement powers and whether or not these powers have inadvertently deterred precompetitive activity.

Based on their survey, the authors believe that the revision of the Swiss Cartel Act has moved Switzerland closer to an efficient competition policy regime. For example, the Swiss Competition Commission's ability to conduct dawn raids and impose substantial penalties, even on first-time offenders, had led to an increased awareness of the significance of antitrust law. This in turn has led to an increased interest in competition law compliance programs. This is especially true among Swiss firms that are less active in foreign countries and less familiar with European competition law.

On the other hand, the survey suggests that many are unsure about the ultimate impact of the revisions because it remains to be seen whether the allowable fines actually will be imposed. At the same time, those interviewed suggested that fines for abuses of market power, as opposed to horizontal agreements, may deter precompetitive business strategies. And, not surprisingly, those interviewed found prison sentences for those convicted of cartel conduct controversial, with several interviewees arguing that prison sentences, even for hard core cartel offenses, may not be appropriate within Switzerland.

H. Bargaining in the Shadow of the European Settlement Procedure for Cartels

Our next two contributions take perspectives different from those that precede them. The first, by University of Amsterdam Professor Maarten Pieter Schinkel, focuses on the impact of the new European Union settlement procedures on deterrence and compliance issues.

Under the terms of the new process, a company may avoid long and expensive litigation with the possibility of high fines, lengthy appeals, reputational damage, and the increased likelihood of private litigation. Unlike settlement in the United States, the new European process involves little bargaining—at least under its explicit terms. If the company acknowledges its involvement in the cartel, the Commission will settle its case and reduce the company's applicable fine by ten percent. According to the Commission, this is a take-it-or-leave-it offer, and the ten percent fine reduction is not negotiable.

Despite the official pronouncements, Professor Schinkel observes that at least three areas are open for negotiation in cartel cases: (1) the ultimate fine base to which the ten percent reduction is applied, (2) a reduction for providing additional information under the European leniency program, and (3) the wording that the Commission uses in its public statement announcing the cartel settlement. Schinkel suggests that the Commission actually has adopted a weak bargaining position; its refusal to negotiate on the fine discount may prompt companies to push harder on the base fine, leniency discounts, and the language used in a public statement, all areas in which it is more difficult for the Commission to commit to being tough.

Unfortunately, the program to date has produced few cases on which to base any long-term conclusions. Nevertheless, a quick look at how the Commission determines a company's base fine supports Schinkel's argument. To determine the base fine, the Commission first multiplies the number of years that the cartel operated by the value of the affected sales made by the company during the last full business year that it participated in the cartel. Thirty percent of this sum is the base amount of the fine, but the Commission may increase the fine by another fifteen to twenty-five percent in hard core cartel cases. Next, the Commission considers aggravating and mitigating circumstances. Combined, these factors leave a wide margin of discretion for the Commission to determine the base fine to which the ten percent reduction should be applied. Separate and apart from these circumstances, the Commission may reduce the fine based on leniency applications of other than the first applicant. For example, a company may receive a fifty percent discount if it provides evidence with "significant value" to the Commission. Hence, the fine ultimately paid by the company clearly is open to negotiation.

Apart from the fine, the phrasing of the Commission's public statement about the cartel is also open to negotiation. Because of the Commission's weak bargaining position, Schinkel believes there will be less public disclosure about the cartel if the Commission settles with an alleged cartel member. After all, the Commission is not required to publicly disclose information about the cartel, and companies often wish to settle to keep the public from learning about the cartel. This likely will make it more difficult to bring successful follow-on damages cases. By forcing all negotiations to points where it is not known how much the Commission gave away in a settlement, Schinkel believes that the Commission risks finding itself in a position where it gives away too much, reducing deterrence. Schinkel concludes that the Commission should further develop its bargaining strategy, reconsider applying company-specific fine reductions, and submit its settlement agreements to independent critical review.

I. Does Prison Work for Cartelists? The View from Behind Bars

The last article approaches the issue from a different perspective. In this contribution, English solicitor Michael O'Kane interviews his client Bryan Allison, who recently completed a term of incarceration in a U.K. prison after having pled guilty to price fixing.

On May 2, 2007, a trial attorney from the U.S. Justice Department's Antitrust Division, along with five armed federal agents, arrested Bryan Allison in Houston, Texas, for his involvement in an international conspiracy to fix prices, rig bids, and allocate the market for flexible marine hoses. Allison pled guilty in the United States, but under an unprecedented plea agreement, the Justice Department allowed Allison to return to the United Kingdom where he pled guilty to a U.K. cartel offense and received a two-year term of imprisonment. Had Allison received a shorter sentence, his plea agreement with the Justice Department would have required him to return and serve additional jail time in the United States. In the interview with O'Kane, who brokered the plea agreement between Allison, the Justice Department, and the U.K. Office of Fair Trading, Allison discusses the Marine Hose Cartel, his arrest and plea bargain, and how criminal sanctions against individual executives deter international cartels.

Allison was arrested at 5:00 a.m., interrogated for several hours, transported in handcuffs to a federal jail, kept in jail for several days before he made bail, and then confined to house arrest for six months until he returned to the United Kingdom to serve his sentence. For Allison, the experience was shocking. Although he was aware that participating in a cartel was a criminal offense in the United States and the United Kingdom, Allison says that he never realized the full extent of the risk and its consequences. According to Allison, the market for marine hoses was small, and the only buyers were large oil companies. Furthermore, he did not necessarily view his conduct as dishonest. Allison says that business custom and competitive pressure, as opposed to personal gain, motivated the conspiracy.

Once arrested, the prospect of spending ten years in a U.S. prison was very frightening. Allison, a university-educated and middle class executive, viewed a custodial sentence as a real personal cost. Con-

firming a point often made by U.S. enforcement officials, Allison states he would have accepted a much larger fine if he could have avoided jail. And, even though Allison only served eight months of this two-year sentence, he found the experience harsh. Perhaps Allison's story may do more to instill an interest in cartel compliance programs than the binders customarily distributed by company legal advisors. Indeed, perhaps he may find an opportunity in that regard.

J. Bibliography

The symposium issue concludes with a bibliography prepared by Freshfields Bruckhaus Deringer US LLP librarian Benjamin Toby. The assembly of these contributions by scholars, enforcement officials, and practitioners should be of significant aid both to those who want to increase their own understanding of the subject and to those who are undertaking further research on the subject of the deterrence of cartel behavior.

*D*eterrence and detection of cartels:
Using all the tools and sanctions

BY GREGORY J. WERDEN,* SCOTT D. HAMMOND**
AND BELINDA A. BARNETT***

The United States applies a diverse array of tools and sanctions to deter and detect cartels. Because cartel activity is treated as a serious crime, a formidable array of criminal investigative tools is available, and convicted individuals are imprisoned. Private damages actions also yield substantial recoveries. The many tools and sanctions support each other in various ways, making each significant. But the claim that private damages actions provide the most important deterrent to cartels in the United States ignores the enormous assistance provided by criminal enforcement, misses much that is critical in deterring cartels, and mistakenly assigns credit for detecting cartels.

* Senior Economic Counsel, Antitrust Division, U.S. Department of Justice.

** Deputy Assistant Attorney General for Criminal Enforcement, Antitrust Division, U.S. Department of Justice.

*** Deputy General Counsel—Criminal, Antitrust Division, U.S. Department of Justice.

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I. INTRODUCTION

The basic framework for deterring and detecting cartels in the United States remains that established in 1890 by the Sherman Act: Corporations that participate in cartels are subject both to criminal fines and civil actions for damages,¹ and culpable individuals are subject to criminal prosecution and imprisonment.² The applicable sanctions, however, have evolved substantially since 1890, and the arsenal of enforcement tools has been significantly enlarged in recent decades. This article details the tools and sanctions used in the United States to deter and detect cartels and explains how they work together in pursuit of a common goal. Even though more than a hundred countries now have anticartel laws, including many moving in the direction of the U.S. model, the United States remains the only jurisdiction that has extensive experience utilizing both incarceration and private damages litigation.

II. CARTEL DETERRENCE IN THEORY

Cartels have no legitimate purposes and serve only to rob consumers of the tangible blessings of competition. Cartels, therefore, are not properly redressed with just a liability rule designed to compensate victims.³ Rather, participation in a cartel is viewed in the United

¹ Section 7 of the Sherman Act provided that “any person” injured by a violation of the Act “may sue” in federal court and “recover three fold the damages by him sustained, and the costs of suit, including a reasonable attorney’s fee.” Ch. 647, § 7, 26 Stat. 210 (1890). This provision was replaced by identical language (except for making “three fold” into a single word) in section 4 of the Clayton Act, now codified at 15 U.S.C. § 15 (2006).

² Section 1 of the Sherman Act declared that “[e]very contract, combination . . . , and conspiracy, in restraint of trade . . . is a misdemeanor.” Ch. 647, § 1, 26 Stat. 209 (1890). As highlighted below, violations are now felonies. See *infra* note 47 and accompanying text. When the Sherman Act became law, thirteen of the states already had criminal laws prohibiting cartels. See HENRY R. SEAGER & CHARLES A. GULICK, JR., TRUST AND CORPORATION PROBLEMS 342 & n.1 (1929).

³ On the basic rationale for criminal prohibitions rather than reliance on liability rules, see Guido Calabresi & A. Douglas Melamed, *Property Rules, Liability Rules, and Inalienability: One View of the Cathedral*, 85 HARV. L. REV. 1089, 1124–27 (1972).

States as a property crime, akin to burglary or larceny, and it is properly treated accordingly. Like other serious crimes, cartels are never socially desirable, and therefore U.S. law properly seeks to deter them completely rather than merely tax them.⁴ As Judge Posner has explained, criminal sanctions are not “prices designed to ration the activity; the purpose so far as possible is to extirpate it.”⁵

Theoretical analyses of deterrence often invoke the economic theory of optimal deterrence,⁶ a key premise of which is that the conduct under consideration is sometimes socially desirable and therefore would be overdeterred by sufficiently severe sanctions. Theoretical analyses of cartel deterrence often draw on (or replicate) the analysis of Professor William Landes, who applied the economic theory of optimal deterrence to what he called “cartels.”⁷ But Professor Landes assumed that the competitor collaborations he considered both restricted output, thus raising price, and reduced cost, thus yielding an offsetting social benefit.⁸ Such conduct is not treated as a cartel by the Antitrust Division of the U.S. Department of Justice.

When competitors collaborate in a manner that creates an efficiency-enhancing integration of economic activity, their collaboration nevertheless might unreasonably restrain trade, and hence violate section 1 of the Sherman Act, but the Antitrust Division does not treat

⁴ On the differing treatments of crimes and torts and their distinct rationales, see John C. Coffee, Jr., *Paradigms Lost: The Blurring of the Criminal and Civil Law Models—And What Can Be Done About It*, 101 YALE L.J. 1875 (1992); Robert Cooter, *Prices and Sanctions*, 84 COLUM. L. REV. 1523 (1984); Keith Hylton, *Theory of Penalties and Economics of Criminal Law*, 1 REV. L. & ECON. 175 (2005).

⁵ Richard A. Posner, *An Economic Theory of Criminal Law*, 85 COLUM. L. REV. 1193, 1215 (1985).

⁶ See, e.g., Gary S. Becker, *Crime and Punishment: An Economic Approach*, 76 J. POL. ECON. 169 (1968); Richard A. Posner, *Optimal Sentences for White-Collar Criminals*, 17 AM. CRIM. L. REV. 409 (1980).

⁷ See William M. Landes, *Optimal Sanctions for Antitrust Violations*, 50 U. CHI. L. REV. 652 (1983).

⁸ *Id.* at 656–66.

such a collaboration as a cartel.⁹ The Division's criminal enforcement against cartels is limited to agreements among competitors serving no purpose other than to eliminate competition. Such agreements are a subset of the conduct condemned as per se violations of the Sherman Act, and under the Supreme Court's modern decisions, the per se rule is applied only to types of restraints of trade, such as price fixing, bid rigging, and market allocation, that both "have 'manifestly anticompetitive' effects . . . and 'lack . . . any redeeming virtue.'"¹⁰ An efficiency-enhancing integration of economic activity among competitors could not be said to lack any redeeming virtue and would not be prosecuted as a cartel.¹¹

A very different rationale for invoking the economic theory of optimal deterrence, also raising the possibility of overdeterrence, begins with the premise that the rewards to individuals within corporations do not perfectly correlate with the profits of their employers. An implication of this premise is that a corporation's reckoning of the risks and rewards from criminal conduct could differ significantly from the personal risks and rewards for a key employee. To guard against unauthorized criminal conduct by employees, corporations therefore must monitor them. This rationale warns that large monetary sanctions on corporations from criminal and civil liability could cause excessively high employee monitoring costs,¹² and it supports

⁹ See FED. TRADE COMM'N & U.S. DEP'T OF JUSTICE, ANTITRUST GUIDELINES FOR COLLABORATION AMONG COMPETITORS § 3.2 (2000), available at <http://www.ftc.gov/os/2000/04/ftcdojguidelines.pdf>.

¹⁰ *Leegin Creative Leather Prods., Inc. v. PSKS, Inc.*, 551 U.S. 877, 886 (2007) (quoting *Bus. Elecs. Corp. v. Sharp Elecs. Corp.*, 485 U.S. 717, 723 (1988); *Nw. Wholesale Stationers, Inc. v. Pac. Stationery & Printing Co.*, 472 U.S. 284, 289 (1985)).

¹¹ Nor is it plausible that such an arrangement would mistakenly be treated as a cartel. That possibility had been advanced as a rationale for applying the economic theory of optimal deterrence. See Michael K. Block & Joseph Gregory Sidak, *The Cost of Antitrust Deterrence: Why Not Hang a Price Fixer Now and Then?*, 68 GEO. L.J. 1131, 1136–38 (1980).

¹² See Bruce H. Kobayashi, *Antitrust, Agency, and Amnesty: An Economic Analysis of the Criminal Enforcement of the Antitrust Laws*, 69 GEO. WASH. L. REV. 715, 735–39 (2001); Douglas H. Ginsburg & Joshua D. Wright, *Antitrust Sanctions*, COMPETITION POL'Y INT'L, Autumn 2010, at 3, 8.

imposing serious sanctions on culpable individuals to ensure effective deterrence.

Economic analyses of cartel deterrence (much as those for other white collar crimes) typically conclude that it is best to use only monetary sanctions,¹³ but this conclusion follows from unsupportable assumptions. One assumption is that imposing fines on corporations is costless to society, while sentencing individuals to imprisonment imposes significant social costs. Imposing fines is nearly costless when the fines are small in relation to the liquid assets of the corporations being fined, but fines sufficient to deter cartels are not so small.

A simple calculation grounded in data on real-world cartels suggests that a sufficient level of fines (aggregated across all cartel participants) is about twice the annual volume of commerce affected by the cartel activity,¹⁴ and the annual volume of commerce done by U.S. corporations filing tax returns is roughly the same as their net worth.¹⁵ Hence, fines at a level sufficient to deter can exceed the ability of cartel participants to pay.¹⁶

¹³ See, e.g., Kenneth G. Elzinga & William Breit, *Antitrust Penalties and Attitudes Toward Risk: An Economic Analysis*, 86 HARV. L. REV. 693 (1973); Posner, *supra* note 6. Economic analyses generally conclude that imprisonment is efficient only to the extent that liability limits for corporations and wealth constraints for individuals prevent monetary sanctions from achieving the desired level of deterrence. See Posner, *supra* note 5, at 1201–08; Steven Shavell, *Criminal Law and the Optimal Use of Nonmonetary Sanctions as a Deterrent*, 85 COLUM. L. REV. 1232 (1985).

¹⁴ See Gregory J. Werden, *Sanctioning Cartel Activity: Let the Punishment Fit the Crime*, 5 EUR. COMPETITION J. 19, 28–29 (2009). Consistent with data on actual cartels, the calculation assumes that cartel participants expect to raise prices by ten percent for six years. The calculation also assumes that the fine is imposed two years after the cartel ends and that the annual discount rate applied by cartel participants is six percent.

¹⁵ For all U.S. corporations filing tax returns for 2007, aggregate receipts and net worth were both \$28.8 trillion, and their cash on hand was just \$3.6 trillion. See INTERNAL REVENUE SERVICE, STATISTICS OF INCOME—2007, CORPORATE INCOME TAX RETURNS table 4 (2010), available at <http://www.irs.gov/pub/irs-soi/07coccr.pdf>.

¹⁶ The U.S. guidelines for the sentencing of organizations provide for the reduction of fines on the basis of inability to pay, but “not be more than necessary to avoid substantially jeopardizing the continued viability of the

Cartel participants operating only in the cartelized products and locations often could not raise the funds required to pay at a sufficient level even through total liquidation. For such corporations, fines would fail to achieve the desired deterrent effect because of the limits of corporate liability.¹⁷ Cartel participants with limited diversification outside the cartelized products and locations often could not pay fines at a sufficient level without major asset sales or other significant disruptions in business operations. For corporations in either category, the brunt of the fines would be borne not just by those who stood to benefit from the cartel participation, i.e., executives and shareholders, but also by rank-and-file employees, suppliers, distributors, and communities.¹⁸ And paying the fines could significantly weaken competitors and hence weaken competition.

Theoretical analyses concluding that it is best to rely on monetary sanctions also assume that imposing a fine on an individual can

organization." See 1 U.S. SENTENCING COMM'N, FEDERAL SENTENCING GUIDELINES MANUAL § 8C3.3 (2010). Under the guidelines, limited ability to pay sometimes results in significantly reduced fines. See, e.g., Plea Agreement, United States v. Nippon Cargo Airlines Co., No. 09cr0098 (D.D.C. May 9, 2009), available at <http://www.justice.gov/atr/cases/f245700/245774.pdf>; Plea Agreement, United States v. Premio, Inc., No. CR 06-0086 (N.D. Cal. Feb. 22, 2006), available at <http://www.justice.gov/atr/cases/f215800/215819.pdf>; Plea Agreement, United States v. Hynix Semiconductor, Inc., No. CR 05-249 (N.D. Cal. May 11, 2005), available at <http://www.justice.gov/atr/cases/f209200/209231.htm>; Plea Agreement, United States v. DuCoa, L.P., No. 3-No. 2CR00291N (N.D. Tex. Sept. 30, 2002), available at <http://www.justice.gov/atr/cases/f200300/200380.pdf>; Plea Agreement, United States v. Steele-Nickles & Assoc., Inc., No. 01cr491 (N.D. Ga. July 12, 2001), available at <http://www.justice.gov/atr/cases/indx321.pdf>; Government's Sentencing Memorandum, United States v. UCAR Int'l, Inc., Crim. No. 98-177 (E.D. Pa. Mar. 21, 1998), available at <http://www.justice.gov/atr/cases/f3800/3838.pdf>.

¹⁷ Corporate liability limits also could undermine the incentive to invest in compliance because the marginal benefit of compliance effort is reduced by liability limits. See Assaf Hamdani & Alon Klement, *Corporate Crime and Deterrence*, 61 STAN. L. REV. 271, 290-98 (2008).

¹⁸ See John C. Coffee, Jr., "No Soul to Damn: No Body to Kick": An Unscandalized Inquiry into the Problem of Corporate Punishment, 79 MICH. L. REV. 386, 389-93, 401-02 (1981); Reinier H. Kraakman, *Corporate Liability Strategies and the Costs of Legal Controls*, 93 YALE L.J. 857, 882-83 (1984).

achieve the same level of deterrence as a prison sentence.¹⁹ But those making this assumption ignore the fact that a prison sentence uniquely sends the message that society condemns the particular conduct for which a prison sentence is imposed,²⁰ and the failure to send that message necessarily lessens deterrence.²¹ They also ignore the fact that the brunt of a prison sentence must be borne by the convicted individual, whereas a fine could be paid (if only indirectly) by others.²² A former Assistant Attorney General in charge of the Antitrust Division reports being told by a “very senior corporate executive” that “ ‘as long as you are only talking about money, the company can at the end of the day take care of me . . . but once you begin talking about taking away my liberty, there is nothing that the company can do for me.’ ”²³ Finally, the proposition that a fine can achieve the same

¹⁹ The analyses note that this is not true if fines exceed the individual’s total wealth, and even with lower fines, this need not be true with differing attitudes of potential offenders toward risk when wealth is at stake (with fines) versus when personal liberty is at stake (with incarceration). See Michael K. Block & Robert C. Lind, *An Economic Analysis of Crimes Punishable by Imprisonment*, 4 J. LEGAL STUD. 479 (1975); Michael K. Block & Robert C. Lind, *Crime and Punishment Reconsidered*, 4 J. LEGAL STUD. 241 (1975); John R. Coffee, Jr., *Corporate Crime and Punishment: A Non-Chicago View of the Economics of Criminal Sanctions*, 17 AM. CRIM. L. REV. 419, 423–26 (1980).

²⁰ See Voula Marinou, *Equivalency and Interchangeability: The Unexamined Complexities of Reforming the Fine*, 39 CANADIAN J. CRIMINOLOGY 27 (1997).

²¹ Survey research finds that potential white-collar criminals make rational economic calculations of costs and benefits but also give weight to the perceived morality of the particular conduct. See Raymond Paternoster & Sally Simpson, *Sanction Threats and Appeals to Morality: Testing a Rational Choice Model of Corporate Crime*, 30 L. & SOC’Y REV. 549 (1996).

²² Federal law requires individuals to bear the cost of the fines imposed upon them unless payment by their employer “is expressly permissible under applicable State law.” 18 U.S.C. § 3572(f). Many existing state statutes could satisfy that test. See generally Pamela H. Bucy, *Indemnification of Corporate Executives Who Have Been Convicted of Crimes: An Assessment and Proposal*, 24 IND. L. REV. 279, 282–92 (1991) (reviewing state laws on indemnification of corporate executives). Moreover, effective monitoring of fined individuals to make sure they are not indemnified via a bonus, pay raise, or other indirect means is unlikely to be infeasible.

²³ Donald I. Baker, *The Use of Criminal Law Remedies to Deter and Punish Cartels and Bid-Rigging*, 69 GEO. WASH. L. REV. 693, 705 (2001).

level of deterrence as a prison sentence is completely at odds with what prosecutors and counsel representing cartel defendants observe almost on a daily basis: individuals would gladly pay whatever they have to stay out of prison.²⁴

Theoretical analyses of deterring corporations reasonably assume that they act rationally, so monetary sanctions can have a significant deterrent effect,²⁵ but sanctions on culpable individuals are necessary because the monetary sanctions on corporations are insufficient. And although monetary sanctions can induce corporations to take significant steps to ensure compliance, the threat of prison sentences helps make compliance programs effective.²⁶ Sanctions on culpable individuals also are essential because they are apt to misperceive the risks and rewards from cartel participation, e.g., by placing excessive weight on the immediate gains from a cartel or being overly optimistic about escaping detection.²⁷ Sanctions on culpable individuals,

²⁴ The deterrent effect of prison sentences as a general matter also has substantial empirical support. See Steven D. Levitt & Thomas J. Miles, *Empirical Study of Criminal Punishment*, in 1 HANDBOOK OF LAW AND ECONOMICS 455, 470–74 (A. Mitchell Polinsky & Steven Shavell eds., 2007). Prison sentences are believed to have an especially powerful deterrent effect with corporate executives. See, e.g., Arthur L. Linman, *The Paper Label Sentences: A Critique*, 86 YALE L.J. 630, 630–31 (1977) (“To the businessman . . . prison is the inferno, and conventional risk-reward analysis breaks down when the risk is jail.”).

²⁵ See generally DAVID O. FRIEDRICHS, TRUSTED CRIMINALS: WHITE COLLAR CRIME IN CONTEMPORARY SOCIETY 357 (4th ed. 2010) (“White collar crime is typically viewed as a quintessentially instrumental (or rational) crime, and accordingly, . . . more amenable to deterrence than many forms of conventional crime. . .”).

²⁶ In the United States, the prospect of imprisonment of individuals is seen as part of an effective antitrust compliance program. See ABA SECTION OF ANTITRUST LAW, ANTITRUST COMPLIANCE: PERSPECTIVES AND RESOURCES FOR CORPORATE COUNSELORS 55, 258, 277–78 (2010); Tefft W. Smith, Comments for the Antitrust Modernization Commission Hearing on Criminal Antitrust Remedies at 15 (Nov. 3, 2005), available at http://govinfo.library.unt.edu/amc/commission_hearings/pdf/Smith_Statement.pdf.

²⁷ Employees have been known to expose their employers to enormous risk in the pursuit of profit for the employer. In January 2008, Jérôme Kerviel, a trader at the French bank Société Générale, acting without authorization,

therefore, can significantly enhance deterrence,²⁸ and merely fining the individuals would have little deterrent effect because their employers likely would pay their fines.²⁹

Furthermore, the sanction of imprisonment for individuals enhances deterrence by facilitating the detection and prosecution of cartels. The threat of a prison sentence provides individuals involved in cartel activity with the single greatest incentive to self-report through a leniency application and thereby escape sanctions. Even when full immunity is no longer available, the threat of a prison sentence provides an individual involved in cartel activity with a powerful incentive to cooperate with the prosecutor in exchange for a reduction in sentence. Thus, an absence of individual sanctions significantly undercuts the incentives of cartel participants to self-report, cooperate, and accept responsibility, handicapping both deterrence and detection.

Some recent scholarship has suggested that sanctions on individuals are the cornerstone of an effective cartel deterrence program and that the cost of achieving deterrence could be reduced by adding the sanction of disqualification (also called debarment) for convicted individuals.³⁰ The specific suggestion is to shorten prison sentences, hence

booked trades with an aggregate value of €50 million. He was convicted of breach of trust, forgery, and other offenses and sentenced to serve three years in prison and ordered repay the €4.9 billion it cost the bank to undo his trades. See *Rogue French Trader Sentenced to 3 Years*, WALL ST. J., Oct. 6, 2010, at C1–C2.

²⁸ See Paolo Buccirossi & Giancarlo Spagnolo, *Corporate Governance and Collusive Behavior*, in 2 ABA SECTION OF ANTITRUST LAW, ISSUES IN COMPETITION LAW AND POLICY 1219 (W.D. Collins ed., 2008); A. Mitchell Polinsky & Steven Shavell, *Should Employees Be Subject to Fines and Imprisonment Given the Existence of Corporate Liability*, 13 INT'L REV. L. & ECON. 239 (1993).

²⁹ See *supra* notes 22–23 and accompanying text.

³⁰ See Ginsburg & Wright, *supra* note 12, at 16–22. This sanction is available in the United Kingdom under the Company Directors Disqualification Act of 1986, and recent policy statements discuss its use in competition cases. Office of Fair Trading, *Director Disqualification Orders in Competition Cases* (June 2010), available at http://www.offt.gov.uk/shared_offt/business_leaflets/enterprise_act/oft510.pdf; Office of Fair Trading, *Company Directors and Competition Law: A Consultation on OFT*

reducing the cost of imposing the sanction, and to add a substantial term of disqualification after the prison sentence is served. The length of the latter term is calibrated to achieve the same average deterrent effect as the original prison sentence.³¹ During this term, a convicted individual would be prohibited from holding a comparable position of responsibility.³² The deterrent effect of disqualification stems mainly from its tendency to deny the offender substantial income.³³ In our view, however, the deterrent effect of any form of monetary sanction is apt to be far less potent than incarceration, which of course also denies the offender income. So a lifetime term of disqualification might provide less deterrent punch than a year in prison.

Some legal scholars argue that monetary sanctions on corporations can be imposed under civil law, so the only sound reason to criminalize conduct advancing corporate interests is to impose the sanction of imprisonment on the culpable individuals.³⁴ In the case of cartel activ-

Guidance (Oct. 2010), *available at* http://www.oft.gov.uk/shared_ofc/consultations/OFT1277.pdf. Under U.S. law, a sentencing court could prohibit an individual “from engaging in a specified occupation, business, or profession,” after service of a prison sentence, as a condition of supervised release. 18 U.S.C. §§ 3563(b)(5), 3583(d). Proponents of disqualification suggest implementation through consent decrees. Ginsburg & Wright, *supra* note 12, at 22. That would necessitate filing a separate civil case against each individual, going through a court proceeding resulting in a judicial determination that disqualification is appropriate, and monitoring compliance throughout the duration of the decree, which could be decades. Consequently, disqualification would be far from costless. Disqualification also would be problematic with individuals who live or work outside the jurisdiction imposing the sanction.

³¹ See Ginsburg & Wright, *supra* note 12, at 22.

³² According to proponents, the individual would be barred “from working as a manager or director of any publicly traded company or for any company in a particular industry if it is either located in or sells into the United States.” *Id.*

³³ Another asserted advantage of disqualification is that it enhances the reputational sanction imposed on convicted executives by shaming them. See *id.* at 20.

³⁴ See Daniel R. Fischel & Alan O. Sykes, *Corporate Crime*, 25 J. LEGAL STUD. 319 (1996). Others argue that corporations should be held criminally liable if, and only if, the corporate officers either are personally culpable or

ity, actions for damages brought by plaintiffs' lawyers could, in theory, deter corporations, with criminal enforcement reserved for individuals. This approach might have been envisioned by Congress when the Sherman Act was enacted; the United States then applied a principle of English common law under which a corporation was legally incapable of committing a crime because it could not have the required mens rea.³⁵ Others have argued that corporate criminality necessarily results from specific actions taken by particular individuals, and they, rather than the corporation, should be sanctioned.³⁶

In our view, eliminating corporate criminal liability would significantly undermine cartel deterrence in several distinct ways. First, corporate criminal liability has a deterrent effect independent of that from monetary sanctions because a criminal conviction stigmatizes a corporation. Second, the deterrent effect of monetary sanctions imposed through civil damages actions would be greatly diminished

are negligent in policing the activities of subordinates. *See* Ginsburg & Wright, *supra* note 12, at 18–19. Imposing criminal liability on a corporation only upon a showing that corporate officers were negligent or personally culpable would complicate matters, but personal culpability of high-ranking executives is the norm. *See* Antitrust Modernization Commission, Public Hearing of Nov. 3, 2005, at 29–30 (testimony of Scott D. Hammond), *available at* http://govinfo.library.unt.edu/amc/commission_hearings/pdf/051103_Criminal_Remedies_Transcript_reform%20.pdf (for the fiscal year that had just ended the thirty individuals prosecuted by the Antitrust Division included “six owners; one CEO, four presidents, one head of a business group, two heads of marketing for a business group, 12 vice presidents, and one global product manager”).

³⁵ *See* 1 WILLIAM BLACKSTONE, COMMENTARIES ON THE LAWS OF ENGLAND 476 (1771) (“A corporation cannot commit treason or felony, or other crime, in [its] corporate capacity: though [its] members may, in their distinct individual capacities.”). About twenty years after enactment of the Sherman Act, the Supreme Court rejected this principle. *See* N.Y. Cent. & Hudson River R.R. Co. v. United States, 212 U.S. 481, 492–94 (1909); Henry W. Edgerton, *Corporate Criminal Responsibility*, 36 YALE L.J. 827 (1927).

³⁶ For example, in a statement to Congress on antitrust law, President Woodrow Wilson argued: “Every act of business is done at the command or upon the initiative of some ascertainable person or group of persons. These should be held individually responsible and the punishment should fall upon them, not upon the business organization of which they make illegal use.” 51 CONG. REC. 1963 (1914).

without assistance from criminal enforcement. As elaborated below,³⁷ criminal enforcement against corporations detects the cartels, establishes the liability of the defendants, and provides valuable evidence for proving damages. Third, corporate criminal liability and substantial fines are essential in the operation of the Antitrust Division's leniency program. As further explained in the next section,³⁸ the potential to avoid large fines often induces a cartel participant to apply for leniency and inform on its coconspirators. Theoretical economic analysis confirms the deterrent effect of allowing the first conspirator to come forward to avoid a large monetary sanction.³⁹

III. CARTEL DETERRENCE IN PRACTICE

One important tool for cartel deterrence in the United States is the civil action for damages brought by, or on behalf of, victims of the cartel. The corresponding sanction is the imposition on cartel participants of liability for overcharges. To ensure that this combination of tool and sanction acts as a deterrent, plaintiffs successful in antitrust damages actions are awarded both treble damages and attorneys fees.⁴⁰ As explained by the Supreme Court:

Congress chose to permit all persons to sue to recover three times their actual damages every time they were injured in their business or prop-

³⁷ See *infra* notes 92–104 and accompanying text.

³⁸ See *infra* notes 64–69 and accompanying text.

³⁹ See Joe Chen & Joseph E. Harrington, *The Impact of the Corporate Leniency Program on Cartel Formation and Cartel Price Path*, in *THE POLITICAL ECONOMY OF ANTITRUST* 59 (Vivek Ghosal & Johan Stennek eds., 2007); Joseph E. Harrington, *Optimal Corporate Leniency Programs*, 56 *J. INDUS. ECON.* 215 (2008). For nontechnical explanations of the deterrent effect of leniency programs, see Christopher R. Leslie, *Antitrust Amnesty, Game Theory, and Cartel Stability*, 31 *J. CORP. L.* 453 (2006); Giancarlo Spagnolo, *Leniency and Whistleblowers in Antitrust*, in *HANDBOOK OF ANTITRUST ECONOMICS* 259 (Paolo Buccirossi ed., 2008). On the supplemental deterrent effect of leniency for individuals, see Cécile Aubert, *Instruments of Cartel Deterrence, and Conflicts of Interest*, in *THE POLITICAL ECONOMY OF ANTITRUST*, *supra*, at 123.

⁴⁰ Although U.S. antitrust law has authorized private damage actions since 1890, such actions were unusual until the 1960s. See *ABA ANTITRUST SECTION, MONOGRAPH NO. 13, TREBLE-DAMAGES REMEDY* 22–23 (1986); RICHARD A. POSNER, *ANTITRUST LAW* 45–46 (2d ed. 2001).

erty by an antitrust violation. By offering potential litigants the prospect of a recovery in three times the amount of their damages, Congress encouraged these persons to serve as “private attorneys general.”⁴¹

Indeed, the Court has observed that: “The treble-damages provision wielded by the private litigant is a chief tool in the antitrust enforcement scheme, posing a crucial deterrent to potential violators.”⁴²

The potency of the treble damage remedy is substantially enhanced by aggregating claims through class actions. Class actions are governed by Rule 23 of the Federal Rules of Civil Procedure,⁴³ and a substantial revision of that rule in 1966 facilitated class actions in antitrust.⁴⁴ In the 1970s and 1980s, antitrust class actions occasionally achieved large damage recoveries, but in recent decades recoveries have been larger and more frequent. Between 1990 and 2007, largely through class action litigation, plaintiffs’ lawyers achieved recoveries

⁴¹ *Hawaii v. Standard Oil Co. of Cal.*, 405 U.S. 251, 262 (1972) (quoting *Perma Life Mufflers, Inc. v. Int’l Parts Corp.*, 392 U.S. 134, 147 (1968) (Fortas, J., concurring)). The term “private attorneys general” originated with the opinion of Judge Jerome Frank in *Associated Industries of New York State, Inc. v. Ickes*, 134 F.2d 694, 704 (2d Cir. 1943) (referring to “private Attorney Generals”).

⁴² *Mitsubishi Motors Corp. v. Soler Chrysler-Plymouth, Inc.*, 473 U.S. 614, 635 (1985).

⁴³ The extent to which claims can be aggregated under Rule 23 is limited by the requirement that the claims present common questions of fact, especially as to damages, and class certification increasingly requires a substantial showing by plaintiffs. *See, e.g., In re Hydrogen Peroxide Antitrust Litig.*, 552 F.3d 305 (3d Cir. 2008); *In re Initial Public Offerings Securities Litig.*, 471 F.3d 24 (2d Cir. 2006). Class certification was recently denied, for example, in the following antitrust cases: *In re Plastics Additives Antitrust Litig.*, 2010-2 Trade Cas. (CCH) ¶ 77,159 (E.D. Pa. 2010); *In re Evanston Nw. Healthcare Corp. Antitrust Litig.*, 268 F.R.D. 56 (N.D. Ill. 2010); *In re Flash Memory Antitrust Litig.*, 2010-2 Trade Cas. (CCH) ¶ 77,051 (N.D. Cal. 2010).

⁴⁴ Predicting this effect when the new rule took effect were Walker B. Comegys, Jr., *The Advantages and Disadvantages of a Class Suit under New Rule 23, as Seen by the Treble Damage Defendant*, 32 ANTITRUST L.J. 271 (1966); and Charles Donlan, *The Advantages and Disadvantages of a Class Suit under New Rule 23, as Seen by the Treble Damage Plaintiff*, 32 ANTITRUST L.J. 264 (1966). Confirming this effect after the fact was Dando B. Cellini, *An Overview of Antitrust Class Actions*, 49 ANTITRUST L.J. 1501, 1506 (1982).

totaling more than \$18 billion in antitrust cases, over \$5 billion of which was in cartel cases.⁴⁵

A very different set of tools and sanctions is provided by the criminal justice system. In addition to fining corporations, the Antitrust Division prosecutes culpable individuals, who are subject to imprisonment. Although imprisonment has been a permissible punishment for cartel activity since the Sherman Act was enacted, no one actually served a day in prison for cartel activity for the first seventy years the Act was in effect.⁴⁶ During the next fifteen years, prison sentences for cartel activity were both unusual and brief. In 1974, however, Congress declared that participation in a cartel was a serious crime by making it a felony, increasing the maximum prison sentence from one year to three years and increasing the maximum fine for a corporation to \$1 million.⁴⁷

The 1974 legislation began a long-term upward trend in the frequency with which convicted individuals have been sentenced to prison and in the average length of their sentences. The number of individuals prosecuted per convicted corporation also has increased. During fiscal years 1990–99, a prison sentence of at least one year for participation in a cartel was imposed on twenty-seven individuals, and a prison sentence of at least two years was imposed on ten individuals. During fiscal years 2000–10, a prison sentence of at least one year for participation in a cartel was imposed on fifty-three individuals, and a prison sentence of at least two years was imposed on twenty individuals.⁴⁸ Under legislation in effect since 2004, individu-

⁴⁵ See Robert H. Lande & Joshua P. Davis, *Benefits from Private Enforcement: An Analysis of Forty Cases*, 42 U.S.F. L. REV. 879, 891–93 (2008).

⁴⁶ The first cartel case resulting in prison sentences actually served was *United States v. McDonough Co.*, 1960 Trade Cas. (CCH) ¶ 69,695 (S.D. Ohio 1959) (order overruling defendants' objections to prison sentences). Four individuals were each sentenced to ninety days for fixing the prices of hand tools such as shovels and rakes, but one died before reporting to prison.

⁴⁷ Antitrust Penalties and Procedures Act, Pub. L. 93-528, § 3, 88 Stat. 1708 (1974). From 1955 to 1974, the maximum fine was \$50,000. From 1890 to 1955, it was only \$5000.

⁴⁸ These figures reflect the total sentence imposed on an individual convicted of violating the Sherman Act even if the individual was also convicted of violating another federal criminal statute.

als convicted of Sherman Act violations now can be imprisoned for up to ten years.⁴⁹

Corporate fines also have trended up. In 1990, the Sherman Act was amended to increase the maximum fine from \$1 million to \$10 million,⁵⁰ and under legislation in effect since 2004, the Act contains a maximum fine of \$100 million.⁵¹ In addition, fines exceeding the Sherman Act maximum can be imposed under a provision of federal law allowing, in the alternative to the statutory fines, a fine equal to either twice the gain from the illegal activity or twice the loss to victims.⁵² Since 1990, a fine of at least \$100 million has been imposed on a cartel participant eighteen times.⁵³

IV. DETECTING CARTELS

Deterrence ultimately fails without effective tools for detecting cartels because the probability that the available sanctions would be applied likely would be so low that the sanctions could not do their job. And this is not merely a theoretical possibility; cartel activity is more easily concealed than other crimes, and cartel participants have a strong interest in concealing their unlawful activity. Consequently,

⁴⁹ Antitrust Criminal Penalty Enhancement and Reform Act of 2004, Pub. L. 108-237 § 215(a), 118 Stat. 668 (2004).

⁵⁰ Antitrust Amendments Act of 1990, Pub. L. 101-588, § 4(a), 104 Stat. 2880 (1990).

⁵¹ Antitrust Criminal Penalty Enhancement and Reform Act of 2004, § 215(a).

⁵² See 18 U.S.C. § 3571(d) (“If any person derives pecuniary gain from the offense, or if the offense results in pecuniary loss to a person other than the defendant, the defendant may be fined not more than the greater of twice the gross gain or twice the gross loss, unless imposition of a fine under this subsection would unduly complicate or prolong the sentencing process.”). This provision took effect on November 1, 1987.

⁵³ All fines of \$10 million or more for Sherman Act violations are listed on the Antitrust Division’s Web site, <http://www.justice.gov/atr/public/criminal/sherman10.pdf>. Listed fines over \$10 million for violations committed before June 22, 2004, were imposed under 18 U.S.C. § 3571(d). Listed fines over \$100 million for violations committed after that date were imposed under 18 U.S.C. § 3571(d).

detecting cartels requires powerful tools, and the Antitrust Division has such tools at its disposal.

The Antitrust Division conducts grand jury investigations of cartel activity,⁵⁴ and in recent years always has had over a hundred active grand jury investigations.⁵⁵ A grand jury conducting a criminal investigation can issue subpoenas ad testificandum calling witnesses to provide potentially relevant testimony, and it can issue subpoenas duces tecum ordering the production of potentially relevant documents or physical evidence.⁵⁶ To obtain testimony from a witness asserting the Fifth Amendment privilege against self-incrimination, a federal prosecutor is authorized to compel grand jury testimony under a grant of immunity.⁵⁷

To avoid the possibility of document destruction and to deal with the failure to comply fully with a subpoena duces tecum, the Antitrust Division, with probable cause, can obtain a search warrant and then seize relevant documents.⁵⁸ The Division's cartel investigations can be greatly assisted by audio or video recordings of cartel discussions. Making such recordings is termed "consensual monitoring" when done with the consent of one of the participants, and no court order is required. With a court order, the Division can record conversations without consent.⁵⁹ Antitrust Division criminal investigations are supported by other government agencies, such as the FBI and various offices of inspectors general. Agents from these agencies assist in locating and interviewing persons of interest, executing search warrants, or conducting surveillance. In international cartel

⁵⁴ See generally Antitrust Division, U.S. Dep't of Justice, Grand Jury Manual, <http://www.justice.gov/atr/public/guidelines/4371.htm> (detailing antitrust criminal investigation practices and procedures).

⁵⁵ See Antitrust Division Workload Statistics FY 2000–2009, available at <http://www.justice.gov/atr/public/workload-statistics.pdf>.

⁵⁶ See generally *United States v. Calandra*, 414 U.S. 338, 343 (1974) ("The grand jury may compel the production of evidence or the testimony of witnesses as it considers appropriate. . . .").

⁵⁷ See 18 U.S.C. §§ 6001–03.

⁵⁸ See FED. R. CRIM. P. 41.

⁵⁹ See 18 U.S.C. § 2516.

investigations, the Antitrust Division often benefits from the cooperation of competition agencies outside the United States.⁶⁰

The foregoing tools are substantially reinforced by criminal statutes prohibiting efforts to frustrate criminal investigations. Making knowingly false, material statements under oath before a grand jury is the crime of perjury.⁶¹ Making unsworn, knowingly false, material statements to Antitrust Division investigators or FBI agents also is a crime.⁶² Acts designed to interfere with a criminal investigation can constitute the crime of obstruction of justice.⁶³

For all the power of this formidable array of investigative tools, the Antitrust Division's leniency program is now the most important tool either for detecting cartels or for developing the evidence necessary to prosecute them. Under the Division's leniency program, a corporation participating in a cartel can be granted leniency in return for coming forward and cooperating in the investigation and prosecution of the cartel. The Division first adopted a leniency policy in 1978, but it became an effective tool only after major revisions in 1993.⁶⁴

Since 1993, avoidance of all criminal sanctions has been automatic for qualifying corporations that come forward before the Division has information indicating the existence of the cartel. Moreover, all officers, directors, and employees of these corporations are protected from criminal conviction, provided that they cooperate in the investigation. In addition, avoidance of criminal sanctions has potentially

⁶⁰ The Antitrust Division's cooperation agreements with authorities in several other jurisdictions can be found at http://www.justice.gov/atr/public/international/int_arrangements.htm.

⁶¹ See 18 U.S.C. §§ 1621, 1623.

⁶² See 18 U.S.C. § 1001.

⁶³ See 18 U.S.C. §§ 1503, 1510, 1512 & 1519.

⁶⁴ Under the original program, the Division received only about one leniency application per year, and no leniency application made under the original program resulted in the detection of a significant cartel. See Scott D. Hammond, *The Evolution of Criminal Enforcement Over the Last Two Decades* at 2, Speech at the 24th Annual National Institute on White Collar Crime (Feb. 25, 2010), available at <http://www.justice.gov/atr/public/speeches/255515.pdf>.

been available even if cooperation begins after the Division acquired information indicating the existence of the cartel.⁶⁵ Since 1994, the Division also has had a leniency policy for individuals who come forward when their employers do not.⁶⁶

Over ninety percent of fines imposed for Sherman Act violations since 1996 can be traced to investigations assisted by leniency applicants,⁶⁷ and prosecutions assisted by leniency applicants accounted for over ninety percent of the total commerce affected by all the cartels prosecuted by the Division since 1999. The Antitrust Division's leniency program is effective because acceptance into the leniency program can enable both corporations and individuals to avoid substantial sanctions. A corporation accepted into the program avoids the stigma of a criminal conviction, pays no fine, and has limited liability in any follow-on civil litigation.⁶⁸ Moreover, qualifying executives avoid the stigma of a criminal conviction, fines, and imprisonment.

Avoidance of corporate sanctions provides a strong incentive to come forward because the likelihood of detection is substantial: Corporations participating in cartels are well aware that one of their coconspirators or employees could apply for leniency and that the Antitrust Division has powerful criminal investigation tools. Avoidance of individual sanctions also provides a strong incentive to come

⁶⁵ See ANTITRUST DIVISION, U.S. DEP'T OF JUSTICE, CORPORATE LENIENCY POLICY (Aug. 10, 1993), available at <http://www.justice.gov/atr/public/guidelines/0091.pdf>. For a fuller discussion of program, see Scott D. Hammond & Belinda Barnett, Frequently Asked Questions Regarding the Antitrust Division's Leniency Program and Model Leniency Letters (Nov. 19, 2008), <http://www.justice.gov/?atr/public/criminal/239583.pdf>.

⁶⁶ ANTITRUST DIVISION, U.S. DEP'T OF JUSTICE, LENIENCY POLICY FOR INDIVIDUALS (Aug. 10, 1994), available at <http://www.justice.gov/atr/public/guidelines/0092.pdf>.

⁶⁷ See Hammond, *supra* note 64, at 3.

⁶⁸ Section 213 of the Antitrust Criminal Penalty Enhancement and Reform Act of 2004, Pub. L. 108-237, 118 Stat. 665, 666-67 (2004), limits the exposure of any company accepted into the Division's leniency program to its pro rata share of the total damages before trebling, provided that the company cooperates with the plaintiffs in the damages action.

forward because culpable individuals who do not get leniency are regularly sentenced to prison.⁶⁹

Detection of cartels through the leniency program bolsters cartel deterrence.⁷⁰ First, the leniency program directly increases the expected probability with which sanctions will be applied. Second, the leniency program has a destabilizing effect on potential cartels because the first participant to apply for leniency can escape sanctions that are then imposed on the other cartel participants. Third, the leniency program facilitates prosecutions because leniency applicants provide access to evidence that otherwise might be unavailable (e.g., documents and witnesses located outside the United States). Fourth, the leniency program induces cooperating companies to provide useful information on the existence of other cartels, which the Division then investigates with its formidable array of tools.⁷¹

Plaintiffs' lawyers can avail themselves of none of the foregoing tools in detecting cartels, and historically, civil tools have not been effective in detecting cartels.⁷² Until a few years ago, however, an inkling of cartel activity might have sufficed to invoke the discovery powers under the Federal Rules of Civil Procedure. As pleading stan-

⁶⁹ See Scott D. Hammond, Cornerstones of an Effective Leniency Program 6–8, Speech at the International Competition Network Workshop on Leniency Programs (Nov. 22–23, 2004), available at <http://www.justice.gov/atr/public/speeches/206611.pdf>.

⁷⁰ Experimental and empirical evidence confirms the deterrent effect of leniency programs. See Jeroen Hinloopen & Adriaan R. Soetevent, *Laboratory Evidence on the Effectiveness of Corporate Leniency Programs*, 39 RAND J. ECON. 607 (2008); Nathan Miller, *Strategic Leniency and Cartel Enforcement*, 99 AM. ECON. REV. 750 (2009).

⁷¹ See Antitrust Modernization Commission, Public Hearing of Nov. 3, 2005, at 50–51 (testimony of Scott D. Hammond), available at http://govinfo.library.unt.edu/amc/commission_hearings/pdf/051103_Criminal_Remedies_Transcript_reform%20.pdf (As a result of the leniency program, “[o]ver 50 percent of our international investigations were generated as a result of a lead developed in a completely separate investigation.”).

⁷² See, e.g., John C. Coffee, Jr., *Rescuing the Private Attorney General: Why the Model of the Lawyer as Bounty Hunter Is Not Working*, 42 MD. L. REV. 215, 220–23 & n.15 (1983).

dards were interpreted, a complaint did not have to set out specific facts,⁷³ but rather only to say enough to establish a “reasonably founded hope that the [discovery] process will reveal relevant evidence.”⁷⁴ Dismissing antitrust cases in advance of discovery was particularly disfavored.⁷⁵ Thus, the filing of a complaint with vague allegations of cartel activity could have sufficed to make use of civil discovery.⁷⁶

The opportunity for plaintiffs’ lawyers to investigate suspected cartel activity with the tools of civil discovery was limited in 2007 by the Supreme Court’s decision in *Twombly*.⁷⁷ *Twombly* was a putative class action alleging a concealed agreement not to compete among four regional telephone companies. The district court’s dismissal of

⁷³ See generally *S. Austin Coalition Cmty. Council v. SBC Commc’ns Inc.*, 274 F.3d 1168, 1171 (7th Cir. 2001) (“It is not necessary that facts or the theory of relief be elaborated.”); *Kirksey v. R.J. Reynolds Tobacco Co.*, 168 F.3d 1039, 1041 (7th Cir. 1999) (“The courts keep reminding plaintiffs that they don’t have to file long complaints, don’t have to plead facts, don’t have to plead legal theories.”).

⁷⁴ *Dura Pharms., Inc. v. Boudo*, 544 U.S. 336, 347 (2005) (alteration in original) (quoting *Blue Chip Stamps v. Manor Drug Stores*, 421 U.S. 723, 741 (1975)).

⁷⁵ See *Poller v. Columbia Broad. Sys., Inc.*, 368 U.S. 464, 473 (1962) (“We believe that summary procedures should be used sparingly in complex antitrust litigation where motive and intent play leading roles, the proof is largely in the hands of the alleged conspirators, and hostile witnesses thicken the plot.”).

⁷⁶ See generally *Swierkiewicz v. Sorema N.A.*, 534 U.S. 506, 512 (2002) (interpreting Rule 8(a)(2)); *Conley v. Gibson*, 355 U.S. 41 (1957) (same).

⁷⁷ *Bell Atl. Corp. v. Twombly*, 550 U.S. 544 (2007). Any doubt about the significance of *Twombly* was dispelled two years later by the Court’s decision in *Ashcroft v. Iqbal*, 129 S. Ct. 1937, 1949 (2009) (“To survive a motion to dismiss, a complaint must contain sufficient factual matter, accepted as true, to state a claim to relief that is plausible on its face. A claim has facial plausibility when the plaintiff pleads factual content that allows the court to draw the reasonable inference that the defendant is liable for the misconduct alleged. The plausibility standard is not akin to a probability requirement, but it asks for more than a sheer possibility that a defendant has acted unlawfully. Where a complaint pleads facts that are merely consistent with a defendant’s liability, it stops short of the line between possibility and plausibility of entitlement to relief.”) (internal quotations and citations to *Twombly* omitted).

the complaint prior to discovery was reversed by the appeals court. The Supreme Court then reversed the appeals court, holding that a complaint alleging a conspiracy in violation of section 1 of the Sherman Act must provide “enough factual matter (taken as true) to suggest that an agreement was made,” and must do so by “identifying facts that are suggestive enough to render a § 1 conspiracy plausible.”⁷⁸ Without the benefit of discovery, many plaintiffs have had difficulty in providing “enough factual matter” to make antitrust conspiracy claims “plausible,” so the dismissal of such claims has been common since *Twombly*.⁷⁹ Courts in antitrust cases take the view expressed by one appeals court even before *Twombly* that

the price of entry, even to discovery, is for the plaintiff to allege a factual predicate concrete enough to warrant further proceedings, which may be costly and burdensome. Conclusory allegations in a complaint, if they stand alone, are a danger sign that the plaintiff is engaged in a fishing expedition.⁸⁰

V. RELATIVE CONTRIBUTIONS OF CIVIL AND CRIMINAL ENFORCEMENT

Law professors Robert Lande and Joshua Davis purport to assess the relative deterrent effect of civil damages actions and government criminal prosecutions by comparing the total recovery in damages actions to the total criminal penalties imposed in Antitrust Division cases. Comparing aggregate figures, they argue that the recovery from damages actions filed by plaintiffs’ lawyers amount to more than penalties imposed in prosecutions by the Antitrust Division and hence the former are more important in deterring cartels.⁸¹

⁷⁸ *Twombly*, 550 U.S. at 556.

⁷⁹ See, e.g., *In re Travel Agent Comm’n Antitrust Litig.*, 583 F.3d 896, 902–11 (6th Cir. 2009), *cert. denied*, 131 S. Ct. 896 (2011); *Rick-Mik Enters., Inc. v. Equilon Enters., LLC*, 532 F.3d 963, 975–76 (9th Cir. 2008); *Kendall v. Visa U.S.A., Inc.*, 518 F.3d 1042, 1048–50 (9th Cir. 2008); *In re Elevator Antitrust Litig.*, 502 F.3d 47, 50–52 (2d Cir. 2007) (per curiam).

⁸⁰ *DM Research, Inc. v. Coll. of Am. Pathologists*, 170 F.3d 53, 55 (1st Cir. 1999).

⁸¹ Robert H. Lande & Joshua P. Davis, *Comparative Deterrence from Private Enforcement and Criminal Enforcement of the U.S. Antitrust Laws*, 2011 B.Y.U. L. REV. (forthcoming), available at <http://ssrn.com/abstract=1565693> (page references are to the unpublished version of the paper).

To assess the deterrent effect of damage actions filed by plaintiffs' lawyers, Lande and Davis use the data on damage recoveries they had compiled on antitrust cases in which plaintiffs' lawyers achieved substantial recoveries since 1990.⁸² Of these cases, thirteen involved cartels, and \$5.6–7.0 billion was recovered in those cases, with \$3.9–5.3 billion from just the vitamins cartel.⁸³ To assess the deterrent effect of the Antitrust Division's criminal enforcement, Lande and Davis use the data published by the Division on sentences in its criminal cases for the same time period as the damage recoveries.⁸⁴ They sum the penalties imposed in all the Division's cases, converting prison sentences to what they view as a reasonable dollar equivalent based on several alternative methods of determining the disutility of incarceration. Lande and Davis conclude that recovery in the thirteen cartel cases accounted for at least as much deterrent effect as all the Division's criminal cases put together.⁸⁵

For purposes of computing the total deterrent effect of criminal sanctions, Lande and Davis ultimately value the disutility of a year in

⁸² *Id.* (citing Lande & Davis, *supra* note 45). To be included, a case had to produce a recovery of at least \$50 million. Consequently, Lande and Davis provide no information on the contribution of plaintiffs' lawyers to the deterrence of small cartels. Historical data indicate that successfully prosecuted small cartels often were not the subject of damages actions. See Gregory J. Werden, *Price-Fixing and Civil Damages: Setting the Record Straight*, 34 ANTITRUST BULL. 307, 313–16 (1989). During the period examined by Lande and Davis, the Antitrust Division had over one hundred cartel prosecutions involving less than \$10 million in annual commerce. Such cases typically could generate, at the very most, only a few million dollars in damages, making them unattractive to plaintiffs' lawyers. Yet if small cartels were permitted to fly under the enforcement radar, in the aggregate, they would inflict a great deal of harm on consumers.

⁸³ See Lande & Davis, *supra* note 81, tables 7, 10.

⁸⁴ The relevant data for the ten most recent years are provided by Antitrust Division Workload Statistics FY 2000–2009, available at <http://www.justice.gov/atr/public/workload-statistics.pdf>. Earlier data are available at <http://www.justice.gov/atr/public/division-operations.html>. As Lande and Davis note, these data cover all the Antitrust Division's criminal cases, including cases not involving antitrust violations.

⁸⁵ See Lande & Davis, *supra* note 81, at 23.

prison at \$2 million, while arguing that figure is “unduly high.”⁸⁶ We believe, however, that some antitrust defendants have spent more than \$2 million in legal fees in the attempt to avoid prison and would pay much more in criminal fines to avoid jail altogether. Moreover, Lande and Davis overlook the deterrent effect of stigma from criminal conviction, from restrictive conditions of supervised release, and from reduced future earnings.

Lande and Davis usefully document the important role played by civil damages actions in the deterrence of cartel activity, but their specific comparison is more misleading than informative. They overlook the critical contributions made by the Antitrust Division to the success of plaintiffs’ damages actions, and they fail to fully appreciate how cartel deterrence works.

Lande and Davis maintain that deterrence is accomplished if, and only if, the expected value of total criminal penalties and civil settlements exceeds the expected value of total incremental profits from the illegal activity.⁸⁷ But this overly simplistic view misses much that is critical in deterring cartels. A cartel is not a single, profit-maximizing entity, but rather a group of competitors each of which is run by individuals.

Even if criminal fines and damages are insufficient to make cartel activity unprofitable for the entire group of corporations competing in a market, deterrence nevertheless succeeds if cartel activity is made unprofitable for corporations collectively accounting for a substantial share of the market. An important insight from economic theory is that a voluntary cartel can exist only when each participant reckons that it gains from participating, so heterogeneity among competitors tends to make a cartel less likely,⁸⁸ and it tends to strengthen the effect of any deterrent. Success in cartel deterrence might require only that one substantial competitor decline to participate. The costs and benefits of cartel participation differ substantially between large and small

⁸⁶ See *id.* at 20 & n.71.

⁸⁷ See *id.* at 4–11.

⁸⁸ See Olivier Compte, Frédéric Jenny & Patrick Rey, *Capacity Constraints, Mergers and Collusion*, 46 EUR. ECON. REV. 1 (2002); Helder Vasconcelos, *Tacit Collusion, Cost Asymmetries, and Mergers*, 36 RAND J. ECON. 39 (2005).

firms,⁸⁹ and empirical evidence indicates that recent cartels were destabilized by asymmetry in participants' market shares.⁹⁰

And even if criminal fines and damages are insufficient to make cartel activity unprofitable for any of the corporations competing in a market, deterrence nevertheless can succeed if the threat of prison sentences prevents individuals within those corporations from committing acts necessary to effectuate a cartel. Success in cartel deterrence might require only that one individual in one substantial competitor decline to commit the unlawful acts needed to effectuate the cartel. For this reason, the deterrent effect of a prison sentence cannot be measured usefully by the monetary equivalent assigned it by Lande and Davis.

Lande and Davis also are wrong to credit the entire deterrent effect of damage recoveries to plaintiffs' lawyers on the basis that the recovery would not have occurred without the efforts of plaintiffs' lawyers.⁹¹ In fact, the Antitrust Division does a great deal of the work that results in damage recoveries. By statute, a criminal conviction for an antitrust offense creates what amounts to a collateral estoppel effect in a subsequent damages case.⁹² The Antitrust Division's

⁸⁹ The impact of firm size is most stark if cartels are both lawful and enforceable in court. In such a world, the best outcome for every firm is for all of its rivals to participate in a cartel, while it free rides on the cartel. But if a firm is large enough, it realizes that its attempt to free ride makes the cartel unprofitable for others, thereby eliminating the opportunity to free ride. Consequently, sufficiently large competitors, but not smaller ones, elect to participate when cartels are lawful and legally enforceable. See LOUIS PHILIPS, *COMPETITION POLICY: A GAME THEORETIC PERSPECTIVE* 23–38 (1995); Reinhard Selten, *A Simple Model of Imperfect Competition where Four Are Few and Six Are Many*, 2 INT'L J. GAME THEORY 141 (1973).

⁹⁰ See Oindrila De, *Analysis of Cartel Duration: Evidence from EC Prosecuted Cartels*, 17 INT'L J. ECON. BUS. 33 (2010).

⁹¹ See Lande & Davis, *supra* note 81, at 30.

⁹² See 15 U.S.C. § 16(a) (A conviction in a "criminal proceeding brought by or on behalf of the United States under the antitrust laws to the effect that a defendant has violated said laws shall be prima facie evidence against such defendant in any action or proceeding brought by any other party against such defendant under said laws as to all matters respecting which said judgment or decree would be an estoppel as between the parties thereto . . .").

leniency program also provides plaintiffs' lawyers with a stream of cooperating conspirators.⁹³

Plaintiffs' lawyers now rely on the work done by the Antitrust Division more than ever. In 2007, when the research by Lande and Davis on private damage recoveries ends, the Supreme Court's *Twombly* decision held that antitrust conspiracy claims must be dismissed unless their plausibility is supported by substantial factual allegations.⁹⁴ Without either discovery or the benefit of the Antitrust Division's efforts, it is difficult in the post-*Twombly* world for plaintiffs' lawyers to make the required allegations. Having either a conviction in the Division's criminal case or a cooperating amnesty applicant is enormously helpful to plaintiffs' lawyers litigating cartel cases.⁹⁵

Lande and Davis recognize that the Antitrust Division facilitates cartel damages actions by detecting the cartels that plaintiffs' lawyers then target, but they assert that the "private plaintiffs completely uncovered" the conduct responsible for two of the thirteen cartel-based recoveries in their data "with the government following the private plaintiffs' lead or playing no role at all."⁹⁶ In fact, the Antitrust Division did not "follow the private plaintiffs' lead" in prosecuting those cartels, and any suggestion that the Division "played no role at all" is ridiculous.⁹⁷

⁹³ See *supra* note 68.

⁹⁴ See *supra* notes 77–79 and accompanying text.

⁹⁵ See Heather Lamberg Kafele & Mario M. Meeks, Antitrust Digest: Developing Trends and Patterns in Federal Antitrust Cases After *Bell Atlantic Corp. v. Twombly* and *Ashcroft v. Iqbal* 15–17, <http://www.shearman.com/files/upload/AT-041910-Antitrust-Digest.pdf>. Even when a damages action alleges a broader conspiracy than that of which the defendants were convicted in the Antitrust Division's case, courts give significant weight to the conviction in evaluating the plausibility of the allegations under *Twombly*. See, e.g., *In re Packaged Ice Antitrust Litig.*, 723 F. Supp. 2d 987, 1009–12 (E.D. Mich. 2010); *In re Flash Memory Antitrust Litig.*, 643 F. Supp. 2d 1133, 1149 (N.D. Cal. 2009); *In re Static Random Access Memory (SRAM) Antitrust Litig.*, 580 F. Supp. 2d 896, 903 (N.D. Cal. 2008).

⁹⁶ Lande & Davis, *supra* note 45, at 897.

⁹⁷ The fact that plaintiffs' lawyers filed a complaint before the Antitrust Division announced an indictment or plea agreement in no way suggests that the plaintiffs' lawyers became aware of a cartel before the Division did.

In particular, Lande and Davis credit plaintiffs' lawyers with detecting the massive vitamins cartel, relying on the events recounted by David Boies.⁹⁸ He reports that he first got wind of a cartel in February 1997 and that he and others filed the first of many damages cases in December 1997.⁹⁹ The Antitrust Division, however, had been investigating the vitamins cartel for more than a year before Boies got his first indication of the cartel's existence. And contrary to the assertion of Lande and Davis, Boies acknowledges the contribution to his success provided by the Antitrust Division.¹⁰⁰ He observed that indications that criminal cases were about to be filed by the Antitrust Division and the evidence provided by the leniency applicant made success "easy" for the plaintiffs and greatly increased their recovery.¹⁰¹

Lande and Davis credit the detection of one other cartel to plaintiffs' lawyers. They report that an explosives cartel was discovered in the course of private litigation of a noncartel case.¹⁰² They do not indicate when evidence of a cartel emerged, but they do indicate that the antitrust claims leading to significant damage recovery were filed in

Plaintiffs' lawyers can engage in discovery only after filing a case, and they often race to the courthouse with class action complaints. The Antitrust Division, on the other hand, completes its investigation of a target before seeking an indictment and conducts a substantial investigation before entering into plea agreements.

⁹⁸ See Robert Lande & Joshua Davis, Benefits from Antitrust Private Enforcement: Forty Individual Case Studies at 237–38, available at <http://ssrn.com/abstract=1105523>.

⁹⁹ See DAVID BOIES, COURTING JUSTICE 226–35 (2004). A somewhat different version of the story was recounted by Harry First, *The Vitamins Case: Cartel Prosecutions and the Coming of International Competition Law*, 68 ANTITRUST L.J. 711, 712–14 (2001).

¹⁰⁰ Lande and Davis inaccurately report that Boies claimed that his firm "ultimately proved the collusion 'without the benefit of government involvement.'" Lande & Davis, *supra* note 98, at 237. What he actually wrote is that taking on a case like this, "without the benefit of government involvement, is a long, uncertain venture that can tax the resources of small firms such as" those that were working on the case. BOIES, *supra* note 99, at 230.

¹⁰¹ See BOIES, *supra* note 99, at 241–43.

¹⁰² See Lande & Davis, *supra* note 81, at 61.

February and August 1996.¹⁰³ But that was after the Division had secured guilty pleas from the conspirators,¹⁰⁴ and evidence uncovered in the private litigation did not prompt the Division's investigation.

VI. CONCLUSION

Building on a basic statutory framework unchanged for more than a century, the United States applies a diverse array of tools and sanctions to deter and detect cartels. Many countries rely on some of the same tools and sanctions, but the United States stands alone in its extensive experience with both class action damages cases brought by plaintiffs' lawyers and imprisonment of individuals convicted of engaging in cartel activity. Because cartel activity is treated as a serious crime in the United States, a formidable array of criminal investigative tools is available for ferreting out cartels. The tools and sanctions used in the United States support each other in numerous ways that make each of them important in deterring and detecting cartels.

Civil damages actions brought by plaintiffs' lawyers result in large monetary sanctions on corporations and thus are a mainstay of cartel deterrence. But the success of the damages actions depends on the work of the Antitrust Division. With its formidable criminal investigation tools, none of which can be used directly by plaintiffs' lawyers, the Antitrust Division is vastly more likely to detect a cartel than they are. In addition, the Division provides plaintiffs' lawyers with criminal convictions effectively establishing liability in follow-on civil suits and with cooperating leniency applicants that greatly assist in proving damages. One inducement to apply for leniency, however, is the potential to significantly limit liability in damages suits.

Although civil damages contribute to deterring corporations, criminal fines also play a critical role. Avoiding criminal fines is a powerful inducement to apply for leniency, and leniency applications

¹⁰³ See *id.* at 63–64.

¹⁰⁴ The August 22, 1995, and September 6, 1995, press releases announcing the pleas are at http://www.justice.gov/atr/public/press_releases/1995/227835.pdf and http://www.justice.gov/atr/public/press_releases/1995/0354.pdf.

are the most important means of cartel detection, which in turn makes them critical in cartel deterrence.

Monetary sanctions on corporations, even combining criminal fines with civil damages, are unlikely to be sufficient to deter cartels. Serious sanctions on culpable individuals therefore are required, and they are provided by the imprisonment of convicted individuals. If the threat of monetary corporate sanctions fails to deter, the threat of prison sentences for the culpable individuals still can do the job, and the threat of prison sentences is apt to be an especially powerful deterrent because this threat need be perceived by only one of a few key individuals across all the potential conspirators. If the threat of monetary sanctions does induce corporations to take significant steps to ensure compliance, the threat of prison sentences nevertheless is important because it makes compliance programs effective.

Deterrence ultimately fails without effective tools for detecting cartels because the probability with which the available sanctions would be applied would be so low that the sanctions could not do their job. The Antitrust Division has many powerful tools for detecting cartels, and they reinforce each other. For example, leniency applicants provide leads that trigger grand jury investigations, and the fact that the formidable criminal investigation tools can be used to detect a cartel is critical in the risk-reward calculus of potential leniency applicants.

The leniency program works well because of criminal sanctions. One inducement to come forward and cooperate is the avoidance of criminal sanctions on both the corporation and individuals within it. Another inducement to come forward and cooperate is the knowledge that only the first participant in a cartel to come forward and cooperate can avoid criminal sanctions. By playing one cartel participant off against another, the leniency program not only serves to detect cartels, it also has a potent destabilizing effect that deters cartels.

Cartels have not yet been eliminated in the United States, and they might never be, but the United States has the most successful cartel enforcement program. The reason is the unique array of tools and sanctions brought to bear against cartels in the United States.

Fines against hard core cartels in Europe: The myth of overenforcement

BY EMMANUEL COMBE* AND CONSTANCE MONNIER**

This article compares the level of fines actually imposed on cartel participants to the illicit gains captured by the firms and estimates a range of optimal restitution and dissuasive fines in each case. The results show that the fines imposed against cartels by the European Commission are, overall, moderate, regardless of the probability of detection. The article is based on a sample of sixty-four cartel decisions by the European Commission from 1975 to 2009 and a methodology that estimates optimal fines imposed on cartels on a case-by-case basis.

* Professor, University of Paris I Panthéon-Sorbonne, Associate Professor, ESCP Europe Business School, and member of the Board of the French Competition Authority.

** Assistant Professor, University of Paris I Panthéon-Sorbonne, PRISM Sorbonne.

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I. INTRODUCTION

In recent years, the European Commission (the Commission) has stressed its determination to crack down on cartels. To help its fight against cartels, the Commission has increased the level of fines imposed on price fixers. In 2008, the Commission imposed the highest fine on record, more than 1.3 billion euros, upon the Car Glass Cartel.¹ For the third consecutive year, total fines imposed on cartels by the Commission amounted to more than 2 billion euros. One wonders whether this sharp increase in the level of fines imposed by the Commission on cartelists is supported by economic analysis, which has questioned the ability of antitrust enforcement to prevent cartel formation and has noted the inadequate level of fines compared to the harm to the economy that is inflicted by such anticompetitive practices.² This article assesses whether the fines imposed by the Commission are economically efficient.

Despite the abundant theoretical literature on cartel dissuasion and optimal fines,³ few empirical studies address the topic. Although most of these studies discuss the insufficient level of pecuniary sanctions inflicted by collusive agreements,⁴ they seldom undertake a

¹ See Press Release, European Comm'n, Antitrust: Commission Fines Car Glass Producers Over €1.3 Billion for Market Sharing Cartel (Nov. 12, 2008), available at <http://europa.eu/rapid/pressReleasesAction.do?reference=IP/08/1685&format=HTML&aged=0&language=EN&guiLanguage=en>. See also *infra* appendix A.

² See, e.g., John Connor, *The Size of Cartel Overcharges: Implications for U.S. and EU Fining Policies*, 51 ANTITRUST BULL. 983 (2006). Connor concludes his study with the following assertion: "We therefore urge the EU to increase its cartel penalties dramatically: by an order of magnitude." *Id.* at 1022.

³ For a synthesis, see Frédéric Jenny, Emmanuel Combe, John M. Connor, Paolo Buccirosi & Giancarlo Spagnolo, *Cartels: Economic Efficiency of Sanctions*, CONCURRENCES No. 4/2006, http://www.concurrences.com/toc_revue.php?id_rubrique=171&lang=fr (last visited Nov. 21, 2010).

⁴ See, e.g., John Connor, *Optimal Deterrence and Private International Cartels* (Purdue Univ. Working Paper, 2006), available at http://www.agecon.purdue.edu/staff/connor/papers/Optimal_Deterrence.pdf. Connor concludes that on average, fines imposed upon international cartels range from 3.9% to 31.2% of the illegal profit realized by the undertakings. Other studies use

case-by-case microeconomic analysis. Recent empirical studies of fines against cartels in Europe examine how fines are fixed in practice under European competition law, particularly under the 1998 Penalty Guidelines,⁵ but not how they should have been determined so as to prevent the formation of cartels.⁶

Our article presents an empirical methodology based on easily computable microeconomic parameters, which allows us to estimate a range of optimal fines. More precisely, by analyzing sixty-four cartels condemned by the European Union over the period 1975–2009, we compare the sanction actually imposed to the illicit gain captured by the firms and estimate a range of restitution fines (amounting to the illegal profit, which corresponds to optimal fines given a 100% probability of detection) and dissuasive fines (which correspond to an optimal fine given that some cartels remain undetected). This comparative analysis allows us to assess over time the efficiency of the Commission's antitrust enforcement in preventing explicit collusion. We do not discuss comprehensively how fines are actually fixed in practice, as this article focuses on the ability of fines to deter the formation of cartels in Europe.

mean values and refer to a "representative international cartel," as defined in Maarten Pieter Schinkel, *Effective Cartel Enforcement in Europe*, 30 *WORLD COMPETITION* 539 (2007), and also conclude that fines are too low.

⁵ EUROPEAN COMM'N, GUIDELINES ON THE METHOD OF SETTING FINES IMPOSED PURSUANT TO ARTICLE 15(2) OF REGULATION NO. 17 AND ARTICLE 65(5) OF THE ESC TREATY, 1998 O.J. (C9) 3 [hereinafter 1998 PENALTY GUIDELINES], available at <http://ec.europa.eu/competition/antitrust/legislation/fines.html>.

⁶ See, e.g., Cento Veljanovski, *Cartel Fines in Europe: Law Practice and Deterrence*, 29 *WORLD COMPETITION* 65 (2007); Damien Geradin, *The EC Fining Policy for Violations of Competition Law: An Empirical Review of the Commission Decisional Practice and the Community Courts' Judgments* (Global Competition Law Ctr., Working Paper No. 03/05, 2005); Patrick V. Van Cayseele & P.D.N. Camesasca, *The EC Commission's 2006 Fine Guidelines Reviewed from an Economic Perspective: Risking Over-Deterrence* (Amsterdam Ctr. for Law and Econ., Working Paper No. 2007-3, 2007). See also John Connor & Douglas Miller, *Determinants of EC Antitrust Fines for Members of Global Cartels*, Presentation at the 3rd LEAR Conference on The Economics of Competition Law, Rome (June 25–26, 2009), available at <http://www.learlab.com/learconference/documents/Predicting%20EC%20Fines%20for%20Members%20of%20Global%20Cartels%209-11-09.pdf>.

Section II of this article presents the data on fines imposed by the Commission on cartels since the beginning of the European competition law⁷ and analyzes whether the increase in fines over time is due to a strengthening of antitrust enforcement. Section III explains the methodology used to determine ranges for restitution and dissuasive fines. It presents the model and explains how the different parameters are computed in each case. Section IV presents and analyzes the estimated results based on our sample.

II. DATA ON FINES: IS THE FINING POLICY OF THE COMMISSION TOUGHER?

A. *Total fines imposed by the European Commission against cartels*

From the beginning of cartel prosecution in the European Union until the end of 2008, the Commission fined 110 cartels⁸ with aggregate fines amounting to 12 billion euros. (These fines were imposed by the Commission after leniency⁹ but prior to revision on appeal¹⁰).

⁷ European competition law dates back to 1951 and the adoption of the European Economic and Social Committee (ECSC) Treaty.

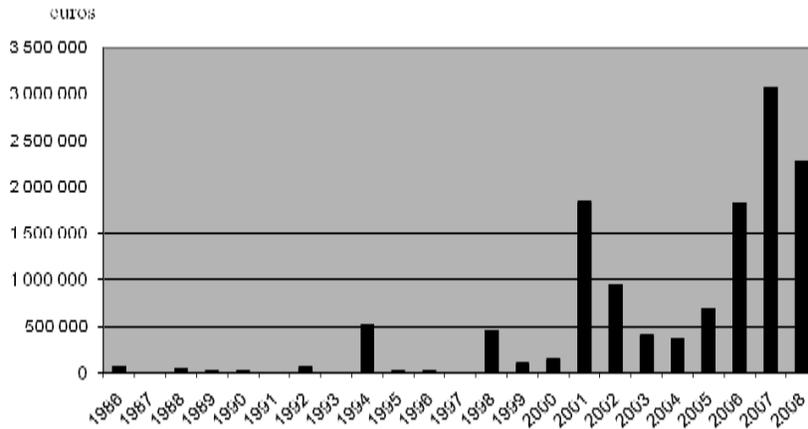
⁸ We considered only cases for which fines have been imposed.

⁹ The European leniency program has a significant impact on the fines eventually paid by the offenders. Veljanovski showed that fines were reduced by forty-five percent on average by leniency. Veljanovski, *supra* note 6, at 75. Our calculations used fines after leniency to insure continuity in our time series, as leniency programs were introduced only in 1996 in the European Union. See EUROPEAN COMM'N, COMMISSION NOTICE ON THE NON-IMPOSITION OR REDUCTION OF FINES IN CARTEL CASES, 1996 O.J. (C 207) 4–6; EC COMM'N, COMMISSION NOTICE ON IMMUNITY FROM FINES AND REDUCTION OF FINES IN CARTEL CASES, 2002 O.J. (C 45) 3–5; EUROPEAN COMM'N, COMMISSION NOTICE ON IMMUNITY FROM FINES AND REDUCTION OF FINES IN CARTEL CASES, 2006 O.J. (C 298) 17. Moreover, from a dissuasive standpoint, decision makers willing to form a cartel base their cost-benefit analysis on actual fines eventually paid by firms, not on the amounts initially imposed.

¹⁰ We did not take into account reformation on appeal, to ensure time consistency, as we cannot predict the results of ongoing litigation. The reduction of fines imposed upon cartels by European courts amounts to about twenty percent.

The average fine is equal to 116 million euros per cartel. The largest cartel fine imposed by the Commission was 1.3 billion euros in 2008 in the Car Glass Cartel case.¹¹

Figure 1
Total Fines (Per Year) Imposed by the Commission (in Euros)



SOURCE: Authors

Figure 1 shows that the Commission has increased the annual level of fines imposed against cartels in recent years. In particular, fines have grown exponentially since the mid-1990s, and all of the largest fines date from the 2000s.¹²

This increase could result from a higher rate of detection over time. For example, between 1996 and 2008, 75 cartels were detected, which corresponds to 6.25 detections per year on average, while in the twenty-eight years before 1996, we count only 35 detected cartels, which corresponds to 1.4 detections per year on average. Nevertheless, this increase in the number of cartel decisions¹³ cannot fully

¹¹ See *infra* appendix A.

¹² *Id.*

¹³ This rise in the number of detected cartels can be due either to a greater number of cartels alive (i.e., to an increased birth rate of cartels) or to the fact that antitrust authorities are more efficient in catching cartels.

explain the rise in the total amount of penalties, because fines imposed on each cartel have also dramatically increased, as illustrated by figure 2. Since 2006, the average fine per cartel is always greater than 300 million euros, while it was seldom above 100 million euros before 2000. Figure 3 presents the fines imposed in each case from the first cartel decision in 1965 (the Quinine Cartel) to the 111th cartel decision in 2009 (the Marine Hose Cartel). The increase in the fines imposed is clear.

B. Cartel duration and affected market

This upward trend in the level of fines also could be due to larger and longer-lasting cartels, particularly if fines increase with the size of the affected market or with the duration of the cartel.

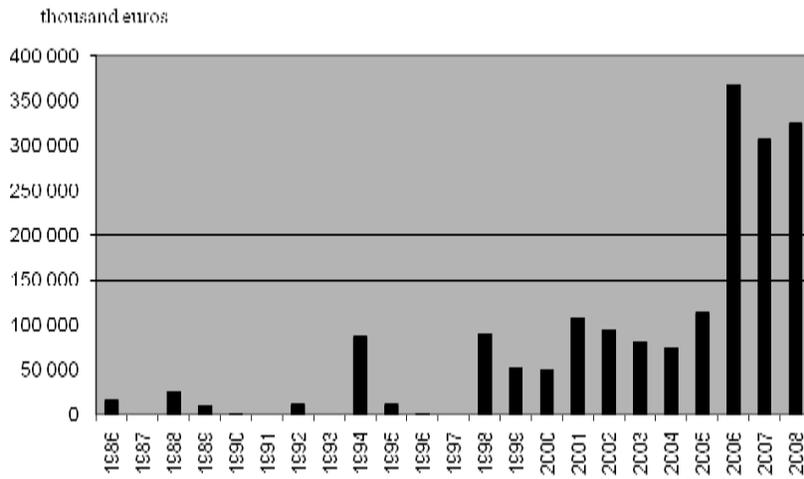
If fines were positively correlated with duration, an increase in the cartels' lifetimes would lead to an increase in the level of the fines. Figure 4 represents cartel duration for each cartel in our sample in chronological order—from the Quinine Cartel decision in 1969 to the Marine Hose Cartel decision in 2009—and shows that cartel lifetimes slightly increase over time but not enough to explain the increase in fines.¹⁴

Similarly, if fines were positively correlated with affected markets, a rise in market size would trigger an increase in the level of fines. Information on affected markets is not always available because some parts of the decisions of the Commission remain confidential and some decisions are not yet published. If we examine the affected markets in the cases where data are available,¹⁵ we find the affected market per cartel has not increased these last years, i.e., cartels are not larger.

¹⁴ Note that the average duration of cartels in our sample is 7 years and the median is 5.6 years.

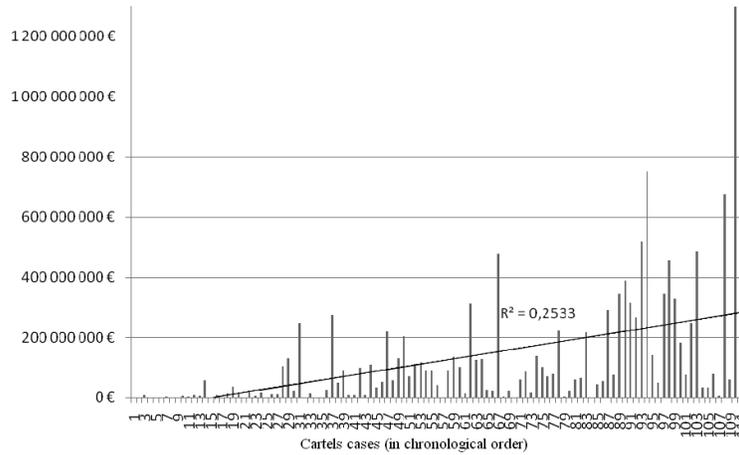
¹⁵ See *infra* appendix E (sixty-four cases from 1975 to 2009).

Figure 2
Average Fine per Cartel



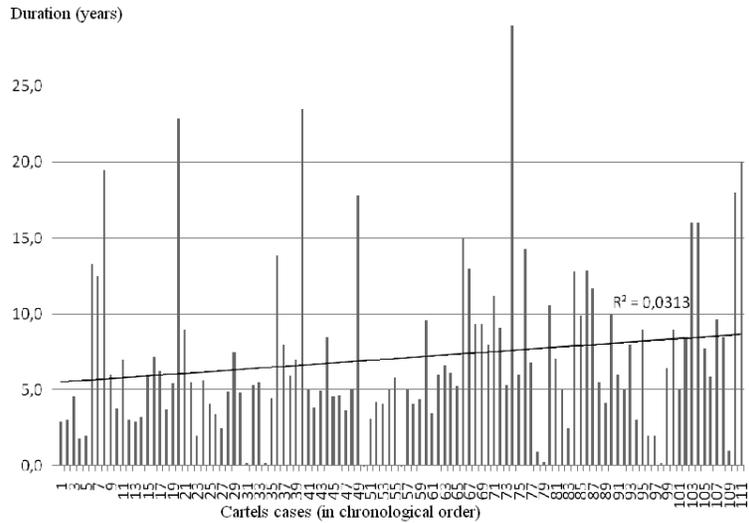
SOURCE: Authors

Figure 3
Fines Imposed by the European Commission by Case (1965–2009)



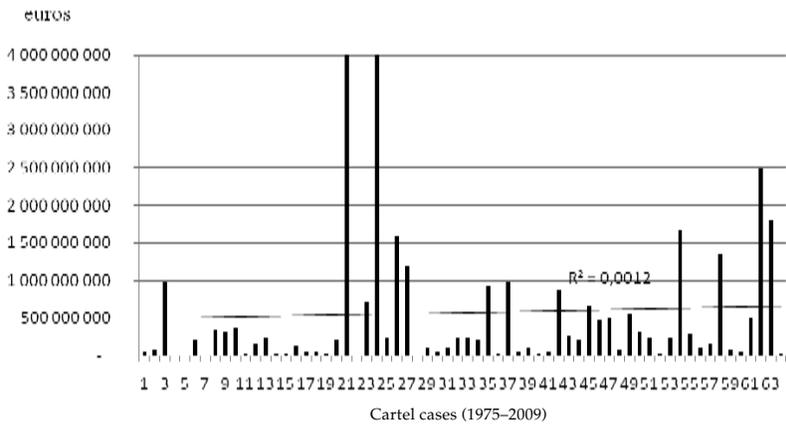
SOURCE: Authors

Figure 4
Cartel Duration



SOURCE: Authors

Figure 5
Annual Affected Market per Cartel (Euros)



SOURCE: Authors

The rise in pecuniary sanctions imposed on European cartels in Europe can be explained by a change in European antitrust policy: the Commission is imposing heavier fines to deter cartel formation. From a deterrence perspective, even though fines have increased over time, one may wonder whether this increase is sufficient. Nevertheless, some analysts concerned about the risk of overenforcement are alarmed by the tougher stance adopted by the Commission. To address that question, this article estimates a range of compensatory and dissuasive fines in each case, based on estimates of the illegal gain made by the undertakings, which allows us to assess whether or not overenforcement is a threat.

C. The subsample

From all cartels, we have selected those for which sufficient data was available to estimate optimal fines. Our sample encompasses sixty-four cartels that have affected European trade¹⁶ and were the subject of decisions by the Commission between 1975 and 2009, with fines imposed in each case.¹⁷ For the Vitamins Cartels (2001), the Specialty Graphite Cartels (2002), the Industrial Thread Cartels (2005), and the Lift and Escalators Cartels (2007), we computed optimal fines for each subcartel, as the Commission imposed different fines for the different agreements (except for Vitamins B1, B6, B and H, which were time-barred).

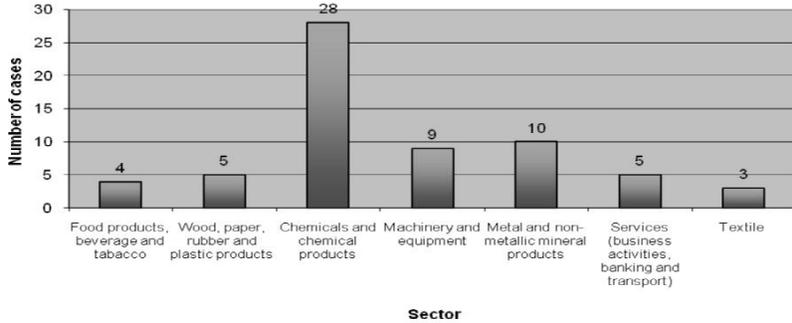
The average duration of our subsample is 7.3 years, which corresponds to the 7 years' average duration of the total sample. Moreover, there is no selection bias regarding sectors. Figure 6 summarizes the incidence of our subsample of cartels by industry. These cartels affect a broad range of industries, with some sectors more affected than others. The most affected is the chemical industry, where about forty percent of cartels operated. Economic theory predicts that the occurrence of cartels is higher in industries with high barriers to entry, as in the case of chemical products. Manufacturing of intermediary products is

¹⁶ We used the criteria of "affected trade" as defined by the Commission. See EUROPEAN COMM'N, COMMISSION NOTICE: GUIDELINES ON THE EFFECT ON TRADE CONCEPT CONTAINED IN ARTICLES 81 AND 82 OF THE TREATY, 2004 O.J. (C 101) 81–96.

¹⁷ The first cartel decision in our sample is the Preserved Mushrooms Cartel, condemned in 1975, and the most recent is the Marine Hose Cartel in 2009.

Figure

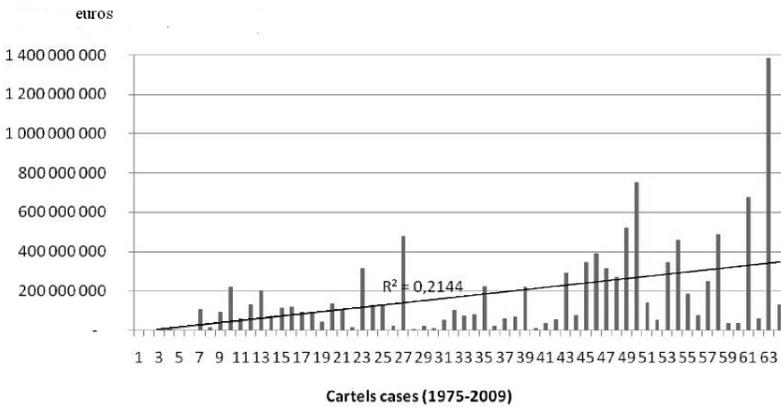
Incidence of Cartels by Affected Industry



SOURCE: Authors

Figure 7

Fines per Cartel in the Subsample (Euros)



SOURCE: Authors

also well represented (two thirds of the sample), with ten cartels involved in the metals and minerals sector, nine cartels relating to machinery and equipment (among them carbon and graphite products) and five in wood, paper, rubber, and plastic products. This result is also consistent with economic theory, which predicts cartels in mar-

kets for sophisticated and intermediate manufactured goods.¹⁸ Five cartels relate to the service industry. Cartels in the food, beverage, tobacco, and textile industries make up the remaining part of the sample. A 2006 study by Levenstein and Suslow¹⁹ sampled seventy-two international cartels²⁰ and found essentially the same results: chemical products top the list (42%), and the other categories include nonchemical manufacturing (38%), water transport (14%), construction (4%), and services (3%). As for European studies, Veljanovski's 2007 study²¹ also finds that cartels are concentrated in the chemicals (44%), industrial inputs (21%), and food (18%) sectors.²²

Our subsample of cartels contains more recent cartels than the overall sample. Only fifteen percent of the subsample relates to cartel decisions before 2000, forty-five percent between 2001 and 2004, and forty percent between 2005 and 2009. Even though the beginning of European competition law enforcement is not well represented, we note an increasing trend in the level of fines imposed (figure 7). After an analysis of the main features of our sample, we will estimate the optimal fines and compare them to actual ones.

III. THE DETERMINATION OF OPTIMAL FINES AND THEIR PARAMETERS

A. *Cartel dissuasion: the theoretical framework*

The starting point of the literature related to optimal sanctions is rationality. Indeed, a rational agent, i.e., one who undertakes a cost-benefit analysis based on expected profits and losses and who is risk neutral, does not break the law if the illegal gain derived from the

¹⁸ Elasticity is low, collusive profits are high, and the collusive outcome is therefore easier to reach.

¹⁹ Margaret Levenstein & Valerie Suslow, *Determinants of International Cartel Duration and the Role of Cartel Organization* (Ross Sch. of Bus., Working Paper No. 1052, 2006).

²⁰ Their study is based on cartels either convicted in the United States or fined in the European Union, and all cases include member firms from more than one country.

²¹ Veljanovski, *supra* note 6.

²² Our subsample of cartels is representative of European cartels in terms of affected sectors.

crime is less than its expected cost, the latter being equal to the average sanction times the probability of conviction. If we apply this theory to price fixing, cartel formation will be deterred if the expected sanction (average fine times the probability of detection) is at least equal to the illicit profit obtained by cartel members.

In this article, we will use the illicit gain derived from the infringement as the basis for the optimal fine. The literature related to the economics of crime refers rather to the harm inflicted upon victims or society as the basis for sanctions. The latter approach insures that only efficient crimes are actually committed, as the illegal gain for the criminal is higher than the losses suffered by the victims. Nevertheless, as for cartels, which are per se prohibited, the illegal profit is always inferior (or equal in the case of a null price elasticity of demand) to the harm inflicted on consumers. Moreover, the magnitude of damages caused to society by a cartel is difficult to quantify because it requires estimation of static consumer loss as well as the dynamic loss incurred by the economy as a whole. Taking the illegal profit, rather than consumer loss, as the basis of the fine is consistent with the deterrence perspective, as agents willing to form a cartel are motivated by the illegal gain they intend to achieve, not by the damages suffered by society.²³ Thus, a fine based on the illegal gain must be considered the minimal fine to deter.²⁴

²³ See also Gregory J. Werden & Marilyn J. Simon, *Why Price Fixers Should Go to Prison*, 32 ANTITRUST BULL. 917 (1987) (using the illegal profit to compute the optimal fine imposed on cartels). In contrast, Gallo, et al. also take into account the consumer loss, which according to them amounts to 5% of the illegal profit (considering a price elasticity of demand of -1). See Joseph C. Gallo, Kenneth G. Dau-Schmidt, Charles Parker & Joseph L. Craycraft, *Criminal Penalties Under the Sherman Act: A Study in Law and Economics*, 16 RES. L. & ECON. 25 (1994). Veljanovski retains a constant total consumer loss of 150% of the cartel overcharge, hypothesizing an annual overcharge of 20%, constant annual sales, and that losses attract compound interest at 5% assuming that the "but for" price equals constant unit costs and that the demand curve is linear. See Veljanovski, *supra* note 6, at 79. Another solution bases the fine on the illicit gain plus an additional amount. See A. Mitchell Polinsky & Steven Shavell, *The Economic Theory of Public Enforcement of the Law*, 38 J. ECON. LIT. 45, 49 (2000)

²⁴ Our estimations of optimal fines could be underestimated as their amounts do not take into account the deadweight loss that results from the decrease in demand due to the fact that some consumers are excluded from the market (Their loss of surplus is not recovered by the extra profits of colluding firms.)

Given our assumption, the optimal fine to be imposed upon a cartel should amount to the ratio of the illicit profit to the probability of detection (denoted α):

$$\text{optimal fine} = \text{illicit profit} / \alpha .$$

Determination of optimal fines requires estimation of the probability of getting caught as well as the illicit gain realized by the cartel. The illicit gain is the additional profit made by a cartel member, which depends on four factors: (1) the increase in price due to collusion (denoted κ), (2) the price elasticity of demand (in absolute value, denoted ε), (3) the total affected market, and (4) the competitive markup (denoted m).²⁵ Based on these factors, we can determine in each case the amount of the optimal fine, denoted f^* , as a percentage of the global affected market.²⁶

$$f(\alpha, \kappa, \varepsilon, m) = \frac{\kappa[(1+m)(1-\varepsilon\kappa) - \varepsilon m]}{\alpha(1+m)(1+\kappa)(1-\varepsilon\kappa)} .$$

The minimal optimal fine²⁷ is equal to the expected illicit gain derived from collusion (i.e., the increased profit from the price increase). We see in the previous equation that the level of the optimal fine depends negatively on the probability of detection (α), the competitive markup (m), and the price elasticity of demand (ε), and varies positively with the increase in price (κ). When the price elasticity of demand is null ($\varepsilon = 0$), the previous formula can be simplified, and the optimal fine does not depend on the competitive markup, but solely on the increase in price and the probability of detection:

$$f = \frac{\kappa}{\alpha(1+\kappa)} .$$

²⁵ Most empirical studies on optimal fines to be imposed on cartels undertake an estimation of illegal profits or consumer loss, applying the same percentage (for all cartels) to the affected market of each cartel. For example, Werden and Simon apply ten percent to the affected market and Wils applies twenty percent to the affected market. See Werden & Simon, *supra* note 23, at 925; Wouter P.J. Wils, *Optimal Antitrust Fines: Theory and Practice*, 2 WORLD COMPETITION 183, 183–208 (2006).

²⁶ See Paolo Buccirossi & Giancarlo Spagnolo, *Optimal Fines in the Area of Whistle Blowers* 43 (CEPR Discussion Paper No. 5465, 2006).

²⁷ The minimal optimal fine corresponds to a 100% probability of detection.

B. *The parameters of the optimal fine*

1. CARTEL DURATION Some empirical studies on optimal sanctions retain a mean duration rather than making a case-by-case lifetime analysis. For instance, Werden and Simon use an average duration of seventy-four months.²⁸ We consider it more accurate to compute cartel lifetimes in each case, rather than using an average duration derived from empirical studies, as these studies also show a high standard deviation.²⁹

Therefore, our study is based on individual cartel lifetimes—the duration between birth and death of cartels subject to decisions of the Commission.³⁰ We have computed cartel lifetimes in days, using estimates made by the Commission as reported in its decisions. In a number of cases, the Commission presumed that the cartel lasted longer than the reported duration, because of lack of proof. This implies that durations used in our estimations may be underestimated and should be considered as lower bounds. In particular, the beginning date of a cartel corresponds to the date for which the first evidence of collusion was found and not to the actual starting date of the conspiracy. It is likely that the cartel's inception date precedes the date claimed by firms or the Commission. Because the fine imposed upon an undertaking is, in principle, positively correlated to the duration of the firm's involvement in the cartel, it is in the firm's interest not to disclose the actual starting date of the collusive agreement.³¹ Sometimes, collusion goes on after the detection of the cartel.³² Nevertheless, we

²⁸ See Werden & Simon, *supra* note 23, at 925.

²⁹ Combe and Monnier found a mean duration of 7.5 years and a standard deviation of six years, implying that there is a huge variability in cartel duration. Emmanuel Combe & Constance Monnier, *Cartel Profiles in the European Union*, 3 CONCURRENTS 181, 184 (2007). Levenstein and Suslow found a medium duration of seven years and a standard deviation of five years. See Levenstein & Suslow, *supra* note 19, at 13.

³⁰ Most detected cartels are ultimately fined, thanks to the introduction of the leniency notice and the reinforcement of the investigative powers of antitrust authorities.

³¹ Levenstein and Suslow discuss the difficulty in dating the beginning and the end of a cartel. Margaret C. Levenstein & Valerie Y. Suslow, *What Determines Cartel Success?*, 44 J. ECON. LIT. 43, 50 (2006).

³² See, e.g., PVC Cartel, Comm'n Decision No. 94/599, 1994 O.J. (L 239) 14; Organic Peroxides Cartel, No. COMP/E-2/37.857, 2005 O.J. (L 110) 44.

do not consider this rare phenomenon. Rather, this study assumes that detection ends the conspiracy. In all other cases, we use the date, established by the evidence, when collusion ceased. Furthermore, the duration of each undertaking's involvement in the cartel is not necessarily the same. Therefore, we use the global duration of the cartel, as indicated in the decisions. Last, in many of cases, firms have agreed to collude in several markets, e.g., on several products or geographic areas. We have treated cartels where one agreement is terminated but is followed by another agreement as one for purposes of this study.³³ Similarly, we have treated formal agreement cases and concerted practices together. Usually, the decision of the Commission reports only the total duration of the cartel without distinguishing between the agreements, as the case law of the Court of First Instance and the European Court of Justice refers to the concept of complex infringement.³⁴ Nevertheless, in the Vitamins Cartel (2001), the Specialty Graphite Cartel (2002), the Industrial Thread Cartel (2005), and the Elevators and Lifts Cartel (2007), the Commission distinguished between several agreements in different markets, dividing their durations and fining firms for each infringement. Thus, we retain the specific duration of each agreement in these cases.

2. AFFECTED SALES The affected market is sales in the European Economic Area³⁵ affected by the price increase due to the cartel. Determining the market is straightforward, because antitrust authorities, through their investigations, collect information on the relevant market.³⁶

³³ See, e.g., Citric Acid Cartel, No. COMP/E-1/36.604, 2002 O.J. (L 239) 18.

³⁴ According to the ruling of the Court of First Instance "in the context of a complex infringement which involves many producers seeking over a number of years to regulate the market between them, the Commission cannot be expected to classify the infringement precisely, for each undertaking and for any given moment, as in any event both those forms of infringement are covered by Article [81] of the Treaty." Joined Cases T-305/94 to T-307/94, T-313/94 to T-316/94, T-318/94, T-325/94, T-328/94, T-329/94 and T-335/94, *Limburgse Vinyl Maatschappij v. Comm'*, 1999 E.C.R. II-931 (1999).

³⁵ The Commission enforces competition rules for the whole of the European Economic Area, which comprises the European Union Member States plus Norway, Liechtenstein, and Iceland.

³⁶ The relevant market can sometimes be used as a proxy for the affected market, and it is a useful tool to ascertain the real extent of a cartel. See Enrico

Nevertheless, in some cases, data regarding affected markets are not yet available³⁷ or remain confidential. We have omitted these cases from our database. The Commission's decisions provide the overall market on which collusion took place. Therefore, it is necessary to estimate the market share of the cartel to exclude trade from firms outside the cartel, denoted as the competitive fringe. Lastly, the Commission's decisions report the annual affected market; therefore the global affected market is computed by multiplying the annual amount by the duration of the cartel in years.

3. INCREASE IN PRICE DUE TO COLLUSION (*k*) Unfortunately, cartel overcharges are not easily computable because calculating the competitive price, the "but for" price, can prove difficult, especially in long-lasting cartels. When the decisions of the Commission do not provide precise data on price increases, we assume that cartels imposed a standard average price increase, based on numerous empirical studies.³⁸ On average, cartels increase price more than twenty percent and international cartels increase price more than thirty percent over their global lifetimes.³⁹ Therefore, except when precise data is available and shows a lower price increase,⁴⁰ it appears reasonable to take a twenty percent average price increase for national cartels and a thirty percent average price increase for international cartels, which corresponds to a restrictive hypothesis favorable to firms.⁴¹

4. COMPETITIVE MARKUP (*M*) The markup measures the ability of the firm to charge a price above its marginal cost in the absence of a

L. Camilli, *Optimal Fines in Cartel Cases and the Actual EC Fining Policy*, 29 WORLD COMPETITION 575, 575–605 (2006).

³⁷ For instance, no public version of the Sodium Chlorate Cartel decision (cartel convicted in 2008) is available.

³⁸ See *infra* appendix B.

³⁹ This price increase is often spread out over time, as cartel members often agree on an annual rise in price.

⁴⁰ For instance, in the Exchange of Euro-zone Currencies Cartel (2001), we took the smallest price increase (three percent per year).

⁴¹ Veljanovski assumes that cartels impose an annual average overcharge of twenty percent, whereas we take a twenty percent overcharge over the whole collusive period. And if the information is available, we retain the smallest price increase. See Veljanovski, *supra* note 6, at 79.

price-fixing agreement. In most empirical studies, this is not taken into account. Nevertheless, estimating the competitive markup is crucial, because the illegal profit made by the cartel is a negative function of this parameter.⁴² Indeed, if the competitive markup is high, the increase in price due to collusion triggers a decrease in quantities exchanged on which firms made a positive profit margin without colluding (except when the price elasticity of demand is null). Figure 8 illustrates the effect of collusion on price and quantity exchanged. We note that at a competitive price P_c , the firm obtains a profit margin equal to the sum of the areas $(B+C)$. With a cartel price P^* , the illicit gain is equal to the area A minus the area C , which represents the profit margin lost on consumers who no longer purchase the good at the increased price.

We approximate competitive markup using the following accounting ratio: operating result divided by turnover.⁴³ The operating result takes into account all of the recurrent and regular transactions related to the firm's activity. Therefore, it excludes the variation in results due to the financial structure of the firm and to exceptional events, and it is more accurate than the ratio of net profit to turnover, which can vary significantly depending on the financial choices of the firm. The ratio of gross margin to turnover takes into account only buying costs and is therefore too sensitive to the industry sector and to the nature of firm activity. For example, a commercial firm with high buying costs will have a low gross margin, while an industrial firm will obtain a much higher gross margin.

⁴² Moreover, the difficulty related to the identification of a benchmark for the competitive price in the absence of collusion (the but for price) can be avoided by using the competitive markup.

⁴³ In their 2001 study, Konings, Van Cayseele and Warzynski also use the operating revenue, as well as the total assets and the number of employees, to compute the markup. See Jozef Konings, Patrick Van Cayseele & Frederic Warzynski, *The Dynamics of Industrial Markups in Two Small Open Economies: Does National Competition Policy Matter?*, 19 INT'L J. INDUS. ORG. 841 (2001). In our case, we do not subtract the cost of capital employed from the operating revenue as we consider long-term equilibrium. It would decrease the markup and lead to an increase in the illegal profit made by colluding firms, which implies higher optimal fines. Hence, it would not fit with our cautious stance.

For each cartel,⁴⁴ we estimated an average value of that ratio for cartel members or industry leaders.⁴⁵ In particular, we took the ratio of operating result to turnover over the last five years and determined an average for two firms. If a firm had a negative operating result, we excluded the given year, assuming the negative result was due to unusual events. Then, we chose the highest ratio between the two averages. For instance, in the case of the Choline Chloride Cartel (2004), we estimated the markup of BASF over the last five years, which gave us an average markup of 12.6%, and the average markup of Akzo (over four years as the fifth year showed losses), which amounted to 10.2%. Finally, we retain a markup equal to 12.6%,⁴⁶ which is favorable to the firm. If cartel members produced many different goods, we used the firms whose activities were the nearest to the affected market so as to reduce the bias related to the industry. For instance, for the Vitamins Cartel (2001), we based our estimate on one firm (BASF), because the other undertakings—particularly Hoffmann-LaRoche—had very high markups for sales of drugs that did not accurately reflect the markup for vitamins (which are commodities and command a lower markup).

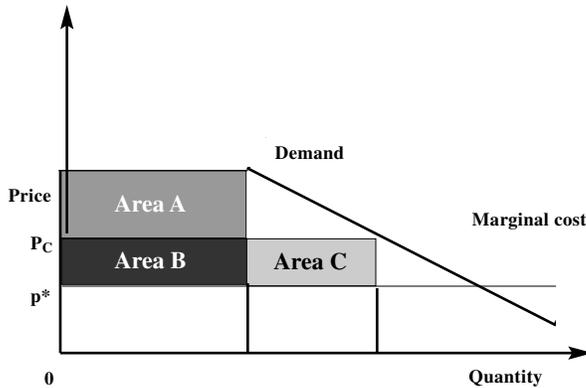
5. PRICE ELASTICITY OF DEMAND The amount of illegal profit made by cartel members varies positively with the price elasticity of demand. Because of price-sensitive customers, an increase in price can trigger a significant decrease in the quantities exchanged, which limits the illegal profit derived from collusion.

⁴⁴ One exception is the Steel Beam Cartel, for which the decision gives a specific estimation of the illegal profit made by the cartel. *See* Steel Beams, Case COMP/C.38.907, 2008 O.J. (C 235) 4.

⁴⁵ Appendix D presents the list of these firms in each cartel. If the relevant data were not available for cartel members, we took leading firms belonging to the same industry. For instance, we used data of firms who did not belong to the collusive agreement when cartel members were not listed on the stock exchange, as in the Italian Tobacco Cartel (2005). In this case, we took two leaders of the industry: Philip Morris and Imperial Tobacco. Similarly, for the Carbonless Paper Cartel (2001), the two firms considered (Norske Skog and Sequana) did not belong to the cartel. This selection could lead to overestimating the competitive markup and to underestimating the amount of the optimal fine, as we consider that leaders are the most efficient firms.

⁴⁶ This choice is favorable to firms because the higher the markup, the lower the illegal profit, and thus, the lower the optimal fine.

Figure 8
Impact of the Competitive Markup on the Illegal Gain



SOURCE: Authors

This parameter cannot easily be estimated on a case-by-case basis, and it will be hazardous to retain a fixed price elasticity of demand for an overall sector⁴⁷ because price elasticity is not fully independent from the competitive markup. For instance, within the same industry, the higher the competitive markup, the lower the price elasticity of demand. Thus, it is more accurate to build a range of values for this parameter using average results from empirical studies, with a lower bound—zero when demand is not sensitive to price—and an upper bound. Most of the price elasticity of demand tests fall above -2 (appendix C), so we use 2 (i.e., the absolute value of -2) as an upper limit.⁴⁸

6. PROBABILITY OF DETECTION The probability of detection of cartels is fiercely debated.⁴⁹ The safest hypothesis is to retain a 100% probability

⁴⁷ Note that most cartels fined by the Commission affect intermediary goods (such as glass and cement), for which price elasticity of demand is rather low, because, in the short run, there are few substitutes for intermediary goods, and substitution is often costly (due to such factors as technological or production changes).

⁴⁸ But see Gallo, et al., *supra* note 23, at 58 (taking a price elasticity of demand equal to -1).

⁴⁹ We do not distinguish between the probability of detection and the probability of being convicted, contrary to Connor. See Connor, *supra* note 4,

of detection, although that is most unlikely. Therefore, we first use a 100% probability of detection to compute optimal fines. Second, we use an average value for the probability of detection, drawn from different studies on cartels.

Several investigators, like William Landes,⁵⁰ used a thirty percent probability of detection⁵¹ without precise justification. The percentage corresponds to a general opinion. Werden and Simon found a ten percent probability.⁵² A questionnaire survey carried out by Beckenstein and Gabel⁵³ among American lawyers specializing in antitrust, found a probability of less than fifty percent. A methodology used by Bryant and Eckard⁵⁴ and refined by Combe, Monnier and Legal,⁵⁵ inferred a probability of detection based on a life and death statistical process. More precisely, it computed the average cartel's lifetime from a sample of cartel decisions. From these results, a probability of detection can be derived (for a cartel that will eventually be detected), with the probability being all the higher, the shorter the average duration of the cartel. Applying this methodology, Bryant and Eckard found that an annual probability of getting caught is between thirteen and seventeen percent based on a sample of detected cartels in the United States over the period 1961–88.⁵⁶ Combe, Monnier and Legal, obtained a

at 8. Our sample encompasses cartel decisions by the Commission, which does not issue dismissal letters. Therefore, we do not have data on cartels detected but not fined. Furthermore, with the introduction of leniency programs, most detected cartels are convicted, the collection of evidence being facilitated by the cooperation of the firm receiving leniency.

⁵⁰ William Landes, *Optimal Sanctions for Antitrust Violations*, 50 J.L. & ECON 652 (1983).

⁵¹ *Id.* at 657; see also Veljanosvki, *supra* note 6, at 80.

⁵² See Werden & Simon, *supra* note 23, at 926.

⁵³ Alan R. Beckenstein & H. Landis Gabel, *Antitrust Compliance: Results of a Survey of Legal Opinion*, 52 ANTITRUST L.J. 459 (1983).

⁵⁴ Peter G. Bryant & Woodrow E. Eckard, *Price Fixing: The Probability of Getting Caught*, 73 REV. ECON. & STAT. 531 (1991).

⁵⁵ Emmanuel Combe, Constance Monnier & Renaud Legal, *Cartels: The Probability of Detection in the European Union* (PRISM-Sorbonne Working Paper, 2007).

⁵⁶ See Bryant & Eckard, *supra* note 54.

Table 1
The Parameters of the Optimal Fine and Their Estimation

<i>Parameters</i>	<i>Impact of the parameter on the level of the optimal fine</i>	<i>Methodology</i>	<i>Indicator</i>
Duration of the cartel	Positive	Case-by-case	Date of first piece of evidence /detection date or natural death of the cartel before its detection
Affected market	Positive	Case-by-case	Annual turnover of the cartel members on the affected geographic and product market
Competitive markup (denoted m)	Negative (except if the price elasticity is null)	Case-by-case	Operating result/turnover of cartel members or industry leaders (average over five years).
Price elasticity of demand (denoted ϵ)	Negative	Based on a range of value	Null elasticity; elasticity of -2 (in absolute value)
Increase in price (denoted κ)	Positive	Based on a sample of empirical studies or precise data	+ 20% for national cartels + 30% for international cartels Exact price increase in twelve cases
Probability of detection (denoted α)	Negative	Based on empirical studies	Probability of 15%, lower bound: (dissuasive fines) Probability of 100%, upper bound (restitution fines)

very similar result: a probability of thirteen percent for a sample of cartels detected in the European Union by the Commission over the period 1969–2007.⁵⁷ These studies provide a probability of getting caught only for cartels eventually detected. Nevertheless, as we cannot know the actual probability of detection (as the proportion of cartels remaining undetected is unknown),⁵⁸ we take the average of these estimations—a fifteen percent probability.

C. *Restitution and dissuasive fines*

From this model, it is possible to estimate several fines according to the different parameters. In particular, the probability of detection can help determine two different levels of fines as a function of the affected market: a restitution fine, which consists of confiscating the illicit gain from cartel members without taking account of the probability of detection (fixed at 100%), and a dissuasive fine, which includes a 15% probability of detection. Considering the two bounds of the price elasticity of demand, we obtain for each type of fine two values: a maximum value (when the price elasticity is null) and a minimal value (when the price elasticity equals -2).

	Probability of 15%	Probability of 100%
Elasticity null	Maximal bound Maximal restitution sanction	Maximal dissuasive sanction
Elasticity of -2	Minimal dissuasive sanction	Minimal bound Minimal restitution sanction

In the case of a restitution fine to be imposed on an international cartel (with a thirty percent increase in price), the optimal restitution fine as a fraction of the affected market will be a function of two parameters: ϵ , the price elasticity of demand, and m , the competitive markup.⁵⁹ The optimal restitution fine ranges from eight to twenty-three percent of the affected sales.

⁵⁷ See Combe, Monnier & Legal, *supra* note 55.

⁵⁸ It means that for instance, if only one cartel in five is eventually detected, the overall annual probability of detection is equal to three percent.

⁵⁹ See table 2.

Table 2

Values of the Restitution Fine (for $k = 0.3$)

	$m = 0\%$	$m = 1\%$	$m = 3\%$	$m = 5\%$	$m = 7\%$	$m = 9\%$	$m = 11\%$	$m = 13\%$	$m = 15\%$
$\varepsilon = 0$	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23
$\varepsilon = -1$	0.23	0.22	0.22	0.21	0.20	0.20	0.19	0.19	0.18
$\varepsilon = -2$	0.23	0.21	0.19	0.17	0.15	0.13	0.11	0.09	0.08

In the case of a maximum dissuasive fine imposed on an international cartel (with a thirty percent price increase) with a probability of detection of fifteen percent, the optimal fine will also depend on the value of two parameters: ε , the price elasticity of demand, and m , the competition markup.⁶⁰ In such a case, the optimal fine lies between 53% and 153% of the affected market.

Table 3

Values of the Dissuasive Fine (for $k = 0.3$)

	$m = 0\%$	$m = 1\%$	$m = 3\%$	$m = 5\%$	$m = 7\%$	$m = 9\%$	$m = 11\%$	$m = 13\%$	$m = 15\%$
$\varepsilon = 0$	1.53	1.53	1.53	1.53	1.53	1.53	1.53	1.53	1.53
$\varepsilon = -1$	1.53	1.51	1.47	1.43	1.39	1.35	1.32	1.28	1.25
$\varepsilon = -2$	1.53	1.46	1.31	1.17	1.03	0.9	0.77	0.65	0.53

For example, if the competitive markup is between zero and fifteen percent, the optimal fine for an international cartel will take the following values:

	Probability of 15%	Probability of 100%
Elasticity null	Maximal dissuasive fine: 153% of affected market	Maximal restitution fine: 23% of the affected market
Elasticity of -2%	Minimal dissuasive fine: 53%–153% of affected market (depending on the markup)	Minimal restitution fine 8%–23% affected market markup)

⁶⁰ See table 3.

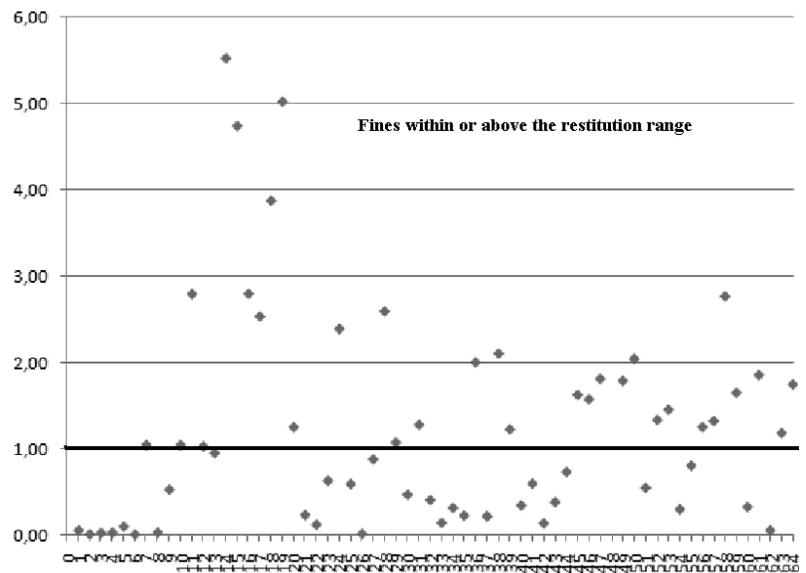
IV. ESTIMATION RESULTS

Applying the methodology developed in the first part of this article to the sixty-four cartels in our subsample, we obtain the following results:

A. Restitution fines

Figure 9 represents for each cartel (in chronological order, from the first to the sixty-fourth) the ratio between the actual fine imposed by the Commission and the optimal fine, assuming a 100% probability of detection and a -2 price elasticity of demand. When this ratio equals 1, the imposed sanction equals the minimal illegal gain realized by the cartel. If the ratio falls below 1, the fine is below the minimal amount of illicit profit confiscated by the undertakings. When the ratio exceeds 1, the fine is higher than the minimal restitution level (the smallest illegal gain).

Figure 9
Actual Fines Compared to Lower Restitution Fines (Lower Bound)

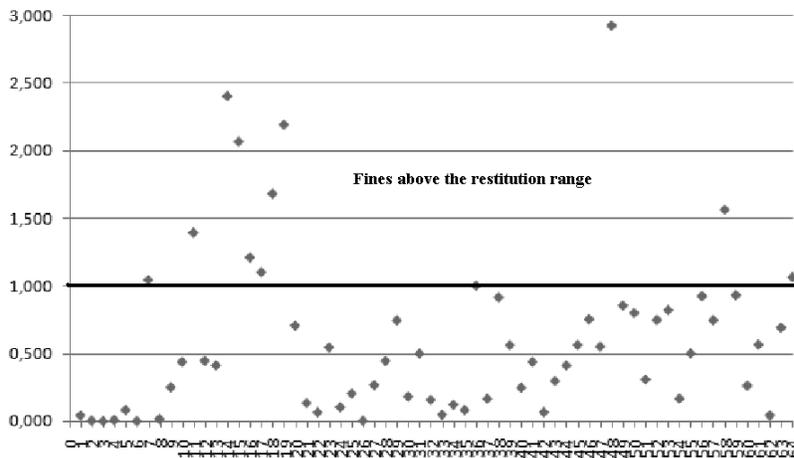


SOURCE: Authors

Thirty-three fines fall into the restitution range, which at best implies (if the price elasticity is high and the illegal gain is low) that half of the fines imposed by the Commission amount to or exceed the illegal profit made by the convicted firms. Thus, regardless of the probability of detection and the price elasticity of demand, at least half of the convicted firms still receive a net positive profit from colluding after paying the fines. Hence, the Commission's fining policy is very far from overenforcement.

Figure 10 represents, for each case of our subsample, the actual fine imposed by the Commission over the upper bound restitution fine, which is the optimal fine considering a 100% probability of detection and zero elasticity of demand (which corresponds to the highest illegal profit). When the ratio exceeds 1, actual fines are above the maximal illegal gain. This implies that the fine could be dissuasive depending on the level of the probability of detection, as firms had to pay more than the illegal gain derived from the infringement. Hence, these fines also take into account the fact that some cartels remain undetected.

Figure 10
Actual Fines/Upper Restitution Fines (Upper Bound)



SOURCE: Authors

Only twelve of the sixty-four cartels of the subsample received fines above the restitution range. In these twelve cases, the firms paid more than their illicit gain whatever the level of price elasticity. In every other case, depending on the level of price elasticity, the fines remain at or below the restitution range.

In a dynamic perspective, as we can see in figures 11 and 12, we cannot conclude that actual fines get slightly closer to restitution levels⁶¹ because our sample encompasses many cartel decisions rendered after 1999. Before 1999, and the arrival of Mario Monti as commissioner in charge of competition policy, only one fine fell within the restitution range. This was the Steel Beam case in 1994, in which the Commission estimated the illegal profit and imposed a fine equal to it. After 1999, less than half the fines fall below the minimal restitution fine: 34.5% are within the restitution range and 20% are above. The Commission has imposed the heaviest fines (in proportion to the illicit gain) on the members of the Vitamins Cartels (2001), the Spanish Tobacco Cartel (2004), the Bitumen in Netherland Cartel (2006), the Flat Glass Cartel (2007), and the Marine Hoses Cartel (2009). In each of these cases, the fines exceed the illicit gain made by the cartel, whatever the level of the elasticity (between 0 and -2).⁶²

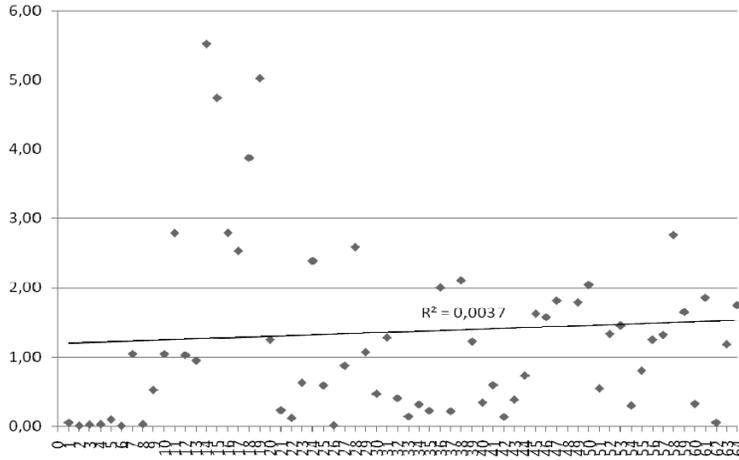
Despite the increase, fines imposed against cartels by the Commission are still far from optimal, even if we consider a 100% probability of detection, as half of the cartel members paid a fine below the level of the minimal illegal profit. If we consider the maximum illegal gain given a low price elasticity (which is likely as cartels often operate in intermediary industries for which the price elasticity of demand is low),⁶³ the Commission is far from the upper limit and has exceeded this limit only in nine cases (i.e., mainly the Vitamins Cartel fines, which may not be a shift in antitrust enforcement as these fines were

⁶¹ The coefficient of determination is very low.

⁶² Note that the fine imposed upon the Bananas Cartel (2008) is well below restitution and dissuasion, even though it is recent. Nevertheless, the low amount of the fine actually imposed can be explained by the particular circumstances of the case, including the specific regulatory regime for the banana market that was in place at that time.

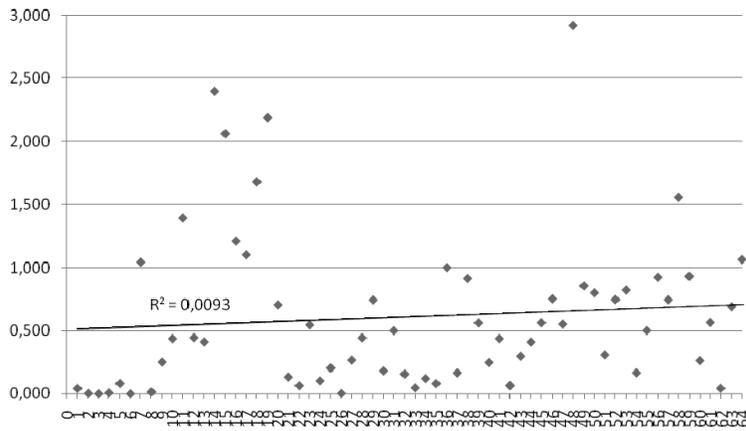
⁶³ See MASSIMO MOTTA, *COMPETITION POLICY: THEORY AND PRACTICE* 640 (2004); Levenstein & Suslow, *supra* note 31, at 65.

Figure 11
Actual Fines/Lower Restitution Fines



SOURCE: Authors

Figure 12
Actual Fines/Upper Restitution Fines

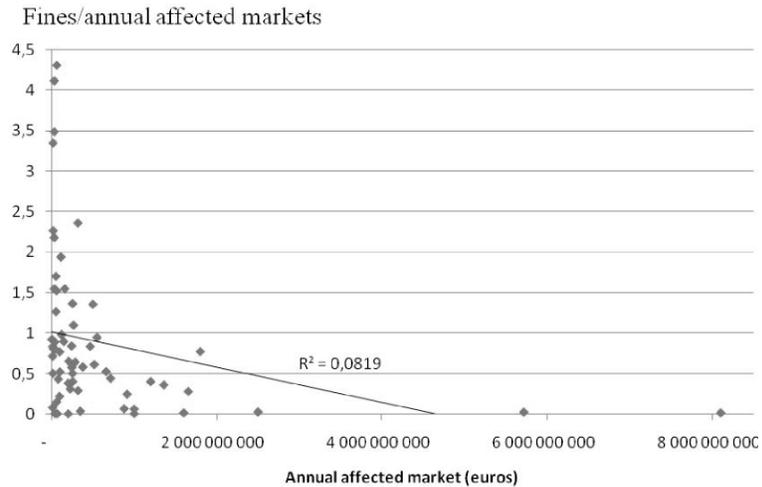


SOURCE: Authors

concentrated in a short period of time). Therefore, from an economic point of view, we wonder why, despite the increase in the level of fines, the sanctions are still small compared to illegal gains. First, there is a size effect implying a fixed-rate bias. Second, we detect a duration effect, as fines were not proportional to duration until the application of the 2006 Penalty Guidelines.⁶⁴

Figure 13 plots the ratio of the annual fine as a proportion of the annual affected market⁶⁵ on the annual affected market. The fine as a proportion of the annual affected market would be constant with the size of the market if the Commission was not shortsighted towards large cartels. But as we can see, the fine relative to the affected market decreases with the size of the market, which implies that the bigger

Figure 13
Size Effect



SOURCE: Authors

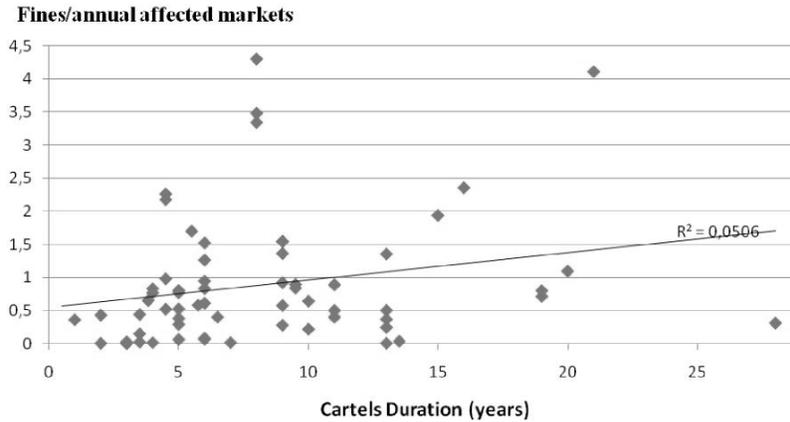
⁶⁴ EUROPEAN COMM'N, GUIDELINES ON THE METHOD OF SETTING FINES IMPOSED PURSUANT TO ARTICLE 23(2) OF REGULATION NO. 1/2003, 2006 O.J. (C 210) 2, available at <http://ec.europa.eu/competition/antitrust/legislation/fines.html> [hereinafter 2006 PENALTY GUIDELINES].

⁶⁵ We use the annual affected market to neutralize the effect of the duration of the cartel on the overall affected market and hence to avoid endogenous bias.

the cartel, the lower the relative fine. This “fixed rate” effect penalizes small cartels and small firms.⁶⁶

This bias could be explained by the method of setting fines in the 1998 Guidelines, which are based on a lump sum penalty.⁶⁷

Figure 14
Duration Effect



SOURCE: Authors

Figure 14 presents the fine (as a proportion of the annual affected market) compared to the duration of the cartel⁶⁸ and shows that dura-

⁶⁶ This bias is also shown through the communications of the Commission. The Commission’s press releases relating to cartel decisions insist heavily on the record level of the fines (in absolute value) imposed upon the undertakings. See, e.g., Press Release, European Commission, Commission Fines Members of Lifts and Escalators Cartels over €990 Million (Feb. 21, 2007), available at <http://europa.eu/rapid/pressReleasesAction.do?reference=IP/07/209&format=HTML>). Nevertheless, if the affected market is large, such fines do not necessarily reflect an increase in the severity of the Commission’s penalties based on relative value.

⁶⁷ 1998 PENALTY GUIDELINES, *supra* note 5, ¶ 1.A.

⁶⁸ This presentation neutralizes the size effect.

tion has a positive impact on the level of fines; but the correlation is not highly significant, and there is no proportionality (which should be the case if fines were optimal). Longer cartels benefit from a lower relative fine. This effect clearly can be explained by the 1998 Guidelines which established three types of infringement: infraction shorter than one year (with no increase in the basic fine); infringement lasting from one to five years (with an increase amount up to fifty percent), and the infringement lasting longer than five years (with an increase per year of ten percent).⁶⁹ This method is inadequate from an economic point of view: the duration of the infringement played only a marginal role on the level of the fines. The 2006 Penalty Guidelines⁷⁰ improve the penalty system because the fine is now proportionate to the duration of the infringement.⁷¹

B. *Dissuasive fine*

We now consider a fifteen percent probability of getting caught (taking into account that it is likely that most cartels remain undetected). Our results (figures 15 and 16) show a poor efficiency of actual fines in deterring cartels and a remote shadow of overenforcement.

Figure 15 represents actual fines imposed on cartels over optimal fines considering a fifteen percent probability of detection and a -2 price elasticity of demand (lower bounds). Over the period, only one fine falls into the dissuasive range. This means that only one fine may have been optimal depending on the value of the price elasticity of demand. For the sixty-three other cases, whatever the value of the price elasticity of demand, fines are far below dissuasive levels.

Figure 16 represents actual fines over upper bound dissuasive fines, with optimal fines considering a fifteen percent probability of detection and a null price elasticity of demand. It shows no fine is above the upper bound dissuasive fines, which implies no overenforcement (i.e., fines above the maximal optimal levels).

⁶⁹ 1998 PENALTY GUIDELINES, *supra* note 5, ¶ 1.B.

⁷⁰ 2006 PENALTY GUIDELINES, *supra* note 64, ¶ 24.

⁷¹ We also regressed the amount of the fine on the duration of the cartels and on the size of the affected market, and the two parameters are not significant. *See infra* appendix D.

Nevertheless, one should note that complete deterrence is not desirable, and these results can be used as a benchmark only in order to assess how far from overenforcement the Commission remains.

Some firms may be unable to pay the optimal fine. Craycraft, Craycraft and Gallo⁷² found that in the United States, between 1955 and 1993, only eighteen percent of convicted firms would have had sufficient funds available to pay optimal fines. The risk is that firms could be driven out of the market and bankrupted, resulting in even less competition. Furthermore, the proportionality principle may contradict the theory of optimal fines.⁷³ Finally, the principle of equal treatment is a general principle of European Community law (related to the principle of proportionality) and should be respected when enforcing competition law.⁷⁴

Last, agents who collude may not be risk neutral. On the one hand, if they are risk averse, optimal fines would be lower than our estimations. On the other hand, if they have a taste for risk, optimal fines would be higher than our estimations. According to Korobkin and Ulen, agents who form cartels tend to be overoptimistic, that is, they underestimate the probability of getting caught.⁷⁵

V. CONCLUSION

This article proposes a methodology for estimating the fines to be imposed on a specific cartel that involves the setting of upper and lower bounds depending on various relevant parameters. Our approach provides a guide to antitrust authorities by helping to assess when a fine is at least equal to the illicit gain made by the cartel (which corresponds to the minimum optimal fine given a 100% probability of detection). Applying this method to cartels condemned by the Commission from 1975 to 2009, when sufficient data were avail-

⁷² Catherine Craycraft, Joseph L. Craycraft & Joseph C. Gallo, *Antitrust Sanctions and a Firm's Ability to Pay*, 12 REV. INDUS. ORG. 171 (1997).

⁷³ See Camilli, *supra* note 36, at 583.

⁷⁴ See WOUTER P.J. WILS, EFFICIENCY AND JUSTICE IN EUROPEAN ANTITRUST ENFORCEMENT 64 (2008).

⁷⁵ Russell B. Korobkin & Thomas S. Ulen, *Law and Behavioral Science: Removing the Rationality Assumption from Law and Economics*, 88 CAL. L. REV. 1051, 1051–1144 (2000).

able, we measured the spread between actual fines imposed by the Commission and optimal restitution and dissuasive fines.

First, we found that the Commission has shown a tendency to impose heavier fines on price fixers across time, mainly since the mid-1990s. Second, the level of fines compared to the illegal gain made by cartel members remains low, as only half the fines equal the amount of illicit gain. This implies that fines regularly fall below the minimum illegal profit realized by the cartel. Thus, fines imposed against cartels by the Commission are suboptimal, even considering a 100% probability of detection.⁷⁶ Hence, these fines cannot deter price fixing if decision makers are risk neutral, as the probability of detection is clearly below 100%. Third, the Commission has never imposed a dissuasive fine given the low probability of detection and a low price elasticity of demand. For all of these reasons, the risk of overenforcement is a myth.

Our results are consistent with those of Geradin,⁷⁷ Connor and Miller,⁷⁸ Connor,⁷⁹ and Veljanosky⁸⁰ who conclude that fines are most often far from optimal and below the illegal profit made by the cartel or consumer harm. But, their results are even more pessimistic than ours.⁸¹ Their conclusions could result from differences in the method-

⁷⁶ The Commission is not the only authority to impose suboptimal fines. Our results are similar to those of Werden and Simon who conclude that the optimal fine in the United States in the period 1975–80 was on average equal to 111 times the level of actual fines. Werden & Simon, *supra* note 23, at 926. Gallo, et al., on the basis of a sample of 250 cartels convicted in the United States from 1955 to 1993, estimate that the fines imposed amounted to 0.043% of the optimal fine. Gallo, et al., *supra* note 23, at 58.

⁷⁷ See Geradin, *supra* note 6.

⁷⁸ See Connor & Miller, *supra* note 6.

⁷⁹ See Connor, *supra* note 4.

⁸⁰ See Veljanovski, *supra* note 6.

⁸¹ Connor shows that in the case of the Vitamins Cartel, the fines imposed upon the cartel amount to eighteen to forty-four percent of the illegal profit. See Connor, *supra* note 4, at 20. Veljanovski finds that the Commission's fines undervalued consumer losses in all but three cases (Vitamins B2, B5, and D3). See Veljanovski, *supra* note 6, at 80. On the contrary, we found that at best, the Commission undervalued illegal profits in half of the cases and at worst in eighty-five percent of the cases.

ologies used. First, the authors cited above used the same fixed percentage, applying it to the affected markets whatever the case, whereas we used data from each specific case at a firm level. Furthermore, their estimates did not take into account the competitive markup, although the optimal fines depend on it. If firms can make a profit—and sometimes high profits—even without colluding, the estimate of the illegal profit resulting from the collusive agreement may be overestimated, which leads to the conclusion that actual fines are far from illegal gains or consumer losses.

The method used to determine the amount of the fine may explain the spread between actual and optimal fines. Fines in Europe are based neither on the illicit profit made by the offenders nor on consumer harm. Nevertheless, dissuasion is part of the criteria. Indeed, the 1998 Penalty Guidelines state that the deterrence uplift is part of the basic amount of the fine and that fines can be increased “*at a level which ensures that it has a sufficiently deterrent effect.*”⁸² The 2006 Penalty Guidelines also can lead to higher fines,⁸³ as they allow, at the end of the process of fine determination (not at the first stage to fix the basic amount as was the case previously), the possibility of increasing the fine so as to exceed any gain to the offender, which is a means of taking account of the necessity of dissuasion. The specific increase for deterrence refers in particular to undertakings that have a large turnover. Moreover, the effect of duration on fine (proportionality) is more efficient in the 2006 Penalty Guidelines and could contribute to better results with regard to collusion deterrence. Notwithstanding, the 2006 Penalty Guidelines still state that the final amount of the fine should not exceed ten percent of the total turnover in the preceding business year of the undertaking or association.⁸⁴ Schinkel shows that the ten percent rule still applies and could impede the use of the 2006 Penalty Guidelines to improve dissuasion.⁸⁵

⁸² 1998 PENALTY GUIDELINES, *supra* note 5, ¶ 1.A (emphasis added).

⁸³ The 2006 Penalty Guidelines were designed to improve cartel dissuasion. See 2006 PENALTY GUIDELINES, *supra* note 64, ¶ 31.

⁸⁴ 2006 PENALTY GUIDELINES, *supra* note 64, ¶ 32.

⁸⁵ See Schinkel, *supra* note 4, at 556.

Our results do not imply that fines should be dramatically increased in the European Union, but do demonstrate that most often they remain too low to confiscate the illegal gain and deter cartel formation. Hence, fines should be increased to insure that in each case the cartel pays back the illegal profits derived from the infringement. In such a case, the Commission would reach optimality considering a 100% probability of detection. This objective would be cautious, as it excludes the issue relating to the presumed value of the probability of detection and the arguments relating to the proportionality of fines and inability to pay. Our results show that, given the level of fines, there is no actual risk of overenforcement even though fines have increased in recent years. Given that not all cartels are detected, penal and civil sanctions may be useful complements to fines.

APPENDIX A**Ten Largest Fines Imposed Against Cartels by the European Commission at Year-end 2009**

<i>Sector</i>	<i>Year</i>	<i>Total Fines (euros)</i>
Car glass	2008	1,383,896,000
Gas	2009	1,106,000,000
Elevators and escalators	2007	992,312,200
Vitamins	2001	790,515,000
Paraffin waxes	2008	676,011,400
Synthetic rubber	2006	519,050,000
Flat glass	2007	486,900,000
Plasterboard	2002	458,520,000
Hydrogen peroxide	2006	388,128,000
Acrylic glass	2006	344,562,500

APPENDIX B**Estimation of Price Increases Inflicted by Cartels**

<i>Studies</i>	<i>Number of cases</i>	<i>Average price increase</i>
Werden [2003] ^a	13 cartels	21%
Posner [2001] ^b	12 international cartels	49%
Levenstein & Suslow [2006] ^c	22 international cartels	43%
Griffin [1989] ^d	38 cartels	46%
OECD [2003] ^e	12 national cartels	15.75%
OECD [2002] ^f Report on the nature and effect of cartels	15%–20%	
Combe and Monnier [2007] ^g	12 cartels convicted by the European Commission	34%
Connor [2006] ^h	25 cartels convicted by the U.S. Department of Justice	30% (21.6% median)
Connor [2006]	248 cartels convicted by antitrust authorities throughout the world	43% (23.5% median)
Connor [2006]	674 quotations of price increase	25% (median) with: 17%–19% for domestic cartels 30%–33% for international cartels

Connor [2006]	136 quotations of price increase (cartels convicted in a single European country)	47% (17% median) 53% (42% median)
	126 quotations of price increase (cartels convicted in European countries)	
Connor [2006]	64 cartels convicted by the European Commission	35% (27.5% median)
Connor and Bolotova [2005] ⁱ	200 international and national cartels	30%–33% for international cartels 17%–19% for domestic cartels
Bolotova, Connor, Miller [2009] ^j	333 cartels from the 18th to the 21st century	18%

^a Gregory Werden, *The Effect of Antitrust Policy on Consumer Welfare: What Crandall and Winston Overlook* (U.S. Dep't of Justice, Antitrust Div., Discussion Paper No. EAG 03-2, Jan. 2003), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=384100.

^b RICHARD POSNER, *ANTITRUST LAW* (2d ed. 2001).

^c Margaret C. Levenstein & Valerie Y. Suslow, *What Determines Cartels Success?*, 44 J. ECON. LIT. 43, 50 (2006).

^d James Griffin, *Previous Cartel Experience: Any Lessons for OPEC?*, in *ECONOMICS IN THEORY AND PRACTICE: AN ECLECTIC APPROACH* 179–206 (L.R. Klein & Jaime Marquez eds., 1989).

^e OECD, *ANNUAL REPORT* (2003), available at <http://www.oecd.org/dataoecd/45/28/2506789.pdf>.

^f OECD, *ANNUAL REPORT* (2002), available at <http://www.oecd.org/dataoecd/8/38/2080175.pdf>.

^g Emmanuel Combe & Constance Monnier, *Cartel Profiles in the European Union*, 3 CONCURRENTS 181, 184 (2007).

^h John Connor, *The Size of Cartel Overcharges: Implications for U.S. and E.U. Fining Policies*, 51 ANTITRUST BULL. 983 (2006).

ⁱ John Connor & Yuliya Bolotova, *Cartel Overcharges: Survey and Meta-Analysis* (Purdue Univ. Working Paper, 2005), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=788884.

^j Yuliya Bolotova, John Connor & Douglas Miller, *Factors Influencing the Magnitude of Cartel Overcharges: An Empirical Analysis of the U.S. Market*, 5 J. COMPETITION L. ECON. 361 (2009).

APPENDIX C

Price Elasticity of Demand

<i>Study</i>	<i>Industry</i>	<i>Price elasticity of demand</i>
INSEE [2006] ^a	Tobacco	-0.3
Customs Associates [2001] ^b	Beer	[0.12; -0.9]
Customs Associates [2001]	Wine	[0.2; -1.85]
The Canadian Ministry of Finance [2006] ^c	Air transport	[-1.2; -1.7]
European Commission [1993] ^d	Glass	[-0.1; -0.3]
MNEFI [2005] ^e	Fuel	-0.2
French Ministry of Transport [2000] ^f	Maritime transport	[-0.1; -0.3]
La Cour and Møllgaard [2002] ^g	Cement	-0.27
OECD [2005] ^h	Petroleum	[-0.15; -0.3] in the short run [-0.8; -1] in the long run
Connor [2001] ⁱ	Lysine	[-0.2; -0.8]

^a Danielle Besson, *Consommation de Tabac: La Baisse s'Est Accentuée Depuis 2003*, INSEE PREMIERE, Vol. 1110 (Dec. 2006), available at <http://www.insee.fr/fr/ffc/ipweb/ip1110/ip1110.pdf>.

^b CUSTOMS ASSOCS. LTD., STUDY ON THE COMPETITION BETWEEN ALCOHOLIC DRINKS—FINAL REPORT (2001), available at http://ec.europa.eu/taxation_customs/resources/documents/study_comp_between_alcoholdrinks_en.pdf.

^c DEPARTMENT OF FINANCE CANADA, AIR TRAVEL DEMAND ELASTICITIES: CONCEPTS, ISSUES AND MEASUREMENT, FINAL REPORT, http://www.fin.gc.ca/consultresp/Airtravel/airtravStdy_eng.asp (last visited Dec. 13, 2010).

^d Commission Decision 94/359, 1994 O.J. (L 158) 24 (declaring a concentration to be compatible with the common market).

^e Ministère Français de l'Économie des Finances et de l'Industrie, *L'Impact des Taxes sur le Marche Pétrolier*, DIAGNOSTICS PRÉVISIONS ET ANALYSES ÉCONOMIQUES, No. 73, May 2005, available at http://www.minefe.gouv.fr/directions_services/dgtpe/dpae/pdf/2005-054-73.pdf.

^f Ministère Français des Transports, *Modélisation du Choix Modal Air-Mer à Partir de l'Enquête Chargeur*, LETTRE DE COMMANDE Vol. 00MT54 (Draft) (2000), available at <http://www.innovations-transport.fr/IMG/pdf/199-S00MT54.pdf>.

^g Lisbeth Funding la Cour & H. Peter Møllgaard, *Test of Domination: The Danish Cement Industry* (Dep't of Econ., Copenhagen Bus. School Working Paper No. 10-2000), available at <http://openarchive.cbs.dk/bitstream/handle/10398/7560/wpec102000.pdf?sequence=1>.

^h OECD, *Evolution des Prix du Pétrole : Moteurs, Conséquences Économiques et Ajustement des Politiques*, PERSPECTIVES ÉCONOMIQUES DE L'OCDE, Vol. 76 (2005), available at <http://www.oecd.org/dataoecd/39/59/34087712.pdf>.

ⁱ John Connor, *Our Customers Are Our Enemies: The Lysine Cartel of 1992-1995*, 18 REV. INDUS. ORG. 5 (2001).

APPENDIX D

Results of the Regression (OLS) of the Amount of the Fine on the Duration and the Affected Market

	β	<i>T test</i>
Cartel duration	2175481	0.39
Annual affected market	0.04413	1.44

$R^2=0.0339$

APPENDIX E

Mark-up

<i>Year of Decision</i>	<i>Cartels</i>	<i>Fine (euros)</i>	<i>Undertakings (number of years)</i>
1975	Preserved mushrooms	100,000	Bonduelles (5), Fleury Michon (5)
1981	NAVEWA- ANSEAU	201,000	Electrolux (5), Phillips (5), Siemens (5)
1984	Zinc producer group	3,300,000	Rio Tinto (5), Eramet (5)
1984	Peroxygen products	9,000,000	Solvay (5), Degussa (5) Air Liquide (5)
1986	Roofing felt	1,015,000	Colas (5), Eiffage (5)
1986	Fatty acids	150,000	Unilever (5), Henkel (5)
1994	Steel beam [Art. 65 CECA]	11,000,000	Manitou (5), Haulotte (5)
1994	SCK/FNK (Dutch Cranes)	104,364,350	Illegal gain estimated by the Commission
1998	Preinsulated pipes	92,210,000	ABB (5)
2001	Graphite electrode	218,800,000	Carbone Lorraine (5), SGL Carbone (5)
2001	Sodium gluconate	57,530,000	ADM (2), Akzo Nobel (5)
2001	Vitamin A	131,600,000	BASF (5)
2001	Vitamin E	202,700,000	BASF (5)
2001	Vitamin B2	69,600,000	BASF (5)

2001	Vitamin B5	111,400,000	BASF (5)
2001	Vitamin C	117,400,000	BASF (5)
2001	Vitamin beta carotene	91,200,000	BASF (5)
2001	Vitamin carotenoides	88,300,000	BASF (5)
2001	Vitamin D3	42,700,000	BASF (5)
2001	Citric acid	135,220,000	Bayer (5), ADM (2)
2001	Exchange of euro-zone currencies	100,800,000	Dresdner Bank (5), Hypovereinsbank (5)
2001	Zinc phosphate	11,950,000	Bayer (5), ADM (2)
2001	Carbonless paper	313,690,000	Norske Skog (3), Sequana (2)
2002	Lombard Club	124,260,000	Bank of Austria (5), Sparkkasse/erste Bank (5)
2002	Methionine	127,000,000	Degussa (5), Nippon Soda (5)
2002	Fine art auction houses	20,400,000	Sotheby's (5)
2002	Plasterboard	478,320,000	Lafarge (5), Saint-Gobain (5)
2002	Methylglucamine	2,850,000	Aventis (5), Merck (5)
2002	Food flavor enhancers	20,560,000	Ajinomoto (5), Daesang (5)
2002	Extruded graphite products	8,800,000	Carbone Lorraine (5), SGL Carbone (5)
2002	Isostatic specialty graphite	51,800,000	Carbone Lorraine (5), SGL Carbone (5)
2003	Electrical and mechanical carbon and graphite products	101,440,000	Carbone Lorraine (5), SGL Carbone (5)
2003	Organic peroxides	69,531,000	Akzo (4), Degussa (5)
2003	Industrial copper tubes	78,730,000	KME (5), Outokumpu (4)
2004	Copper plumbing tubes	222,291,100	KME (5), Outokumpu (4)
2004	Spanish tobacco	20,038,000	Imperial Tobocco (5), Philip Morris (5)
2004	Needles	60,000,000	Coats (5)
2004	Choline chloride	66,340,000	BASF (5), Akzo (4)
2005	Monochloroacetic acid	216,910,000	Akzo (4), Hoechst (5)
2005	Industrial thread EEE (auto industry)	7,500,000	DMC (2)
2005	Industrial thread Benelux and Northern Europe	35,500,000	DMC (2)

MYTH OF OVERENFORCEMENT : 275

2005	Italian tobacco	56,052,000	Imperial Tobocco (5), Philip Morris (5)
2005	Industrial bags	290,000,000	BPI (5)
2005	Rubber chemicals	75,860,000	Bayer (5), Flexsys (solutia) (5)
2006	Methacrylates	344,562,500	Degussa (5), ICI (Akzo) (5)
2006	Hydrogen peroxide (and pertrate)	388,128,000	Arkema (5), Solvay (5)
2006	Fittings	314,700,000	Aalberts (5)
2006	Bitumen Nederland	266,717,000	Shell (5), Total (5)
2006	Butadiene rubber/ emulsion styrene butadiene rubber	519,000,000	Bayer (5), Shell (5)
2007	Gas insulated switchgear	750,712,500	Siemens (5), Schneider (5)
2007	Lift and escalators Netherlands	140,239,000	Schindler division ascenseurs (5), Kone (5)
2007	Lift and escalators Luxembourg	49,361,400	Schindler division ascenseurs (5), Kone (5)
2007	Lift and escalators Belgium	344,663,550	Schindler division ascenseurs (5), Kone (5)
2007	Lifts and escalators Germany	458,048,250	Schindler division ascenseurs (5), Kone (5)
2007	Bitumen Spain	183,000,000	Respol (5), BP (5)
2007	Professional videotape	74,800,000	Fuji (5), Sony (5)
2007	Chloroprene Rubber	247,000,000	Bayer (5), Dow (5)
2007	Flat glass	486,900,000	Saint-Gobain (5), Asahi Glass (5)
2008	Nitrile butadiene rubber	34,200,000	Bayer (5), Flexsys (solutia) (5)
2008	International removal services	32,755,500	Touax (5), Norbert Dentressangle (5)
2008	Candle waxes	676,011,400	Respol (5), Shell (5), Total (5)
2008	Bananas	60,300,000	Chiquita (5), Dole (3)
2008	Car glass	1,383,896,000	Saint-Gobain (5), Asahi Glass (5)
2009	Marine hose producers	131,510,000	Continental (5), Bridgestone (5)

*U.S. policy and practice in pursuing
individual accountability for cartel
conduct: A preliminary critique*

BY CARON BEATON-WELLS* AND BRENT FISSE**

The extent of individual accountability for cartel conduct in the United States, as elsewhere, may be more limited than some might have one believe. The chances are that individuals responsible for cartel offenses will not be prosecuted and that corporate fines will not result in internal disciplinary action being taken against them. Yet few would disagree with the principle that all who are responsible for serious cartel conduct should be held accountable. Further empirical investigation is required in order to test fully the extent to which the DOJ's approach to anticartel enforcement achieves individual accountability. Such an investigation is warranted with regard to the influence of the U.S. model around the world and the strength of advocacy by the U.S. authorities as to its merits.

* Associate Professor, Melbourne Law School, The University of Melbourne.

** Brent Fisse Lawyers, Sydney; Adjunct Professor, The University of Sydney; Senior Fellow, Melbourne Law School, The University of Melbourne.

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I. INTRODUCTION—INDIVIDUAL ACCOUNTABILITY AS A PARADIGM FOR ANTICARTEL ENFORCEMENT

Individual accountability is a foundation of social control in Western democracies. Although the contours of the concept of individual accountability are context-dependent and widely debated, the orthodox principle is that individuals are the quintessential actors in society and should be accountable for their actions.¹

The U.S. Department of Justice (DOJ) prides itself on having championed a “global movement towards individual accountability” for cartel activity through the application of criminal sanctions, particularly jail time, for individual offenders.² However, with only a handful of exceptions, the DOJ’s contemporary policy and performance record with respect to criminal cartel enforcement have escaped critical scrutiny from U.S. commentators.³ Indeed, most tend to lionize the Antitrust Division’s efforts to eradicate cartels from the U.S. and global economies.⁴ This may be attributed in part to the facially

¹ BRENT FISSE & JOHN BRAITHWAITE, *CORPORATIONS, CRIME AND ACCOUNTABILITY* ch. 1 (1994).

² Scott Hammond, Deputy Assistant Att’y Gen., U.S. Dep’t of Justice, Antitrust Div., *Charting New Waters in International Cartel Prosecutions*, Presentation to the 20th Annual National Institute on White Collar Crime, ABA Criminal Justice Section and ABA Center for Continuing Legal Education (Mar. 2, 2006), at 2 [hereinafter Hammond, *Charting New Waters*]; Scott Hammond, Deputy Assistant Att’y Gen., U.S. Dep’t of Justice, Antitrust Div., *The Evolution of Criminal Antitrust Enforcement over the Last Two Decades*, Presentation to the 24th Annual National Institute on White Collar Crime, ABA Criminal Justice Section and ABA Center for Continuing Legal Education (Feb. 25, 2010) at 4, 6-9 [hereinafter Hammond, *Evolution*].

³ For exceptions, see John M. Connor, *Anti-Cartel Enforcement by the DOJ: An Appraisal*, 5 *COMPETITION L. REV.* 89 (2008); Maurice E. Stucke, *Am I a Price Fixer? A Behavioural Economics Analysis of Cartels*, in *CRIMINALISING CARTELS: CRITICAL STUDIES OF AN INTERNATIONAL REGULATORY MOVEMENT* ch. 12 (Caron Beaton-Wells & Ariel Ezrachi eds., 2011); D. Daniel Sokol, *Neo-Chicago Antitrust, Cartel Enforcement and Corporate Compliance*, *ANTITRUST L.J.* (forthcoming).

⁴ As reflected in the observation by two commentators: “People in the antitrust world disagree about many things, but it is extremely difficult to find responsible critics who do not applaud the U.S. government’s anti-

impressive statistical record of the Division in criminal antitrust cases over the last decade. Statistically it has been for many years (and, in the absence of criminal liability in the European Union, is likely to remain for many years) the world leader in terms of the number of criminal cases brought against cartel offenders.⁵

This article tests in a preliminary way the extent to which individual accountability is reflected in current U.S. anticartel policy and practice, focusing on:

- the policy reasons given by U.S. authorities for subjecting individuals to criminal sanctions for cartel conduct (section II);
- the exercise of enforcement discretion with respect to prosecution, leniency, and plea bargaining in the United States (section III);
- the nature of individual sanctions for cartel conduct in the United States (section IV); and
- the nature of corporate sanctions for cartel conduct in the United States (section V).

The analysis is necessarily preliminary. A definitive analysis would require an empirical investigation of a scale and kind that was not possible for the purposes of this article. Nevertheless, on even a preliminary analysis, it is evident that questions hang over the extent to which individual accountability is in fact pursued or achieved in anti-cartel enforcement by the DOJ. In the conclusion, we map the

cartel program. We strongly agree with this almost-unanimous consensus and are second to no one in our appreciation of the DOJ's anti-cartel activity. In terms of taxpayer dollars well spent, the program surely is one of the most outstanding in all of government." Robert H. Lande & Joshua P. Davis, *Comparative Deterrence from Private Enforcement and Criminal Enforcement of the U.S. Antitrust Laws*, 2011 BYU L. REV. (forthcoming). See also Donald C. Klawiter, *After the Deluge: The Powerful Effect of Substantial Criminal Fines, Imprisonment and Other Penalties in the Age of International Criminal Enforcement*, 69 GEO. WASH. L. REV. 745 (2001); David A. Balto, *Antitrust Enforcement in the Clinton Administration*, 9 CORNELL J. L. & PUB. POL'Y 61 (1999).

⁵ The decrease in the total number of individuals charged with cartel violations since the mid-1990s has been attributed to a shift in prosecutions away from bid-rigging conspiracies and toward large-scale price fixing cartels, the latter of which tend to have a smaller number of corporations and individuals involved in them than the former. See Connor, *supra* note 3, at 109–10.

steps that would need to be taken to test thoroughly the DOJ claim to have championed individual accountability for cartel conduct (section VI).

By “accountability” we mean simply the state of being held to account for one’s conduct.⁶ Being “held to account” requires that an actor explain his or her conduct and then be sanctioned for that conduct after account is taken of the explanation given or not given by the actor. The sanctions imposed may be positive or negative and are always to some extent nonmonetary; accountability entails being censured or praised as a member of a social community.⁷ Accountability is not necessarily fault-based. For example, failure to perform an assigned organizational function when expected to do so may result in accountability on that basis alone.

Accountability may be corporate as well as individual. It is a mistake to conceive of accountability as necessarily relating only to individuals.⁸ Corporations are subject to criminal liability, and there are strong underlying policy reasons why that should be so.⁹ It is also a mistake to conceive of accountability as necessarily relating only to corporations: that conception radically violates the orthodox principle of individual accountability.¹⁰

The scope of this article is limited to the design and application of sanctions for cartel conduct. It does not attempt to address many

⁶ “Accountability” and “responsibility” are closely related concepts. Technical distinctions can be drawn between them but are of little moment to enforcement strategy.

⁷ See generally CHRISTOPHER HARDING, *CRIMINAL ENTERPRISE: INDIVIDUALS, ORGANIZATIONS AND CRIMINAL RESPONSIBILITY* ch. 1 (2007); FISSE & BRAITHWAITE, *supra* note 1, at ch. 1; H.L.A. HART, *PUNISHMENT AND RESPONSIBILITY—ESSAYS IN THE PHILOSOPHY OF LAW* (2d ed. 2008); TONY HONORÉ, *RESPONSIBILITY AND FAULT* (1999); PETER CANE, *RESPONSIBILITY IN LAW AND MORALITY* (2002); R. JAY WALLACE, *RESPONSIBILITY AND THE MORAL SENTIMENTS* (1994); MARK BOVENS, *THE QUEST FOR RESPONSIBILITY* (1998).

⁸ FISSE & BRAITHWAITE, *supra* note 1, ch. 2.

⁹ See CARON BEATON-WELLS & BRENT FISSE, *AUSTRALIAN CARTEL REGULATION: LAW, POLICY AND PRACTICE IN AN INTERNATIONAL CONTEXT* § 7.2 (2011).

¹⁰ FISSE & BRAITHWAITE, *supra* note 1, ch. 3.

other issues, including liability rules,¹¹ powers of investigation, or enforcement methods that conduce to the shifting by senior management of blame and liability to lesser employees.¹²

II. INDIVIDUAL ACCOUNTABILITY AS A MATTER OF DOJ POLICY

Over the past ten to fifteen years, U.S. authorities and commentators have promoted the policy of criminal sanctions for individual cartel offenders, particularly through jail time. This policy has been justified on the grounds that it is “absolutely critical for effective deterrence and enforcement.”¹³ It has not been justified generally as a policy directed at achieving individual accountability for cartel conduct. As explained in sections II.A and II.B below, policies directed at enhanced deterrence and enforcement are not the same as—and may be inconsistent with—a policy directed at individual accountability.

A. *Individual sanctions as a means of achieving deterrence*

It is often asserted by U.S. enforcement officials that the penal approach taken by the DOJ to individuals involved in cartel conduct, particularly the uncompromising stance taken on jail time as an appropriate sanction, has been effective in deterring such conduct, at least within U.S. borders.¹⁴ There are at least two major problems with such assertions.

¹¹ See BEATON-WELLS & FISSE, *supra* note 9, at ch. 6.

¹² See WILLIAM S. LAUFER, *CORPORATE BODIES AND GUILTY MINDS: THE FAILURE OF CORPORATE CRIMINAL LIABILITY* ch. 5 (2006).

¹³ William Kolasky, *Criminalising Cartel Activity: Lessons from the U.S. Experience*, 12 *COMPETITION & CONSUMER L.J.* 207, 207 (2004). See also Hammond, *Evolution*, *supra* note 2, at 4, 6–9; Donald I. Baker, *Punishment for Cartel Participants in the United States: A Special Model*, in *CRIMINALISING CARTELS*, *supra* note 3, at ch. 2 [hereinafter Baker, *Punishment for Cartel Participants*]; Donald I. Baker, *The Use of Criminal Law Remedies to Deter and Punish Cartels and Bid Rigging*, 69 *GEO. WASH. L. REV.* 693 (2001) [hereinafter Baker, *Criminal Law Remedies*]; Gregory J. Werden, *Sanctioning Cartel Activity: Let the Punishment Fit the Crime*, 5 *EUR. COMPETITION J.* 5, 31–33 (2009); Terry Calvani & Torello H. Calvani, *Custodial Sanctions for Cartel Offences: An Appropriate Sanction in Australia?*, 17 *COMPETITION & CONSUMER L.J.* 119, 127–28 (2009).

¹⁴ Scott Hammond, Deputy Assistant Att’y Gen., U.S. DOJ, Antitrust Div., *Cornerstones to an Effective Leniency Program*, Presentation to the ICN

First, despite record-level prosecutions, convictions, and penalties for cartel activity in the United States, there are in fact few signs that “optimal”¹⁵ deterrence has been reached. If anything, there are signs that the number, scale, and harmfulness of discovered cartels are increasing.¹⁶ Second, and relatedly, the body of empirical work that has sought to test the relationship between individual engagement in

Workshop on Leniency Programs (Nov. 23–24, 2004), at 3 [hereinafter Hammond, Cornerstones]; Thomas O. Barnett, Former Assistant Att’y Gen., U.S. DOJ, Antitrust Div., Seven Steps to Better Cartel Enforcement, Speech at the 11th Annual Competition Law & Policy Workshop, EUI (June 2, 2006), available at <http://www.justice.gov/atr/public/speeches/216453.htm>; Hammond, Charting New Waters, *supra* note 2, at 7–8; Scott Hammond, Deputy Assistant Att’y Gen., U.S. DOJ, Antitrust Div., Recent Developments, Trends and Milestones in the Antitrust Division’s Criminal Enforcement Program, Address before the Cartel Enforcement Roundtable, ABA Section of Antitrust Law (Nov. 16, 2007); Baker, *Punishment for Cartel Participants*, *supra* note 13, at ch. 2; Belinda A. Barnett, Senior Counsel to the Deputy Assistant Att’y Gen. for Criminal Enforcement, U.S. DOJ, Antitrust Div., Criminalization of Cartel Conduct—The Changing Landscape, Speech at Joint Federal Court of Australia/Law Council of Australia (Business Law Section) Workshop (Apr. 3, 2009).

15 “Optimal deterrence” is an opaque and problematic notion that is the subject of diverse interpretation. One broad assumption in the literature appears to be that an “optimal” penalty is one that “promises, on average, to take away the financial gains that would otherwise accrue to cartel members.” ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT (OECD), DIRECTORATE FOR FINANCIAL, FISCAL AND ENTERPRISE AFFAIRS, COMPETITION COMMITTEE, REPORT ON THE NATURE AND IMPACT OF HARD CORE CARTELS AND SANCTIONS AGAINST CARTELS UNDER NATIONAL COMPETITION LAWS ¶ 35 DAFE/COMP(2002)7 (Apr. 9, 2002), available at <http://www.oecd.org/dataoecd/16/20/2081831.pdf>. See also Peter M. Whelan, *A Principled Argument for Personal Criminal Sanctions as Punishment under EC Cartel Law*, 4 COMPETITION L. REV. 7 (2007); Wouter P.J. Wils, *The European Commission’s 2006 Guidelines on Antitrust Fines: A Legal and Economic Analysis*, 30 WORLD COMPETITION L. & ECON. REV. 197 (2007); Wouter P.J. Wils, *Optimal Antitrust Fines: Theory and Practice*, 29 WORLD COMPETITION L. & ECON. REV. 183 (2006). Conceived in those terms, it is difficult to see how optimal deterrence has any application in explaining the effectiveness of jail as a sanction. *But see* Werden, *supra* note 13.

16 See John M. Connor, *The United States Department of Justice Antitrust Division’s Cartel Enforcement: An Appraisal and Proposals* 9 (Am. Antitrust Inst. Working Paper No. 08-02, June 10, 2008) (describing this as a “major paradox”). See also Douglas H. Ginsburg & Joshua D. Wright, *Antitrust Sanctions*, 6 COMPETITION POL’Y INT’L, Fall 2010, at 3, 21, available at <https://www>

cartel conduct and the prospect of legal sanctions provides little support for classical deterrence theory, with its reliance on “the supercharged deterrent of jail”¹⁷ to induce greater compliance. This theory has been found to have “no basis in empirical evidence about why people actually participate in cartel behavior in the complexity of everyday business life.”¹⁸ From empirical studies in both cartel and other contexts there is substantial evidence for the view that cartel participation is likely to be influenced as much, if not more, by dispositional, organizational, situational, and cultural factors, as it is by the prospect of legal sanctions, including the ultimate sanction of jail.¹⁹

.competitionpolicyinternational.com/antitrust-sanctions/; Stucke, *supra* note 3. Cf. the more positive slant offered in John M. Connor, Albert A. Foer & Simcha Udwin, *Criminalizing Cartels: An American Perspective*, 2 NEW J. EUR. CRIM. L. 199, 215 (2010) (under the heading *Criminalization Works*).

¹⁷ Christine Parker, *Criminal Cartel Sanctions and Compliance: The Gap Between Rhetoric and Reality*, in CRIMINALISING CARTELS, *supra* note 3, at 239. Note, in particular, Parker’s critique of the findings in OFFICE OF FAIR TRADING, THE DETERRENT EFFECT OF COMPETITION ENFORCEMENT BY THE OFT: DISCUSSION PAPER 244 (No. OFT 963, Nov. 2007). Even the OECD, one of the strongest proponents of tough measures to deter cartel conduct, has conceded that “there is no systematic empirical evidence to prove the deterrent effects of criminal sanctions or, more importantly, to assess whether the marginal benefit of introducing sanctions against individuals . . . exceeds the additional costs that a system of criminal sanctions entails.” OECD, HARD CORE CARTELS: THIRD REPORT ON THE IMPLEMENTATION OF THE 1998 COUNCIL RECOMMENDATION 27 (2005). Cf. the view expressed by Scott Hammond, Deputy Assistant Att’y Gen., U.S. DOJ, Antitrust Div., that the deterrence superiority of prison over company fines is so obvious that no empirical verification is needed, as reported in Connor, *supra* note 3, at 109 n.121.

¹⁸ Parker, *supra* note 17.

¹⁹ See Christine E. Parker & Vibeke L. Nielsen, *How Much Does It Hurt? How Australian Businesses Think About the Costs and Gains of Compliance with the Trade Practices Act*, 32 MELB. U. L. REV. 554 (2008); Barry J. Rodger, *A Study of Compliance Post-OFT Infringement Action*, 5 EUR. COMPETITION J. 65 (2009); Stucke, *supra* note 3; Utpal Bhattacharya & Cassandra D. Marshall, *Do They Do It for the Money?* (Nov. 2009), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1356118; Kai-D. Bussman & Markus M. Werle, *Addressing Crime in Companies: First Findings from a Global Survey of Economic Crime*, 46 BRIT. J. CRIMINOLOGY 1128 (2006). There is also a vast theoretical and empirical literature on the complexity of motivations underpinning decisions to obey or disobey the law. See, e.g., Susanne Karstedt & Stephen Farrall, *The Moral Economy of Everyday Crime: Markets, Consumers and Citizens*, 46 BRIT. J. CRIMINOLOGY 1011 (2006).

More fundamentally, a policy favoring criminal sanctions as a mechanism for deterring individual offenders is not the same as a policy favoring individual accountability. The aim of deterring individuals from engaging in certain conduct is separate from the aim of holding those individuals found to have engaged in the conduct to account and sanctioning them accordingly. Deterrence operates *ex ante* while accountability operates *ex post* the conduct. The two policies are complementary rather than substitutable.

The paradigm of individual accountability outlined in the introduction to this article does not imply adherence to any particular theory of punishment. It thus accommodates utilitarian approaches to general deterrence that depart from fault-based liability or proportionate punishment. However, deterrence clashes with individual accountability where the means of deterrence used is exclusively enterprise or corporate liability. An exclusively enterprise or corporate liability approach is advocated by some law and economics theorists,²⁰ but not by the DOJ.²¹

B. Individual sanctions as a means of promoting enforcement

To a significant degree, the justification given in the United States for criminal sanctions against individuals is instrumental in nature. The instrumentalism of the policy is evident in at least three ways.

First, the threat of criminal sanctions and jail in particular is seen as vital to ensuring that individuals cooperate with the authorities and provide evidence against their employers, fellow employees, and coconspirators in return for a reduced sentence.²²

²⁰ See, e.g., KENNETH G. ELZINGA & WILLIAM BREIT, *THE ANTITRUST PENALTIES: A STUDY IN LAW AND ECONOMICS* ch. 7 (1976); Gary S. Becker, *Crime and Punishment: An Economic Approach*, 76 J. POL. ECON. 169 (1968); William M. Landes, *Optimal Sanctions for Antitrust Violations*, 50 U. CHI. L. REV. 652 (1983); Richard Posner, *An Economic Theory of Criminal Law*, 85 COLUM. L. REV. 1193, 1201–08 (1985); Steven Shavell, *Criminal Law and the Optimal Use of Nonmonetary Sanctions as a Deterrent*, 85 COLUM. L. REV. 1232 (1985).

²¹ See, e.g., Werden, *supra* note 13.

²² Kolasky makes the point that “there is no other effective way to persuade lower level employees to cooperate in an investigation and to supply evidence that will incriminate their superiors, their employers and their co-

Second, in the leniency context, criminal liability is seen as valuable in incentivizing corporations to apply for leniency in order to secure immunity from prosecution for their officers and employees.²³ It is also said to contribute to alignment of individual employee and corporate employer interests, enabling a company to count on the cooperation of its employees in return for derivative immunity.²⁴ When leniency is not available, the DOJ's insistence on jail terms is said to encourage companies to cooperate early to minimize the number of carve-outs of individuals who could otherwise be subject to jail sentences (see further section III below).²⁵

Third, criminal sanctions are seen as conducive to applications for leniency by individual employees independent of their employers²⁶ and to the potential of such applications to destabilize cartels.²⁷

conspirators." See Kolasky, *supra* note 13, at 211. See also Thomas Barnett, *supra* note 14; Hammond, Cornerstones, *supra* note 14, at 3. If an individual fails to comply with cooperation obligations under a plea agreement, the agreement is rendered void and the DOJ is free to prosecute as well as to use information provided by the individual against him or her in a criminal trial. See Scott Hammond, Deputy Assistant Att'y Gen., U.S. DOJ, Antitrust Div., The U.S. Model of Negotiated Plea Agreements: A Good Deal with Benefits for All, Address before the OECD Competition Committee Working Party No. 3, at 9 (Oct. 17, 2006) [hereinafter Hammond, The U.S. Model].

²³ Under the U.S. DOJ Corporate Leniency Policy, if a corporation qualifies for Part A leniency (i.e., if the corporation reports before an investigation has begun), all directors, officers and employees of the corporation who admit their involvement and cooperate with the investigation also receive leniency. See also Hammond, Charting New Waters, *supra* note 2, at 9; Scott Hammond, Deputy Assistant Att'y Gen., U.S. DOJ, Antitrust Div., When Calculating the Costs and Benefits of Applying for Corporate Amnesty, How Do You Put a Price Tag on an Individual's Freedom?, Presentation to the 20th Annual National Institute on White Collar Crime, ABA Criminal Justice Section and ABA Center for Continuing Legal Education, San Francisco (Mar. 8, 2001) at 6 [hereinafter Hammond, Calculating the Costs and Benefits].

²⁴ Baker, Criminal Law Remedies, *supra* note 13, at 704. However, this is undermined to an extent by the carve-out policy, discussed *infra* section III.

²⁵ Hammond, Charting New Waters, *supra* note 2, at 9.

²⁶ Hammond, Cornerstones, *supra* note 14, at 3.

²⁷ This view continues to be held despite the fact that the individual leniency policy is "evidently little used." See Connor, *supra* note 3, at 97.

These justifications for criminal sanctions are directed at the enhancement of detection and prosecution strategies. They are not justifications grounded in principles of individual accountability. Indeed, such strategies have the potential to undermine individual accountability, particularly when they are not administered in a fully transparent way, as explained in section III.

III. INDIVIDUAL ACCOUNTABILITY AS A MATTER OF DOJ ENFORCEMENT DISCRETION

Since the mid-1990s, the Antitrust Division has won ninety-nine per cent of its criminal cartel cases,²⁸ the majority of individual defendants have been sentenced to jail, and there has been a steady upward trajectory in the length of jail terms imposed. Yet, from the perspective of individual accountability, the DOJ's record is difficult to assess and in some respects appears unsatisfactory.

High conviction rates and custodial sentences against individual cartel defendants are not necessarily an appropriate measure of prosecutorial effectiveness in achieving individual accountability. They reveal little if anything about the DOJ's processes for selecting which individuals to prosecute and for negotiating pleas. To a degree these processes lack transparency.²⁹

²⁸ *Id.* at 101. *Cf.* the hung jury in the price fixing trial of Gary Swanson. See Robert H. Bunzel & Howard Miller, *Defending "The Last Man Standing": Trench Lessons from the 2008 Criminal Antitrust Trial United States v. Swanson*, ANTITRUST SOURCE, June 2008, http://www.bztm.com/pdf/Last_Man_Stand-ing.pdf. Compare also the high profile failure in the single cartel trial held in the United Kingdom to date. See David Teather, *BA Price-Fixing Trial Collapses*, GUARDIAN, May 10, 2010; Andrew Hill, *BA Drama Has the Worst Possible Ending for the OFT*, FIN. TIMES, May 11, 2010; Julian Joshua, *D.O.A.: Can the U.K. Cartel Offence be Resurrected?*, in CRIMINALISING CARTELS, *supra* note 3, at ch. 6.

²⁹ See generally Warren Grimes, *Transparency in Federal Antitrust Enforcement*, 51 BUFF. L. REV. 937 (2007). *Cf.* Hammond, *The U.S. Model*, *supra* note 22, at 2 ("The Division has a tradition of maximizing transparency and predictability in its cartel enforcement program. Examples of this include: transparent standards for opening criminal antitrust investigations; transparent standards for deciding whether to file criminal antitrust charges; transparent prosecutorial priorities; transparent application of the Division's Corporate Leniency Policy; transparent policies relating to the negotiation of plea agreements; and transparent policies on the application of the antitrust Sentencing Guidelines.").

It appears that the proportion of individuals not prosecuted despite the DOJ's having evidence of their involvement in cartel conduct is significant:

It is obvious that each of firms [sic] convicted had at least one and usually several managers responsible for operating the cartel. Yet it is clear that the Division does not indict all guilty individual price fixers in a company convicted for price-fixing. Moreover, in a large proportion of cases, no individuals are charged. To some extent, in order to conserve prosecutorial resources, it is impractical to charge all the underlings involved in a conspiracy; from the point of view of general deterrence, charging the leaders may suffice. However, it is evident that the Division does not indict all the leaders either.³⁰

In the period 1990–2007, the DOJ secured guilty pleas from companies involved in fifty-three international cartels, but in forty-seven percent of those cartels, no individuals were indicted.³¹ The DOJ's published statistics for the period 2000–09 also suggest that a high proportion of individuals are not being charged. For criminal cases filed over this period, the proportion of individuals charged to corporations charged was, on average (across the period), 205%, i.e., a ratio of approximately 2:1.³² In one of the most far-reaching global cartel cases, as of November 2010, the U.S. DOJ had charged nineteen airlines (all of which had pleaded guilty) and had orchestrated the impo-

³⁰ Connor, *supra* note 16, at 35.

³¹ Connor, *supra* note 3, at 112 n.137.

³² DOJ, Antitrust Div., Workload Statistics for FY 1999–2009, at 4 (March 2010), available at <http://www.justice.gov/atr/public/workstats.pdf>. The ratio was much lower in the period 1981–97; in most years less than one individual per corporation was charged. See Stephen Calkins, *Corporate Compliance and the Antitrust Agencies' Bi-Modal Penalties*, 60 LAW & CONTEMP. PROBS. 127, 140 (1997). Hammond concedes that in the mid-1990s it was typical for the DOJ "to prosecute only the single most culpable employee from each foreign company prosecuted." Hammond, *Evolution*, *supra* note 2, at 8. However, he asserts that "during the last decade, the Antitrust Division has routinely prosecuted multiple individuals from each corporate defendant, and over time, the Antitrust Division has tended to prosecute greater numbers of individuals from each corporate defendant." *Id.* at 8. If "multiple" is intended to imply more than two or three, then the first part of Hammond's assertion is misleading. The second part of his assertion (that "the Antitrust Division has tended to prosecute greater numbers of individuals from each corporate defendant") cannot be verified from the published DOJ statistics.

sition of U.S. \$1.7 billion in fines. Yet, to date, only seventeen executives have been charged.³³

These figures are difficult to reconcile with the U.S. DOJ policy on the desirability of prosecuting corporate officers in addition to corporations:

Prosecution of a corporation is not a substitute for the prosecution of criminally culpable individuals within or without the corporation. Because a corporation can act only through individuals, imposition of individual criminal liability may provide the strongest deterrent against future corporate wrongdoing. Only rarely should provable individual culpability not be pursued, particularly if it relates to high-level corporate officers, even in the face of an offer of a corporate guilty plea or some other disposition of the charges against the corporation.³⁴

The DOJ does not explain its decisions not to prosecute certain individuals.³⁵ There is no way to be confident that prosecutorial selection does not involve a tendency to select “soft targets” or to avoid prosecuting individuals perceived as likely to engage in prolonged

³³ See Press Release, U.S. DOJ, Former Executives from Two Japanese Airlines Indicted in Conspiracy to Fix Rates on Air Cargo Shipments (Nov. 16, 2010), available at http://www.justice.gov/atr/public/press_releases/2010/264218.pdf.

³⁴ U.S. DOJ, PRINCIPLES OF FEDERAL PROSECUTION OF BUSINESS ORGANIZATIONS, 9 U.S. Attorneys’ Manual ¶ 28.200B (Aug. 2008).

³⁵ Moreover, there are differences of opinion on the extent to which the DOJ has pursued senior corporate officers as opposed to junior employees as individual antitrust defendants. One study has reported that the majority of individual defendants convicted in antitrust cases during the period 1955–97 were directors, owners or other corporate officers. See Joseph Gallo, Kenneth Dau-Schmidt, Joseph Craycraft & Charles Parker, *Department of Justice Antitrust Enforcement, 1955–1997: An Empirical Study*, 17 REV. INDUS. ORG. 75, 104–06 (2000). Connor has stated that this finding is “still true today.” Connor, *supra* note 3, at 109 n.121. Cf. the view that the “U.S. Antitrust Division’s current enforcement policies under-deter because the Government, rather than sentencing senior executives, prosecutes the mid-level sales executives and marketing directors involved in price fixing, offers them short sentences in return for their guilty pleas, and appears altogether indifferent to whether corporations ultimately terminate or impose any disciplinary measures whatsoever on these individuals.” Tefft W. Smith, Comments for the Antitrust Modernization Commission Hearing on Criminal Antitrust Remedies (Nov. 3, 2005), cited in Ginsburg & Wright, *supra* note 16, at 19.

and expensive litigation.³⁶ It would be surprising if DOJ decision making was not influenced by such considerations given the demands of such litigation, the DOJ's poor track record at trial, and its finite resources.³⁷

In large part, the failure to prosecute individuals can be attributed to the DOJ's corporate leniency policy and its plea carve-out policy.³⁸ The impact of these policies emerges from Connor's analysis. In relation to the leniency policy, he explains:

The majority of all cartels prosecuted by the U.S. since 1993 contain a corporate amnesty recipient; in recent years the proportion is higher. Subject to an admission of guilt and complete cooperation with the Division's investigation, cartel managers who are employees of a successful amnesty applicant are granted immunity. Because the typical price-fixing cartel is comprised of roughly four firms, it follows that up to one-fourth of all guilty cartel managers are neither charged nor sentenced as a matter of policy.³⁹

The impact of the Amnesty Plus policy must also be considered:

among the guilty firms that are the second or third to apply for leniency, a significant share qualifies for Amnesty Plus, which also gives a pass to all of its guilty cartel managers (in this instance, managers of two cartels).⁴⁰

For the remaining firms that do not qualify for either type of amnesty, plea bargaining limits the number of managers that will be carved out

³⁶ Connor, *supra* note 16, at 25; Connor, *supra* note 3, at 101.

³⁷ See F. Joseph Warin, David P. Burns & John W.F. Chesley, *To Plead or Not to Plead? Reviewing a Decade of Criminal Antitrust Trials*, ANTITRUST SOURCE, July 2006, at 1, 2, http://www.americanbar.org/content/dam/aba/publishing/antitrust_source/Jul06_FullSource7_21.authcheckdam.pdf (reporting that for the period 1996–2005, the DOJ charged 367 defendants with antitrust offenses, of whom 307 pleaded guilty, 15 had their cases dismissed, and of the 45 that went to trial, 23 were not convicted (either acquitted or discharged after a mistrial)—a conviction rate of 49%). According to Connor, “it is doubtful that the Division has sufficient resources to prepare for and argue more than about five price fixing cases per year.” Connor, *supra* note 16, at 27.

³⁸ “Carve-out” is the term used to indicate that when a firm is offered partial leniency, some of the most culpable managers will still be subject to criminal indictments. For amnestied firms there are no carve-outs.

³⁹ Connor, *supra* note 3, at 112 (citations omitted).

⁴⁰ *Id.*

of the plea agreement and “with sufficient promises of cooperation in a prosecution, a deal may result in no carve outs.” As Connor points out:

Since the Vitamins prosecutions, the Division has suggested that its policy will be to carve out at least two or three officers, and that that number will increase over time. However, this goal seems to apply only to a couple of the ringleaders in selected high profile cases.⁴¹

In an analysis of a sample of 117 sentencing memorandums on non-amnestied firms culled from the Division Web site, Connor found that 54% of all corporate guilty pleas had zero carve-outs. For firms with carve-outs, the mean number was 2.2 executives, and there is no clear evidence of an upward trend over time.⁴²

Connor’s analysis indicates that the amnesty and plea bargain policies have a significant impact on the extent to which individual accountability is in fact sought after and achieved by the U.S. DOJ. However, the exact impact is impossible to judge. The DOJ does not release information about the number of amnesty applications it receives, the proportion it accepts, or the number and identities of individuals who receive derivative protection from a corporate application.

The DOJ has published guidelines that set out the considerations relevant to the negotiation of plea agreements.⁴³ However, as might be expected, a number of unwritten considerations are also influential in such negotiations.⁴⁴ In particular, there appears to be scope for corporate cartelists to agree to more employee carve-outs and higher employee penalties in return for reduced corporate fines.⁴⁵ A number of the speeches made by DOJ officials refer to the carve-out policy.⁴⁶

⁴¹ *Id.*

⁴² *Id.*

⁴³ The guidelines for entering into plea bargaining negotiations are found in U.S. DOJ, PRINCIPLES OF FEDERAL PROSECUTION, 9 U.S. Attorneys’ Manual, ¶ 27.420 (1997). These guidelines apply to all federal offenses.

⁴⁴ John M. Connor, *A Critique of Partial Leniency for Cartels by the U.S. Department of Justice* (Purdue Univ. Working Paper, 2008), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=977772.

⁴⁵ *Id.*

⁴⁶ Hammond, *Charting New Waters*, *supra* note 2; Hammond, *The U.S. Model*, *supra* note 22; Scott Hammond, Deputy Assistant Att’y Gen., U.S.

These speeches highlight the “opportunity for early cooperating companies to minimize the number of individual employees carved out of the non-prosecution provisions of a corporate plea agreement” and “the possibility of more favorable deals for those executives carved out of plea agreements entered into with early cooperating companies because these executives, like their employers, are in a position to offer valuable and timely cooperation.”⁴⁷ The scope for immunizing individual employees through corporate plea bargains is difficult to reconcile with U.S. DOJ policy:

Although special circumstances may mandate a different conclusion, prosecutors generally should not agree to a corporate guilty plea in exchange for non-prosecution or dismissal of charges against individual officers and employees . . . Prosecutors should rarely negotiate away individual criminal liability in a corporate plea.⁴⁸

The DOJ publishes only a small number of all plea agreements and sentencing memoranda relating to antitrust defendants.⁴⁹ These documents do not identify those individuals who have or have not been carved out or the basis on which the carve-out decisions were made.⁵⁰ The only explanation given in Division speeches about the basis for carve-out decisions is that individuals who may be carved

DOJ, Antitrust Div., *Measuring the Value of Second-In Cooperation in Corporate Plea Negotiations*, Presentation to the 54th Annual American Bar Association Section of Antitrust Law Spring Meeting (Mar. 29, 2006) [hereinafter Hammond, *Second-In Cooperation*]; Hammond, *Calculating the Costs and Benefits*, *supra* note 23.

⁴⁷ Hammond, *The U.S. Model*, *supra* note 22, at 10; Hammond, *Second-In Cooperation*, *supra* note 46.

⁴⁸ U.S. DEP’T OF JUSTICE, *supra* note 34.

⁴⁹ See Connor, *supra* note 16, at 25 n.78 (“In theory, one could visit the files of every District Court in which a cartel case had been conducted, examine their public files, and retrieve copies of all such memoranda. However, not only would this be prohibitively expensive, many courts do not retain paper copies at all because they lack the storage space. An assiduous search of the Division’s Web site turned up less than 130 published sentencing agreements dated from 1995 to the present . . . about one fourth of the agreements prepared and submitted to the courts during that period.”).

⁵⁰ Indeed, the DOJ guidelines strongly caution federal prosecutors against references in public filings and proceedings to “uncharged wrongdoers.” See U.S. DEP’T OF JUSTICE, *supra* note 34, ¶ 9-27.760.

out “can include culpable employees, employees who refuse to cooperate with the Division’s investigation and employees against whom the Division is still developing evidence.”⁵¹ The extent to which the negotiating company has input to DOJ assessments of employee culpability for the purposes of carve-out decisions, and the influence of any such input, are not publicly known.

IV. INDIVIDUAL ACCOUNTABILITY THROUGH INDIVIDUAL SANCTIONS

The DOJ’s sanction of choice for individual antitrust defendants is a jail sentence.⁵² However, a policy of individual accountability does not dictate that imprisonment be imposed automatically in all cases. Other sanctions may be appropriate and as effective, either in the alternative or in addition to a jail sentence. A banning or disqualification order is one such sanction.

The U.S. DOJ does not appear to use banning or disqualification orders as part of its armory for pursuing individuals for cartel violations despite there apparently being no legal or constitutional impediment to seeking such orders.⁵³ It has been suggested, for example, that as part of a negotiated plea agreement, prosecutors could “agree to allow individual defendants to reduce or avoid jail time, in return for debarring them from working for any publicly traded corporation or for a company in a particular industry if it is either located in or sells into the United States.”⁵⁴

⁵¹ Hammond, *Charting New Waters*, *supra* note 2, at 17. *See also* Hammond, *Second-In Cooperation*, *supra* note 46, at 9 (“Second-in companies that cooperate early in an investigation often have the advantage of being able to offer new and significant evidence through multiple employees. When this is the case, the Division will typically carve out only the highest-level culpable individuals as well as any employees who refuse to cooperate; mid- to lower-level employees who provide significant evidence furthering the investigation will be offered non-prosecution protection under the corporate plea agreement.”).

⁵² Fines are also imposed on individual cartel defendants, but only on a small proportion of such defendants and in relatively small amounts. *See* the figures cited in Connor, *supra* note 3, at 110.

⁵³ Ginsburg & Wright, *supra* note 16, at 38–39.

⁵⁴ *Id.* at 39.

The U.S. Sentencing Guidelines authorize the imposition of a condition of probation or supervised release prohibiting the defendant from engaging in a specified occupation, business, or profession or limiting the terms on which the defendant may do so.⁵⁵

Banning orders are regularly sought and obtained by the Federal Trade Commission from federal courts, banning individuals from specific activities (typically telemarketing) or requiring that they post a bond before engaging in such activity.⁵⁶ In addition, at least since the early 1980s, the U.S. Securities and Exchange Commission routinely has negotiated consent decrees barring a person accused of violating the securities laws from serving as an officer or director of a public company for a specified number of years.⁵⁷

Disqualification orders are available to competition authorities in a range of other jurisdictions, including the United Kingdom, Australia and Sweden.⁵⁸ In the United Kingdom, this sanction is yet to be used by the Office of Fair Trading in relation to cartel offenses, despite

⁵⁵ U.S. SENTENCING GUIDELINES MANUAL § 5F1.5(a) (2009). The statutory authorization for such “occupational restrictions” is found in the Comprehensive Crime Control Act, 18 U.S.C. § 3563(b)(5), § 3583(d) (1984). A sentence involving supervised release is available for antitrust offenses. See U.S. SENTENCING GUIDELINES MANUAL § 5B1.1(d) (2009); see also para. 3 of the accompanying commentary.

⁵⁶ Calkins, *supra* note 32, at 133–34.

⁵⁷ Ginsburg & Wright, *supra* note 16, at 38. The SEC has had express statutory authority for seeking such orders since 1990.

⁵⁸ There may be other jurisdictions in which disqualification flows from general company law for directors convicted of an offense. For example, section 160 of the Irish Companies Act 1990 (Act No. 33/1990) (Ir.) provides for the automatic disqualification of a company director for a period of five years on conviction on indictment for an offense in relation to a company or an offense involving fraud or dishonesty. This provision has been applied by the courts where directors have been convicted of competition law offenses, as noted in Int’l Competition Network, Trends and Developments in Cartel Enforcement, Presentation at 9th Annual Conference 59 (Apr. 29, 2010). There have been calls for the use of disqualification orders in Europe at the Community level. See, e.g., Mark Powell & Grant McKelvey, *Director Disqualification as a Complement to EU Antitrust Fines: Towards a More Balanced Sanctions Policy*, CPI ANTITRUST J., Dec. 2010, at 1.

clear signals of its intent to do so.⁵⁹ In Australia, such orders have been available since January 2007,⁶⁰ although there is yet to be a case in which they have been applied. In 2008, the Swedish Competition Authority obtained the power to petition for what is called a “trading prohibition,” barring an individual who has participated in a cartel from managing any business for a specified time.⁶¹ It is not known whether or not the power has been used in a cartel case.

The traditional rationale for banning or disqualification orders is protective.⁶² The known levels of recidivism among antitrust defendants (even in the United States)⁶³ suggest that there is a good case for the use of disqualification orders to protect the market, competitors, and consumers from repeat antitrust offenders. However, such orders also have deterrent and punitive effects.⁶⁴ In considering the applica-

⁵⁹ See Michael Peel, *Business Urged Not to Resist Crackdown on Price Fixing*, FIN. TIMES, June 23, 2008; Office of Fair Trading, Competition Disqualification Orders: Proposed Changes to the O.F.T.’s Guidance (Consultation Paper, OFT1111con, Aug. 2009).

⁶⁰ See Trade Practices Act, 1974, § 86E (Cth.).

⁶¹ Competition Act (2008:579) (Swed.) ch. 3, art. 4; Trading Prohibition Act (1986:436) (Swed.) art. 8b. See also SWEDISH COMPETITION AUTHORITY, THE GENERAL GUIDELINES OF THE SWEDISH COMPETITION AUTHORITY ON TRADING PROHIBITION IN THE EVENT OF INFRINGEMENTS OF THE RULES ON COMPETITION (KKVFS 2010:1, Mar. 17, 2010).

⁶² This is reflected in the U.S. Sentencing Guidelines, which authorize the imposition of occupational restrictions only if the court determines that “imposition of such a restriction is reasonably necessary to protect the public because there is reason to believe that, absent such restriction, the defendant will continue to engage in unlawful conduct similar to that for which the defendant was convicted.” See U.S. SENTENCING GUIDELINES MANUAL § 5F1.5(a)(2) (2009). The commentary to the Guidelines further states that the condition “should only be used as reasonably necessary to protect the public. It should not be used as a means of punishing the convicted person,” citing S. REP. NO. 98-225, REPORT ON THE COMPREHENSIVE CRIME CONTROL ACT (1983).

⁶³ See John M. Connor & C. Gustav Helmers, *Statistics on Modern Private International Cartels, 1990–2005* (Am. Antitrust Inst. Working Paper No. 07-01, 2007), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1103610 (reporting figures on recidivism).

⁶⁴ As recognized, for example, in TRADE PRACTICES ACT REVIEW COMMITTEE, REVIEW OF THE TRADE PRACTICES ACT 1974 (CTH) 161, [10.2.2] (Jan. 2003);

tion of such orders for antitrust offenders, it is necessary therefore to consider the impact on other sanctions in the sentencing mix. Disqualification from corporate management for a substantial period of time, when combined with a fine and a jail sentence, for example, could represent excessive punishment or overdeterrence. It could also have negative side effects on the industry and the market.

In addition, the prospects of evasion of a disqualification or banning order require attention. Disqualification from managing a corporation, for example, may not prevent a defendant from acting as an independent advisor or consultant or from continuing to exert influence over corporate policy and decisions from the position of shareholder. Evasive tactics of this kind can be anticipated to some extent by the formulation of the triggers for breach of the order as broadly as possible.⁶⁵

V. INDIVIDUAL ACCOUNTABILITY THROUGH CORPORATE SANCTIONS

Corporate criminal liability and corporate sanctions are imposed for cartel conduct in the United States partly because of the limited extent to which it is possible to impose individual criminal liability.⁶⁶ One purpose of corporate sanctions is to help induce corporations to impose individual accountability as a matter of internal control.⁶⁷

Internal discipline is a factor taken into account by the DOJ when deciding whether or not to prosecute corporations:

Among the factors prosecutors should consider and weigh are whether the corporation appropriately disciplined wrongdoers, once those employees are identified by the corporation as culpable for the misconduct. Employee discipline is a difficult task for many corporations because of the human element involved and sometimes because of the

Rich v. Austr. Sec. & Invs. Comm'n (2004) 220 C.L.R. 129, 148; OFFICE OF FAIR TRADING, THE DETERRENT EFFECT OF COMPETITION ENFORCEMENT BY THE OFT: DISCUSSION PAPER §§ 1.23, 5.117 (No. OFT 963, Nov. 2007).

⁶⁵ See, e.g., Corporations Act, 2001, § 206A(1) (Cth.).

⁶⁶ See BEATON-WELLS & FISSE, *supra* note 9, § 7.2.3.

⁶⁷ RICHARD A. POSNER, ANTITRUST LAW 271 (2d ed. 2001). On the management of post-offense inquiries and responses, see RICHARD S. GRUNER, CORPORATE CRIMINAL LIABILITY AND PREVENTION ch. 16 (2008).

seniority of the employees concerned. While corporations need to be fair to their employees, they must also be unequivocally committed, at all levels of the corporation, to the highest standards of legal and ethical behavior. Effective internal discipline can be a powerful deterrent against improper behavior by a corporation's employees. In evaluating a corporation's response to wrongdoing, prosecutors may evaluate the willingness of the corporation to discipline culpable employees of all ranks and the adequacy of the discipline imposed. The prosecutor should be satisfied that the corporation's focus is on the integrity and credibility of its remedial and disciplinary measures rather than on the protection of the wrongdoers.⁶⁸

Internal discipline is also important in the context of corporate sanctions in cases where, as outlined below, it is not possible or feasible to prosecute individuals for cartel conduct.

Price fixing and market sharing activities often involve numerous individuals and multiple events and transactions.⁶⁹ While the DOJ often targets individuals for criminal prosecution, the number proceeded against is limited (see section III above). There may be several reasons for this.

First, it is easier said than done to pinpoint which individuals within corporations should be held accountable.⁷⁰ This is not merely a function of size. It is also a reflection of the fact that organizations have "a well-developed capacity for obscuring internal accountability if confronted by outsiders."⁷¹ Thus, in the trial of Arthur Andersen LLP in 2002 for obstruction of justice, defense counsel exploited the difficulty of identifying who had acted with a corrupt intention.⁷² The

⁶⁸ U.S. DOJ, *supra* note 34. The Sentencing Guidelines make internal disciplinary action a relevant factor for assessing whether an organization has an effective compliance and ethics program. See U.S. SENTENCING GUIDELINES MANUAL § 8B2.1(b)(6) (2009).

⁶⁹ See, for example, the cases discussed in JOHN M. CONNOR, *GLOBAL PRICE FIXING* chs. 5, 8 & 11 (2d ed. 2007).

⁷⁰ OECD, *CARTELS: SANCTIONS AGAINST INDIVIDUALS* 100 (DAF/COMP (2004)39, 2004); GRUNER, *supra* note 67, § 1.07.

⁷¹ FISSE & BRAITHWAITE, *supra* note 1, at 38.

⁷² See Stacey Neumann Vu, *Corporate Criminal Liability: Corporate Verdicts and the Problem of Locating a Guilty Agent*, 104 COLUM. L. REV. 459, 462 (2004).

jury responded by asking the trial judge for direction on this question: "If each of us believes that one Andersen agent acted knowingly and with corrupt intent, is it [necessary] for all of us to believe it was the same agent? Can one believe it was Agent A, another believe it was Agent B, and another believe it was Agent C?"⁷³ In a situation of that kind, it is impossible to prove individual criminal liability beyond a reasonable doubt. However, corporate criminal liability can be established if it can be proven that one or other of the employees or agents acted with the state of mind required for the offense charged.

Second, the individuals responsible for an offense in the past may not necessarily be in a position to take steps to prevent a similar offense from occurring in the future.⁷⁴ Deterrence of unlawful behavior by organizations depends "not merely upon threat-induced abstinence from illegality but upon threat-induced catalysis of preventive controls."⁷⁵

Third, multinational corporate operations can impede attempts to bring individual offenders to justice: an officer of a multinational company may authorize or instigate a cartel offense without setting foot in the United States or, after committing a cartel offense in the United States on behalf of a corporation, may be transferred overseas to a related corporation.⁷⁶ In many situations, extradition may be pos-

⁷³ *Id.* (the trial judge ruled that a finding of guilt could be made in the situation put by the jury; the ruling was not challenged because the jury found that one employee had acted with a corrupt intent).

⁷⁴ FISSE & BRAITHWAITE, *supra* note 1, at 40 ("They may be moved elsewhere by the organization (perhaps to some corporate Siberia, such as secondment to a university) or deprived of the power or status necessary to mount a preventive campaign.").

⁷⁵ *Id.*

⁷⁶ *Id.* at 40–41. One example is the position of the senior executives primarily responsible for Qantas's involvement in air cargo price fixing. The meager yield of the DOJ enforcement action against individuals was limited to one U.S. Qantas executive (Mr. Bruce McCaffrey). See *Ex-Qantas Freight Chief Pays Heavy Price for Cartel*, SYDNEY MORNING HERALD, May 4, 2009, at 24. Senior Qantas executives in Australia were not subject to extradition to the United States because at that time there was no cartel offense in Australia; cartel offenses came into effect on July 24, 2009.

sible but only with attendant delay, cost, and additional enforcement effort.⁷⁷ Corporate criminal liability provides a convenient alternative, one aim being to exert pressure on the local corporation to take steps within the corporate group to stimulate individual accountability.⁷⁸

Situations arise where some or even all of the individuals who were implicated in cartel conduct cannot be held to account internally because they are no longer employed by the corporation or engaged in any other capacity. Nonetheless, the prospect of using private justice systems as an additional avenue for achieving individual accountability will often be open. However, as discussed in sections V.A and V.B below, the mechanisms now available in the United States for using corporate sanctions to achieve individual accountability have significant limitations.

A. Limitations of corporate fines as a means of achieving individual accountability

The fine is the predominant type of sanction used against corporations. The DOJ has secured sizeable fines against corporate cartel offenders, especially over the past fifteen years.⁷⁹

Fines against corporations serve to bring about individual accountability in two main ways. First, a fine is intended to trigger internal disciplinary action against the managers and other employees accountable for the conduct that lead to the fine.⁸⁰ Second, the taking of internal disciplinary action is a factor to be taken into account when determining the amount of a fine; under 18 U.S.C. § 3572(a)(8) a court must consider “any measure taken by the organization to discipline any officer, director, employee, or agent of the organization responsible for the offense.”⁸¹ However, these mechanisms may or may not work.

⁷⁷ See, e.g., Julian Joshua, *A Long-Distance Runner: Ian Norris’s Protracted Fight against Extradition Continues Unabated*, COMPETITION L. INSIGHT, June 30, 2009, at 14.

⁷⁸ See Sigmund Timberg, *The Corporation as a Technique of International Administration*, 19 U. CHI. L. REV. 739 (1952).

⁷⁹ Hammond, *Evolution*, *supra* note 2, at 5–6.

⁸⁰ POSNER, *supra* note 67, at 271.

⁸¹ See also GRUNER, *supra* note 67, § 11.02(11)(i).

Fines, or the incentive of a reduced fine, do not ensure that internal disciplinary action is taken against the individuals who participated in or contributed to the cartel conduct for which the fines are imposed.⁸² The cheapest and least embarrassing response may be simply to write a check in payment of the fine and continue with business as usual.⁸³ Corporations have incentives not to undertake extensive disciplinary action. In particular, a disciplinary program may be disruptive, embarrassing for those exercising managerial control, encouraging for whistleblowers, or hazardous in civil litigation against the corporation or its officers.

The U.S. heavy electrical equipment price fixing conspiracies of 1959–61⁸⁴ illustrate how internal discipline may or may not flow from corporate liability. Two of the main corporate participants in the conspiracies were General Electric Co. and Westinghouse Corp. Both were convicted and fined. The internal disciplinary reaction of General Electric was severe. All persons implicated in violations of corporate antitrust policy were disciplined by substantial demotion long before any of them were convicted. Those who were later convicted were asked to resign because “the Board of Directors determined that the damaging and relentless publicity attendant on their sentencing rendered it both in their interest and the company’s that they pursue their careers elsewhere.”⁸⁵ By contrast, Westinghouse decided against disciplinary action, partly on the basis of a watered-down version of the defense that failed at Nuremberg: “[A]nybody involved was acting not for personal gain, but in what he thought was the best interests of the company.”⁸⁶

⁸² FISSE & BRAITHWAITE, *supra* note 1, at 8–12; John Coffee, *Corporate Crime and Punishment: A Non-Chicago View of the Economics of Criminal Sanction*, 17 AM. CRIM. L. REV. 419, 458–61 (1980).

⁸³ See Dan Levine, *Antitrust Convictions Don’t Mean End of Job for Some Executives*, THE RECORDER, Apr. 12, 2010.

⁸⁴ See CLARENCE C. WALTON & FREDERICK W. CLEVELAND, CORPORATIONS ON TRIAL: THE ELECTRIC CASES 103 (1964); JOHN HERLING, THE GREAT PRICE CONSPIRACY 311 (1962).

⁸⁵ *Administered Prices, Pts. 27 and 28: Hearings before the Subcommittee on Antitrust and Monopoly of the S. Comm. on the Judiciary*, 87th Cong. 17671–72 (1961).

⁸⁶ FISSE & BRAITHWAITE, *supra* note 1, at 192.

It might possibly be contended that things have since changed as a result of higher corporate fines and the explicit requirement under 18 U.S.C. § 3572(a)(8) that consideration be given to the factor of internal disciplinary action. However, that seems unlikely and, to be persuasive, any such claim would need to be supported empirically. Case studies of corporations subjected to heavy fines could be instructive in this respect. Insights might also emerge from a comprehensive review of the reasons given for sentences in corporate cases to examine the extent to which 18 U.S.C. § 3572(a)(8) has been relevant in practice and, when it has been relevant, the extent to which fines have been reduced as a result.⁸⁷

Some would contend that “optimal” fines are sufficient to achieve deterrence because they give a strong financial incentive to comply with the law and that, if such an incentive is given, it is immaterial whether or not corporate offenders happen to respond to a fine by taking internal disciplinary action.⁸⁸ However, such a contention is unpersuasive. The U.S. Code provisions relating to fines explicitly require that consideration be given to the factor of internal discipline when assessing a fine.⁸⁹ Furthermore, in terms of policy, there are several fundamental responses to the contention that “optimal” fines are sufficient to achieve deterrence.

First, it is cavalier to rely on financial incentives in lieu of individual accountability as a mode of social control. Individual accountability is highly valued as a mode of social control largely because experience has demonstrated that it is likely to be more effective than merely offering incentives.⁹⁰ Individual accountability does not work merely by asking someone to make a rational choice to avoid financial loss but confronts the particular wrongdoer with his or her wrongdoing and impresses upon the wrongdoer that such conduct is wrong

⁸⁷ One starting point is the statement in GRUNER, *supra* note 67, § 11.02[11](i): “Clearly, extensive discipline and reforms following an offense will justify a corporate fine in the lower portion of a recommended fine range.”

⁸⁸ See, e.g., ELZINGA & BREIT, *supra* note 20, ch. 7.

⁸⁹ 18 U.S.C. § 3572(a)(8) (2010).

⁹⁰ FISSE & BRAITHWAITE, *supra* note 1, ch. 3.

and not tolerated within the social group in which accountability is upheld. As Stucke has illuminated, managers and employees may not be rational actors but may often engage in cartel conduct as a result of behavioral or situational factors that include unclear standards and pressure to perform.⁹¹ Trying to counter the influence of such factors by means of financial disincentives alone is unlikely to succeed. Compliance is more likely to occur if individual accountability is embedded and upheld as a core value in the working environment. That is reflected by the relevance of individual accountability under the Sentencing Guidelines provisions on an effective compliance and ethics program⁹² and generally in antitrust compliance programs.

Second, it is impossible to make the calculations required to assess “optimal” fines against corporations. Assessments of the risk of conviction and the likely amount of gain from wrongdoing require data and reliable data is generally not available.⁹³ By contrast, imposing individual accountability is a tried and trusted means of social control that does not require calculation of the risk of conviction or the likely amount of gain from an offense. This feature of individual accountability has been explained by Fisse and Braithwaite:

A more fundamental way of managing the uncertainty surrounding the impact of sanctions against corporations and their personnel is apparent in the importance traditionally attached to the concept of responsibility. . . . The emphasis placed on responsibility reflects a “rules of action” approach that has been adopted to avoid the need to make difficult and unreliable probabilistic calculations about the effects of financial incentives.

Two rules of action are involved. First, we should disapprove of certain types of actions (such as crimes) by recognising them as wrong. Second, we should hold responsible those who are blameworthy as wrongdoers. In legal as well as everyday decision making, these rules of action may be more workable than case-by-case calculation of the uncertain range of costs and benefits that may attach to any given act. Simple rules of action have lower information and transaction costs, especially in domains where uncertainty or inestimability of benefit–cost are so great as fre-

⁹¹ Stucke, *supra* note 3.

⁹² U.S. SENTENCING GUIDELINES MANUAL § 8B2.1(b)(6) (2009).

⁹³ John Byrne & Steven M. Hoffman, *Efficient Corporate Harm: A Chicago Metaphysic*, in *CORRIGIBLE CORPORATIONS AND UNRULY LAW* 101 (Brent Fisse & Peter A. French eds., 1985).

quently to cause major estimation errors. Simple rule-following may even result in better average returns in terms of benefit–cost. A little knowledge of benefit–cost under conditions of great uncertainty is a dangerous thing. We might well make better judgements by assuming that any knowledge we have is likely to be misleading if we accept it in isolation from all the other knowledge we lack. Put another way, we seek an alternative decision making approach which is more forgiving of uncertainty about what we know. Further, we might take the view that courts are institutions that are well equipped to follow rules of action about assessing responsibility. But we might also consider them poorly equipped to measure the financial benefits and costs of particular decisions made by others, or indeed by themselves.⁹⁴

The upshot is that corporate fines are not geared to delivering individual accountability. If individual accountability is to be delivered effectively by means of a corporate sanction, the sanction needs to be designed specifically to achieve that outcome. This brings us to the possible use of corporate probation as a vehicle for requiring internal disciplinary action.

B. Corporate probation as a means of achieving individual accountability

It is possible under 18 U.S.C. §3563(b)(22) for internal disciplinary action to be made a condition of corporate probation.⁹⁵ This possibility was envisaged by Coffee in 1981.⁹⁶ He took as his starting point the Gulf Oil Corporation report on bribery committed in the United States and abroad by its personnel during the 1970s and earlier. The report was prepared by an outside counsel, John J. McCloy. The revelations in the McCloy study were sufficiently interesting to be picked up by the press and for the report to be republished as a paperback best-seller.⁹⁷ It brought about substantial internal reforms at Gulf and hastened the

⁹⁴ FISSE & BRAITHWAITE, *supra* note 1, at 92.

⁹⁵ For a review of corporate probation, see AMERICAN BAR ASSOCIATION, CRIMINAL ANTITRUST LITIGATION HANDBOOK 473–75 (2d ed. 2006).

⁹⁶ John C. Coffee Jr., “No Soul to Damn: No Body to Kick”: An Unscandalized Inquiry into the Problem of Corporate Punishment, 79 MICH. L. REV. 386, 430–32 (1981).

⁹⁷ JOHN J. MCCLOY, NATHAN W. PEARSON & BEVERLEY MATTHEWS, THE GREAT OIL SPILL: THE INSIDE REPORT, GULF OIL’S BRIBERY AND POLITICAL CHICANERY (1976).

resignation of some senior officials named in it. Coffee was thus prompted to ask whether McCloy-style reports should become a routine part of corporate crime enforcement. One mechanism favored by Coffee was placing corporate defendants on probation, subject to a condition that they employ outside counsel to prepare a report that names key participants and outlines in readable form their *modus operandi*.

There appear to be various reasons why this possible use of corporate probation has not been influential in the United States, in antitrust cases or elsewhere. Deferred prosecution agreements, a form of corporate probation, have been used by the DOJ in some contexts as a means of leveraging internal disciplinary action⁹⁸ but not in cartel cases.⁹⁹

First, internal disciplinary conditions of probation are not authorized explicitly in either the U.S. Code provisions on probation or the U.S. Sentencing Guidelines relating to organizational defendants. The Sentencing Guidelines focus on compliance programs rather than addressing the fundamental issue of individual accountability.¹⁰⁰

Second, the provisions relating to probation in the U.S. Code and the Sentencing Guidelines do not set out a statutory scheme of the kind needed to make the approach work in practice. The traditional model of probation is a far cry from a sanction dedicated to achieving internal accountability within a corporation.¹⁰¹ This is evident from the detailed Accountability Model proposed by Fisse and Braithwaite for

⁹⁸ See, e.g., Sue Reisinger, *Bristol-Myers Takes Its Medicine*, CORP. COUNSEL, Sept. 20, 2007; Press Release, Dep't of Justice, UBS Enters into Deferred Prosecution Agreement (Feb. 18, 2009), available at <http://www.usdoj.gov/opalpr/2009/February/09-tax-136.html>. Deferred prosecution agreements have been the subject of some criticism. See, e.g., Peter Spivack & Sujit Raman, *Regulating the "New Regulators": Current Trends in Deferred Prosecution Agreements*, 45 AM. L. REV. 159 (2008).

⁹⁹ The assumption appears to be that it is sufficient to prosecute individuals who come to light as a result of leniency applications. Such an assumption is questionable because it takes insufficient account of cases in which individuals implicated in cartel conduct cannot be identified or prosecuted.

¹⁰⁰ See U.S. SENTENCING GUIDELINES MANUAL § 8B2.1(b)(6) (2009).

¹⁰¹ This is not to deny that the Sentencing Guidelines make a number of useful adaptations for dealing with organizational defendants. See U.S. SENTENCING GUIDELINES MANUAL ch. 8 (2009).

achieving individual accountability for corporate crime.¹⁰² That model is designed on the basis of twenty desiderata geared to practical implementation of the principle that all who are responsible should be held responsible. One desideratum is that a strategy for allocating individual responsibility should remedy the scapegoating that has been endemic when individual accountability for corporate wrongdoing has been pursued.¹⁰³ Another is that a strategy for sanctioning the responsible should minimize spillovers of the effects of sanctions onto actors who bear no responsibility for the wrongdoing.¹⁰⁴ These and other desiderata are important but are not reflected in the U.S. Code provisions on corporate probation or in the Sentencing Guidelines.

Third, concern has been expressed about the risk of excessive intervention by the courts in the internal affairs of corporations.¹⁰⁵ That concern is unlikely to be dispelled unless a clearly defined and suitably delimited model of enforced self-regulation is articulated.¹⁰⁶

Fourth, it is often claimed that courts and prosecutors lack the experience or skills required to supervise corporate internal con-

¹⁰² FISSE & BRAITHWAITE, *supra* note 1, at chs. 5–6. A similar approach has been adopted by the Canadian Bureau of Competition, as reflected in its Prohibition Order in *The Queen v. Cascades Fine Papers Group Inc.* ¶ 3(a)(iii) (Court of Ontario, Superior Court of Justice, Jan. 9, 2006), available at [http://www.competitionbureau.gc.ca/eic/site/cbbc.nsf/vwapj/Prohibition%20Order.pdf/\\$file/Prohibition%20Order.pdf](http://www.competitionbureau.gc.ca/eic/site/cbbc.nsf/vwapj/Prohibition%20Order.pdf/$file/Prohibition%20Order.pdf). The Australian Law Reform Commission has recommended the introduction of internal discipline orders as a sentence against corporations convicted of an offence under Commonwealth law. AUSTRALIAN LAW REFORM COMMISSION, *SAME CRIME, SAME TIME: SENTENCING OF FEDERAL OFFENDERS* §§ 30.14–30.16 (Report No. 103, 2006). However, that recommendation is yet to be adopted by the Australian government.

¹⁰³ FISSE & BRAITHWAITE, *supra* note 1, at 136 (desideratum 7 discussed at 38–41, 55–57, 96–97, 129).

¹⁰⁴ FISSE & BRAITHWAITE, *supra* note 1, at 136 (desideratum 8 discussed at 49–50, 64).

¹⁰⁵ See, e.g., Christopher A. Wray, *Corporate Probation under the New Organizational Sentencing Guidelines*, 101 YALE L.J. 2017, 2035–37 (1992).

¹⁰⁶ FISSE & BRAITHWAITE, *supra* note 1, at 88, 130, 197–98. On enforced self-regulation, see John Braithwaite, *Enforced Self-Regulation: A New Strategy for Corporate Crime Control*, 80 MICH. L. REV. 1466 (1982).

trols.¹⁰⁷ Although this claim is questionable, it has the force of being a political mantra.

Fifth, insistence on internal disciplinary action is a severe type of sanction whereas probation tends to be perceived as a “soft” option notwithstanding its formally punitive character in the United States. This partly explains the proposal made elsewhere that punitive injunctions be introduced as a sanction against corporations.¹⁰⁸ The punitive injunction is a punitive variant of the mandatory civil injunction or corporate probationary order. It is intended to serve as a sanction against corporations for serious offenses without going to the extremes of disqualification from conducting business or dissolution. The punitive element requires a corporate offender to act in a demanding way that may go beyond the limits of remedial action. The demanding response required is nonfinancial in terms of its direct impact within a corporation. The punitive effect sought is a positive regulatory outcome. The main kinds of positive regulatory outcomes sought in the context of cartel conduct are: (1) the imposition of internal accountability for the cartel offense; (2) the revision of organizational precautions against future possible cartel offenses or contraventions; and (3) the facilitation of civil redress to the victims of a cartel offense or contravention.

Sixth, using probation as a means of achieving internal accountability would require additional administration by courts and prosecutors. The contrast is with fines, which are relatively easy to impose.¹⁰⁹

Seventh, plea bargaining and corporate plea agreements have a propensity to result in individuals’ being shielded from enforcement action. This danger has been highlighted by Gruner:

¹⁰⁷ See e.g., Levine, *supra* note 83 (quoting Gary Spratling, former Deputy Assistant Attorney General, U.S. Department of Justice, as saying: “Prosecutors may be good at investigating crimes, but they haven’t gone to business school and are not corporate governance experts”).

¹⁰⁸ See Brent Fisse, *Cartel Offences and Non-Monetary Punishment—The Punitive Injunction as a Sanction against Corporations*, in *CRIMINALISING CARTELS*, *supra* note 3, at ch. 14.

¹⁰⁹ Administration after sentence seems to be limited to ensuring that a fine or fine installments are paid and dealing with cases in which a defendant becomes insolvent before a fine or an installment of a fine is paid.

Mandated offense studies and disclosures are particularly important means to counteract “an unfortunate plea bargaining dynamic” that tends to conceal the substance of corporate offenses. Often, when a firm and its top corporate officials are both prosecuted, the firm will agree to plead guilty in exchange for an agreement by prosecutors to drop charges against the individual officers. The corporation’s plea may reveal little about the circumstances of its offense or about the identity of those persons within the corporate organization who were responsible for the offense.¹¹⁰

Gruner expressed the view that sentencing courts could use probation sentences as a vehicle for ensuring that the plea bargaining process does not block out public understanding of the culpability of individuals who are responsible for corporate offenses.¹¹¹

In the context of cartel conduct, plea agreements often carve out named individuals but, as observed in section III of this article, the carve-outs appear highly selective and do not expose the nature and extent of implication of other managers and employees. This approach gives the DOJ a bargaining chip that seems to be valued in plea agreement negotiations.

Finally, the conduct resulting in the commission of an offense in the United States by a local U.S. corporation may have stemmed from instructions by the management of an overseas affiliated corporation.¹¹² In such a case the overseas affiliate may be subject to jurisdiction in the United States and prosecuted.¹¹³ However, where the local

¹¹⁰ GRUNER, *supra* note 67, § 12.03[3]. See also John C. Coffee, Richard S. Gruner & Christopher D. Stone, *Standards for Organizational Probation: A Proposal to the United States Sentencing Commission*, 10 WHITTIER L. REV. 77, 85 (1988).

¹¹¹ GRUNER, *supra* note 67, § 12.03[3] (“Sentencing courts can avoid this result by accepting corporate plea bargains, but ensuring through probation sentences that the circumstances of an offense are thoroughly investigated and revealed.”).

¹¹² One example is Qantas’s implication in air cargo price fixing. See Sentencing Memorandum, *United States v. McCaffery*, No. 1:08-cr-00135 JDB (D.D.C. 2008). The role of senior Qantas executives based in Australia is canvassed in *ACCC v. Qantas Airways Ltd.*, NSD 1694 2008 Federal Court of Australia, Joint Submission, Statements of Agreed Facts and Admissions pursuant to § 191 of the Evidence Act 1995.

¹¹³ See, e.g., *United States v. Nippon Paper Indus. Co. (Nippon II)*, 109 F.3d 1, 4 (1st Cir. 1997).

corporation is prosecuted but the overseas affiliate is not, a U.S. court will not have the power to require the overseas affiliate to take internal disciplinary action.

A modest proposal would be to put some focus on individual accountability in plea agreements, as by reserving the right to seek internal disciplinary action as a condition of probation unless the corporate defendant has filed with the DOJ an internal disciplinary report that is acceptable to the DOJ. The present plea agreement process is less than satisfactory in this regard. First, as previously observed, not all plea agreements are available on the DOJ Web site, one example being the plea agreement in the case of LG Display Co. and LG Display America, Inc.,¹¹⁴ in which a fine of \$400 million was agreed to. Second, plea agreements often do not say anything about the application of 18 U.S.C. § 3572(a)(8) (requiring a court to consider “any measure taken by the organization to discipline any officer, director, employee, or agent of the organization responsible for the offense”).¹¹⁵ Third, if a plea agreement recites that probation will not be recommended to the court by reason of the defendant’s “substantial assistance”¹¹⁶ or “improvements to its compliance program,”¹¹⁷ it is unclear whether or not the defendant has undertaken internal disciplinary action or, if it has, what that action has been.

¹¹⁴ Plea Agreement, *United States v. LG Display Co. Ltd.*, No. CR-08-0803 VRW (N.D. Cal. 2008) (plea agreement unavailable to the public on the PACER database).

¹¹⁵ 18 U.S.C. § 3572(a)(8) is not mentioned in any of the sixteen plea agreements available on the DOJ Web site for 2009 and 2010. *See* U.S. DOJ, Antitrust Division, *Sherman Act Violations Yielding a Corporate Fine of \$10 Million or More* (2010), available at <http://www.justice.gov/atr/public/criminal/sherman10.pdf>.

¹¹⁶ *See, e.g.*, Plea Agreement at 7, *United States v. Japan Airlines Int’l Co.*, No. 08-00106 JBD (D.D.C. May 7, 2008); Plea Agreement at 8, *United States v. Qantas Airways Ltd.*, No. 07-00322 JDB (D.D.C. Jan. 14, 2008).

¹¹⁷ *See* Plea Agreement at 9, *United States v. SAS Cargo Group*, No. 08-cr-00182 JDB (D.D.C. Jul. 21, 2008).

VI. CONCLUSION

The extent of individual accountability for cartel conduct in the United States, as elsewhere, may be more limited than some might have one believe. The chances are that individuals responsible for cartel offenses will not be prosecuted and that corporate fines will not result in internal disciplinary action being taken against them. Yet few would disagree with the principle that all who are responsible for serious cartel conduct should be held accountable.

Finding workable ways of imposing individual accountability on the large number of individuals typically implicated in cartel conduct remains a formidable challenge around the world. Headway will be made on this issue, not by imagining that the United States has solved the problem, but by coming more fully to grips with it.

The next step that needs to be taken is to conduct an empirical inquiry into the issues raised by the discussion above. That inquiry would require a comprehensive review of DOJ and court records, interviews with DOJ prosecutors, surveys of and interviews with previously prosecuted companies, interviews with previously prosecuted individuals, interviews with corporations that have been fined pursuant to plea agreements, and interviews with judges and the U.S. Sentencing Commission.¹¹⁸

The main questions that require investigation are:

- the approximate number of individuals who would have been liable but were not prosecuted by virtue of having obtained automatic derivative immunity under a corporate leniency agreement;
- the approximate number of individuals who would have been liable but were not prosecuted in accordance with a term negotiated as a part of a corporate plea agreement;
- the number of individuals carved out from corporate leniency agreements and the reasons why they were carved out;

¹¹⁸ Empirical studies of actual impacts are all too rare. See, e.g., ANDREW HOPKINS, *THE IMPACT OF PROSECUTIONS UNDER THE TRADE PRACTICES ACT* (1978); Lewis D. Solomon & Nancy Stein Kowak, *Managerial Restructuring: Prospects for a New Regulatory Tool*, 56 NOTRE DAME L. REV. 120 (1980); BRENT FISSE & JOHN BRAITHWAITE, *THE IMPACT OF PUBLICITY ON CORPORATE OFFENDERS* (1983).

- the extent to which corporations would be disincentivized from applying for corporate leniency if derivative leniency for individual employees was more limited or if the proportion of carve-outs was greater;
- relatedly, the extent to which reduced derivative leniency and increased carve-outs would generate greater use of the individual leniency policy;
- the extent to which corporations would be disincentivized from applying for corporate leniency if internal disciplinary action was made a condition of leniency;
- the extent to which corporations voluntarily take internal disciplinary action against individuals involved in cartel conduct for which the corporation (and/or the individuals) have been convicted;
- the extent to which internal disciplinary action is made a condition of corporate plea agreements;
- the extent to which judges request information about carve-outs or internal disciplinary action in deciding whether or not to accept a corporate plea agreement;
- the extent to which deferred prosecution agreements have been considered for use in the context of anticartel enforcement and the justification for adopting a different approach.

To conclude, further empirical investigation is required in order to test fully the extent to which the DOJ's approach to anticartel enforcement achieves individual accountability. Such an investigation is warranted with regard to the influence of the U.S. model around the world and the strength of advocacy by the U.S. authorities as to its merits.

*P*roblems with prison in international cartel cases

BY JOHN M. CONNOR*

Around 2000 the Antitrust Division announced a new policy that would substitute more frequent and more severe prison sentences for heavier corporate fines in criminal cartel cases. This article documents that the Division has imprisoned more cartel managers and obtained longer sentences, but failed to achieve other goals. The elimination of no-jail plea deals has not been realized; the number of imprisoned executives per firm has not risen appreciably; adoption of criminalization by other jurisdictions is glacial; almost half of those executives who go to trial are acquitted; extradition is rare and problematic; and the number of fugitives is growing. The optimal mix of corporate and individual sanctions for deterrence remains elusive.

There is a trend among countries to accept as self evident that individual sanctions, including imprisonment, can be a useful part of successful anti-cartel enforcement.¹

* Professor of Industrial Economics, Purdue University.

¹ ORGANISATION FOR ECONOMIC CO-OPERATION & DEVELOPMENT (OECD), POLICY ROUNDTABLES, CARTEL SANCTIONS AGAINST INDIVIDUALS, at *Overview* (2005), available at <http://www.oecd.org/dataoecd/61/46/34306028.pdf> (a debate held under the auspices of the OECD's Competition Committee in October 2003).

I. INTRODUCTION

Although an uncommon sentence elsewhere, the United States frequently and increasingly resorts to imprisonment of executives responsible for criminal price fixing. In the past decade, policy statements of the Antitrust Division of the U.S. Department of Justice (DOJ) assert that the most effective sanction available for destabilizing operational cartels is the threat of imprisonment of cartel managers.² Indeed, the DOJ at times seems to suggest that incarceration is the best tool in its arsenal of anticartel sanctions for deterring the formation of cartels in the first place.³ Since the early 1990s, the number of custodial sentences for both U.S. nationals and foreigners has increased faster than the number of corporate criminal fines for price fixing.⁴ The U.S. stance on the salutary effect of imprisonment for hard-core cartel cases has prodded other jurisdictions, notably the United Kingdom and Australia, to criminalize their antitrust penalties;⁵ the European Union (EU) and other jurisdictions are debating the issue of criminalization.⁶

In particular, it is the DOJ's position that it is the prospect of imprisonment that deters executives from joining price-fixing conspiracies more strongly than the corporation's leaders' fear of large

² See, e.g., Thomas O. Barnett, Former Assistant Att'y Gen., U.S. Dep't of Justice, Antitrust Div., *Seven Steps to Better Cartel Enforcement*, Presentation to the 11th Annual Competition Law & Policy Workshop (June 2, 2006), available at <http://www.justice.gov/atr/public/speeches/216453.htm>.

³ See *id.* at § II(2) ("Our investigators have found that nothing in our enforcement arsenal has as great an effect as the threat of substantial incarceration in a United States prison").

⁴ See U.S. Dep't of Justice, Antitrust Div., *Antitrust Division Workload Statistics FY 2000–2009*, available at <http://www.justice.gov/atr/public/workload-statistics.html> and *Antitrust Division Workload Statistics FY 1990–1999*, available at <http://www.justice.gov/atr/public/246419.pdf> (showing that the average number of prison sentences per corporation convicted rose steadily each semi-decade from 0.25 in 1990–1994 to 1.73 in 2005–2009).

⁵ See *id.* at *Adoption of Legislation and Agreements to Foster Cooperation*.

⁶ See generally Wouter P.J. Wils, *Is Criminalization of EU Competition Law the Answer?*, in *CRIMINALIZATION OF COMPETITION LAW ENFORCEMENT* 60 (Katalin J. Cseres, Maarten Pieter Schinkel & Floris O.W. Vogelaar eds., 2006).

monetary fines and civil penalties.⁷ Because the cartel managers and the company's leaders tend to overlap, this argument boils down to a trade-off between the individual's subjective evaluation of the utility of a given number of months of incarceration compared to the individual's utility of a given number of dollars of corporate penalties. Even if the conspiring executives are not top executives, the CEO or board of directors might rationally be willing to allocate millions of dollars of stockholders' cash to pay criminal fines rather than incur the negative publicity associated with their officers' incarceration.

There are problems with a heavy reliance on prison sentences as a means of deterring cartels, particularly international ones. First, it is more difficult to persuade managers of cartels who reside abroad to submit to U.S. jurisdiction. While indictments of foreign residents have increased, improvements in the ability of U.S. authorities to extradite individuals for price-fixing crimes have not kept pace.⁸ There are large numbers of indicted cartel managers who are fugitives residing abroad.⁹ Second, obtaining convictions of cartel managers who exercise their rights to a jury trial and who are within U.S. jurisdiction has proven challenging for the DOJ.¹⁰ Prosecutorial losses at trial are frequent. Third, even though the most effective mix of corporate and individual sanctions is not well understood, the relative importance of U.S. government fines on corporations has, as a matter of policy, dwindled. Are they complements or substitutes in practice, and if so, how strong is the relationship? If the number of incarcerated executives per firm increases from one to N , the marginal effect on deterrence of the N th person must decline, but by how much? Is the deterrent effect of imprisonment of the N th executive typically equivalent to \$1 million in corporate fines, to \$1

⁷ See, e.g., Barnett, *supra* note 2; Makan Delrahim, Former Deputy Assistant Att'y Gen., U.S. Dep't of Justice, Antitrust Div., Antitrust Enforcement Priorities and Efforts Towards International Cooperation at the U.S. Department of Justice, Remarks made in Taipei, Taiwan (Nov. 15, 2004), available at <http://www.justice.gov/atr/public/speeches/208479.htm>.

⁸ See Julian M. Joshua, Peter D. Camesasca & Youngjin Jung, *Extradition and Mutual Legal Assistance Treaties: Cartel Enforcement's Global Reach*, 75 ANTITRUST L.J. 353, 395 (2008).

⁹ See *id.* at 361.

¹⁰ See *id.* at 360 n.26.

billion, or some number in between? Fourth, the demonstration effect of imprisonment requires adequate publicity about prison sentences. It is possible, indeed, likely that as the number and length of antitrust prison sentences has increased and become more routine, the “shock and awe” effect has declined. To offset such a trend, the DOJ has promised ever tougher levels of incarceration.¹¹ Have these been implemented, or are they mere bluster? Fifth, available statistics on imprisonment are too aggregated or distorted for research purposes. For example, some of the statistics cited in support of the new DOJ thrust to replace corporate fines with imprisonment are exaggerated by multiple charges for non-antitrust violations.¹² Sixth, few antitrust authorities outside the United States have criminalized antitrust.¹³ Those that have tend to adhere to the common law (a small pool of all nations), and they still impose modest prison sentences.¹⁴ Coordination among antitrust authorities in incarceration of executives guilty of global price fixing is rare. Seventh, where a cartel’s injuries are multijurisdictional, multiple corporate fines have become common.¹⁵ However, there are no treaties on multiple carcera-

¹¹ See Christine A. Varney, Assistant Att’y Gen., U.S. Dep’t of Justice, Antitrust Div., *Vigorous Antitrust Enforcement in This Challenging Era*, Remarks before the U.S. Chamber of Commerce (May 12, 2009), available at <http://www.justice.gov/atr/public/speeches/245777.htm>.

¹² Plea Agreement as to Qasim Bokhari, *United States v. Bokhari*, No. 04-cr-56 (E.D. Wis. Oct. 22, 2004), available at <http://www.justice.gov/atr/cases/f206600/206628.htm>. This plea agreement in a bid-rigging case cites multiple charges of conspiracy, mail fraud, and money laundering that resulted in a sentence of seventy-two months of imprisonment, which was double the maximum prison sentence for conspiracy alone at the time of the offense.

¹³ See ABA SECTION OF ANTITRUST LAW, *ANTITRUST LAW DEVELOPMENTS* 1259 (6th ed. 2007).

¹⁴ See, e.g., Thomas O. Barnett, Former Assistant Att’y Gen., U.S. Dep’t of Justice, Antitrust Div., *Criminal Enforcement of Antitrust Laws: The U.S. Model*, Address at the Fordham Competition Law Institute’s Annual Conference on International Antitrust Law and Policy (Sep. 14, 2006), available at <http://www.justice.gov/atr/public/speeches/218336.htm> (discussing developments in antitrust enforcement in Ireland, Israel, the United Kingdom, Canada, and Japan).

¹⁵ See, e.g., Spencer W. Waller, *The Incoherence of Punishment in Antitrust*, 78 CHI.-KENT L. REV. 207, 220–21 (2003).

tions of cartel managers, so double jeopardy concerns may well restrict optimal individual sanctions.

This article addresses many, if not all, of these issues by assembling and analyzing an original micro data set on U.S. individual sentences for criminal price fixing.

II. LITERATURE REVIEW

Theoretical treatments of penalties for cartel deterrence in the law-and-economics tradition focus mainly on corporate sanctions. Consideration of optimal sanctions for price fixing can be traced to Becker's general legal-economic model of crime¹⁶ and to extensions of the Becker framework to price fixing by Posner.¹⁷ According to this reasoning, hard-core price fixing is optimally punished nearly exclusively through corporate fines.¹⁸ Imprisonment should be the last resort, used only when a company is unable to pay an optimal fine and only if the individual is indigent.¹⁹

It is noteworthy that these seminal works were mostly written at a time when, or in a place where, individual price-fixing sanctions were insignificant. The first time that imprisonment was used in a high profile U.S. price-fixing case was in 1960 in the Great Electrical Equipment Conspiracy.²⁰ Violations of section 1 of the Sherman Act were misdemeanors until 1974.²¹ By the late 1980s the public mood seems to

¹⁶ Gary Becker, *Crime and Punishment: An Economic Approach*, 76 J. POL. ECON. 169 (1968).

¹⁷ See RICHARD A. POSNER, *ANTITRUST LAW: AN ECONOMIC PERSPECTIVE* (1976); Richard A. Posner, *Optimal Sentences for White-Collar Crime*, 17 AM. CRIM. L. REV. 409 (1980).

¹⁸ See generally Becker, *supra* note 16; Posner, *supra* note 17. See also POSNER, *supra* note 17, at 270–71.

¹⁹ See Becker, *supra* note 16, at 208; POSNER, *supra* note 17, at 271; Posner, *supra* note 17, at 415.

²⁰ See generally J. HERLING, *THE GREAT PRICE CONSPIRACY: THE STORY OF THE ANTITRUST VIOLATIONS IN THE ELECTRICAL INDUSTRY* (1962) (offering a complete presentation of the conspiracy and the individuals and corporations involved).

²¹ Sherman Antitrust Act of 1890, ch. 647 § 1, 26 Stat. 209, 15 U.S.C. § 1 (1976). See also Roger D. Blair, *Antitrust Penalties: Deterrence and Compensation*, 1980 UTAH L. REV. 57, 58 (1980).

have shifted toward demanding greater use of individual sanctions when corporations cause greater harm.²² Passage of the Sentencing Reform Act in 1984 and the first federal Sentencing Guidelines in 1987 resulted in more severe sentences for criminal price fixers.²³ Developments in the law-and-economics movement strongly influenced antitrust penalties in the 1987 Guidelines.²⁴

From this perspective, there are many arguments in favor and some opposed to criminalization of price-fixing offenses.²⁵ Werden and Simon took issue with the Beckerian model, asserting that it in fact reasonably suggests that imprisonment is optimal for the special case of hard-core cartel conduct.²⁶ Polinsky and Shavell developed a proof within the optimal specific deterrence framework showing that judicial sentences on employees can optimally substitute for corporate fines.²⁷ Public fines on employees can be socially optimal if princi-

²² See, e.g., Mitchell A. Polinsky & Steven Shavell, *Should Employees Be Subject to Fines and Imprisonment Given the Existence of Corporate Liability?*, 13 INT'L REV. L. & ECON. 239 (1993).

²³ See U.S. SENT'G COMMISSION, FIFTEEN YEARS OF GUIDELINES SENTENCING (2004), available at http://www.ussc.gov/15_year/15year.htm; JOHN M. CONNOR, GLOBAL PRICE FIXING: STUDIES IN INDUSTRIAL ORGANIZATION 97 (2d ed. 2008).

²⁴ See, e.g., Stuart M. Chemtob, Special Counsel for International Trade, U.S. Dep't of Justice, Antitrust Div., Remarks at Competition Policy in the Global Trading System conference (June 23, 2000), available at <http://www.justice.gov/atr/public/speeches/5076.htm>.

²⁵ See, e.g., Florian Wagner-von Papp, *Criminal Antitrust Law Enforcement in Germany: "The Whole Point Is Lost if You Keep It a Secret! Why Didn't You Tell the World, Eh?"*, in CRIMINALISING CARTELS: CRITICAL STUDIES OF AN INTERDISCIPLINARY REGULATORY MOVEMENT (Caron Beaton-Wells & Ariel Ezrachi eds., 2011). Wagner-von Papp has neatly summarized the legal-economic arguments for and against individual criminal penalties for antitrust violations. He identifies seven major reasons for individual criminalization and five counter-arguments.

²⁶ Gregory J. Werden & Marilyn J. Simon, *Why Price Fixers Should Go to Prison*, 32 ANTITRUST BULL. 917, 923-29 (1987).

²⁷ Polinsky & Shavell, *supra* note 22 (Polinsky and Shavell's model may not represent the highest technical standard of proof). See also Louis Kaplow & Carl Shapiro, *Antitrust* (Harvard Law Sch. Olin Ctr. for Law, Econ. & Bus., Discussion Paper Series No. 575, 2007), available at http://lsr.nellco.org/harvard_olin/575 (reviewing the contributions of modern game theory to collusion, but concluding that there are few examples of repeated games

ple-agent problems cause employees to fail to take enough care to avoid legal risks for the corporation and the employer is unable to impose a financial penalty as high as a public fine.²⁸ A corollary of this proof is that corporate and personal fines are perfect substitutes for any optimal financial penalty for a given crime. Moreover, the authors show that if the costs of imprisonment and the ability of an individual to pay fines are low, then incarceration is part of the optimal sentence mix.²⁹ This proof assumes that employees pay all individual fines without their employer's reimbursement.³⁰

Imprisonment of individuals may also contribute to general deterrence.³¹ Publicity about severe sentences for price fixing may help educate executives about the true individual and corporate legal risks of being caught.³² Publicity may also contribute to the effectiveness and costs of corporate antitrust compliance programs. And imprisonment may improve the operation of public antitrust leniency programs. By shifting the expectations toward high personal penalties, top executives of cartel participants are more likely to desire immunity from prosecution that accompanies awards of corporate amnesty in many jurisdictions.

The need for criminalization may depend on whether corporate penalties are suboptimal. Although sparse, the weight of the empirical evidence on the optimality of corporate sanctions supports underdeterrence.³³ Nevertheless, Ginsburg and Wright are concerned that

being used to examine cartels and even fewer examples of applications to antitrust enforcement itself).

²⁸ See Polinsky & Shavell, *supra* note 22, at 252.

²⁹ *Id.* at 241.

³⁰ See *id.* at 243. This assumption appears consistent with U.S. practices, but reimbursement is more common in other jurisdictions.

³¹ See Wils, *supra* note 6, at 75; Maurice E. Stucke, *Morality and Antitrust*, 2006 COLUM. BUS. L. REV. 443, 449, 520, 539 (2006).

³² See Wils, *supra* note 6, at 84; Werden & Simon, *supra* note 26, at 934.

³³ See Mark A. Cohen, *The Role of Criminal Sanctions in Antitrust Enforcement*, 7 CONTEMP. ECON. POL'Y 36 (1989), and John M. Connor & Douglas J. Miller, *The Predictability of Global Cartel Fines*, 2-2010 CONCURRENCES: REVUE DES DROITS DE LA CONCURRENCES 59 (2010) (both reporting statistical results that verify that the elasticity of U.S. corporate criminal sanctions with respect to affected sales is less than unity, a measure of sub optimal sanctions).

the high and increasing corporate fines imposed on cartels, especially international cartels, have simply failed to deter cartel formation.³⁴ The evidence that they survey—cartel duration, event studies of stock-price movements, and substantial corporate recidivism—points to underdeterrence of cartels.³⁵ Consequently, they support the DOJ's current policy of emphasizing greater individual penalties and propose instituting complementary debarment sanctions on guilty executives of publicly traded firms.³⁶

Finally, criminalization of antitrust violations is justified by arguments rooted in the need for proportionality in sentencing for other comparable crimes and in morality.³⁷ In many jurisdictions, white-collar crimes like business fraud and tax evasion are treated as serious individual felonies with the possibility of multiyear prison sentences. Similarly, nonviolent crimes like burglary, auto theft, and drug possession are also treated as severe penal infractions. If society becomes convinced that hard-core price-fixing is a kind of theft, then proportionality in sentencing may warrant severe prison sentences for all such crimes. For example, Jephcott, a British solicitor, dispassionately considers the range of sanctions necessary to deter cartel formation.³⁸ He starts from the premise that cartels rank “alongside the gravest forms of financial accounting scandals” and that “[t]he main dilemma for antitrust regimes has been not whether to sanction, but how optimally to do so.”³⁹ Following Wils's analysis that corporate fines of up to 150% of annual affected sales may be necessary for specific deterrence,⁴⁰ Jephcott argues that practical and political difficulties will

³⁴ Douglas H. Ginsburg & Joshua D. Wright, *Antitrust Sanctions*, 6 COMPETITION POL'Y INT'L, Fall 2010, at 3, available at <https://www.competitionpolicyinternational.com/antitrust-sanctions>.

³⁵ *Id.*

³⁶ *Id.* at 22.

³⁷ See generally Stucke, *supra* note 31. See also John M. Connor, Albert Foer, & Simcha Udwin, *Criminalizing Cartels: An American Perspective*, 1 NEW EUR. J. COMPETITION L. 199 (2010).

³⁸ Mark Jephcott, *The Role of Criminal Enforcement*, in 2 ISSUES IN COMPETITION LAW & POLICY 2183 (Wayne Dale Collins ed., 2008).

³⁹ *Id.* at 2184.

⁴⁰ Wils, *supra* note 6, at 80.

require imposition of individual sanctions, including incarceration.⁴¹ Others are persuaded by the universal condemnation of business fraud found in the moral teachings of formal religions and legal systems of many civilizations over the past three millennia.

There are counterarguments to criminalization of cartelization. There is skepticism about the effectiveness of individual sanctions in deterring crimes of any kind. An executive summary of a Policy Roundtable on cartel sanctions sponsored by the Organisation for Economic Co-operation and Development (OECD) asserted that: "There is no systematic evidence proving the deterring effects of sanctions on individuals and/or assessing whether such sanctions can be justified".⁴² Werden and Simon argue that the Beckerian framework is inappropriate in the context of criminal price fixing.⁴³ In a line of reasoning often echoed in Europe, they suggest that price fixing is so reprehensible that an optimal level of price fixing is intolerable.⁴⁴ Therefore, proofs like those of Polinsky and Shavell⁴⁵ are flawed. In the United States, relatively high rates of incarceration by international standards and prison overcrowding have become political issues in the past decade. Curiously, these conditions have worsened in the face of relatively low and decreasing overall crime rates.⁴⁶ Longer sentences in the name of deterrence may contribute to prison-crowding.⁴⁷ Other concerns arise because of higher corporate fines in

⁴¹ See Jephcott, *supra* note 38, at 2022. Beginning in 2003, U.K. law became the first in Europe with the same panoply of cartel sanctions enjoyed by the antitrust authorities in North America. A fully criminalized anticartel law was implemented by Austria in 1972 upon its accession to the European Union, but disuse of criminal sanctions led to their formal abandonment in 2002.

⁴² OECD, *supra* note 1, at *Overview*.

⁴³ Werden & Simon, *supra* note 26, at 932.

⁴⁴ *Id.* (asserting, for example, that "efficient hard-core price-fixing is no more likely than efficient child molestation").

⁴⁵ Polinsky & Shavell, *supra* note 22.

⁴⁶ See Andrew D. Leipold, *Recidivism, Incapacitation, and Criminal Sentencing Policy*, 3 U. ST. THOMAS L.J. 536 (2006).

⁴⁷ See *id.* at 555. In the end, Leipold concludes that high rates of recidivism among released defendants may justify high rates of incarceration

recent years. If corporate penalties for cartel violations are at supra-deterrent levels, then criminalization is unnecessary. Along a similar line of reasoning, the ability of some corporate defendants to pay optimal fines is an issue, especially in price-fixing prosecutions. If a corporation is forced into bankruptcy, additional individual penalties strike some as superfluous.

III. THE DOJ'S POLICIES ON IMPRISONMENT FOR CARTEL OFFENSES

The DOJ accepts that its policies serve general deterrence of cartel conduct. When the DOJ's push to sanction international cartels was new, say from 1997 to 1999, the overarching emphasis was on imposing ever larger corporate fines.⁴⁸ Sometime during 2000–02, the DOJ's policy emphasis shifted from increasing corporate fines to a larger number of more severe prison sentences.⁴⁹ For example, a 2001 speech about its Corporate Leniency Program contains a statement about the

for many years to come. *See also* John M. Connor & C. Gustav Helmers, *Statistics on Modern Private International Cartels, 1990–2005* (Am. Antitrust Inst. Working Paper No. 07-01, 2007), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1103610 (corporate recidivism is known to be high in many industries); Scott D. Hammond, Deputy Assistant Att'y Gen., U.S. Dep't of Justice, Antitrust Div., *The Evolution of Criminal Antitrust Enforcement Over the Last Two Decades*, Address at the National Institute of White Collar Crime (Feb. 25, 2010), *available at* <http://www.justice.gov/atr/public/speeches/255515.htm> (little is known about individual recidivism for price fixing, but Hammond asserts that it is very low).

⁴⁸ *See, e.g.*, Gary R. Spratling, Former Deputy Assistant Att'y Gen., U.S. Dep't of Justice, Antitrust Div., *Trend Towards Higher Corporate Fines: It's a Whole New Ball Game*, Address at the National Institute of White Collar Crime (Mar. 7 1997); Gary R. Spratling, Former Deputy Assistant Att'y Gen., U.S. Dep't of Justice, Antitrust Div., *Are the Recent Titanic Fines in Antitrust Cases Just the Tip of the Iceberg?*, Address at the National Institute of White Collar Crime (Mar. 6, 1998). *See also* U.S. Dep't of Justice, Antitrust Div., *supra* note 4 (average annual criminal fines in 1997–99 (\$469 million) were more than sixteen times higher than those in 1990–96 (\$27.9 million)).

⁴⁹ *See* Hammond, *supra* note 47. *See also* U.S. Dep't of Justice, Antitrust Div., *supra* note 4 (average annual corporate criminal fines in 2002–05 (\$224 million) actually declined by 52% compared to 1997–99, whereas the average annual sentences for cartel executives rose by 246% from 1997–99 (96 months) to 2002–05 (332 months)).

Division's belief that the threat of imprisonment overshadows all other sanctions in prompting corporate leniency applications:

[T]here is no way to quantify the value of the program's greatest benefit—non-prosecution protection for all officers, directors, and employees. How do you put a price tag on an individual's freedom? . . . In light of the tremendous impact that a company's decision whether to seek corporate amnesty can have on its officers, directors, and employees, it is fair to ask (1) whether it is possible to quantify the potential rewards and consequences as they relate to individuals with exposure, and (2) who is looking out for the best interests of those individuals. Some of the commentary from the private bar on the pros and cons of pursuing corporate amnesty seems to be reduced to a cost/benefit analysis where the risks and benefits are measured in dollars and cents. However, . . . monetary cost savings may not be the most important consideration when the freedom of individuals is hanging in the balance.⁵⁰

Notice that this explanation specifically rejects the logic of optimal deterrence principles. The dominant law-and-economics model of crime posits that there is a rational choice driving decisions to commit crimes—a "cost/benefit analysis."⁵¹ Consequently, the legal system can calculate the bundle of sanctions that will optimally deter a crime; in the context of antitrust violations, depending on the jurisdiction, that bundle might comprise a mix of corporate fines, individual fines, imprisonment, and settlements from private suits.⁵² If imprisonment has a monetary value, then each of these sanctions is in principle a perfect substitute for each other. To calculate the optimal total sanction, prosecutors must be able to evaluate each specific sanction in order to understand the trade-offs between them.

⁵⁰ Scott D. Hammond, Deputy Assistant Att'y Gen., U.S. Dep't of Justice, Antitrust Div., *When Calculating the Costs and Benefits of Applying for Corporate Amnesty, How Do You Put a Price Tag on an Individual's Freedom?*, Speech at the 15th Annual National Institute on White Collar Crime (Mar. 8, 2001), available at <http://www.usdoj.gov/atr/public/speeches/7647.htm>.

⁵¹ See generally Becker, *supra* note 16; Posner, *supra* note 17; POSNER, *supra* note 17.

⁵² See, e.g., Raymond Paternoster & Sally Simpson, *A Rational Choice Theory of Corporate Crime*, in 5 ROUTINE ACTIVITY AND RATIONAL CHOICE: ADVANCES IN CRIMINOLOGICAL THEORY 37 (Ronald V. Clarke & Marcus Felson eds., 1993).

By 2005, Deputy Assistant Attorney General Scott Hammond was declaring that “individual accountability through the imposition of jail sentences is the single greatest deterrent” to cartel activity.⁵³ An extreme defense of this enforcement practice is that it needs no defense. That is, no empirical justification of the deterrence superiority of imprisonment is needed because it is obvious, grounded in common sense, or supported overwhelmingly by prosecutorial experience. This view was enunciated in a public speech in 2006 by Hammond:

It is indisputable that the most effective deterrent to cartel offenses is to impose jail sentences on the individuals who commit them. . . . Hard-core cartel offenses are premeditated offenses committed by highly educated executives When an executive believes that incarceration is a possible consequence of engaging in cartel activity, he is far more likely to be deterred from committing the violation than if there is no individual exposure. This conclusion is not simply based on theories of human behavior or common sense. We have first-hand accounts from cartel members of how the presence or absence of individual sanctions has directly resulted in actual deterrence.⁵⁴

However, Hammond cites as evidence instances of international cartels that appear to have avoided operating in the U.S. market:

We have uncovered international cartels that operated profitably and illegally in Europe, Asia, and elsewhere around the world, but did not expand their collusion to the United States solely because the executives decided it was not worth the risk of going to jail. I am referring to cartels

⁵³ Scott D. Hammond, Deputy Assistant Att’y Gen., U.S. Dept. of Justice, Antitrust Div., *Ten Strategies for Winning the Fight Against Hardcore Cartels*, Address at the No. 3 Prosecutor’s Program (Oct. 18, 2005). U.S. authorities are not alone in their belief regarding the superior effectiveness of prison sentences. See OFFICE OF FAIR TRADING, *THE DETERRENT EFFECT OF COMPETITION ENFORCEMENT BY THE OFT* (2007), available at http://www.of.gov.uk/shared_of/reports/Evaluating-OFTs-work/oft962.pdf (reporting that individual criminal penalties for antitrust violations are the most worrisome type of sanction for business people).

⁵⁴ Scott D. Hammond, Deputy Assistant Att’y Gen., U.S. Dep’t of Justice, Antitrust Div., *Charting New Waters in International Cartel Prosecutions*, Address before the ABA Criminal Justice Section’s Twentieth Annual National Institute on White Collar Crime 13 (Mar. 2, 2006), available at <http://www.justice.gov/atr/public/speeches/214861.htm>. However, Hammond does concede that “executives weigh the risk and consequences of detection against the potential financial rewards of colluding.”

that had every opportunity to target U.S. consumers . . . but the collusive conduct still ceased at the border. Why? The answer, from the mouths of the cartel members and verified by our investigators, is that the executives did not want to risk getting caught and going to jail in the United States.⁵⁵

Further insight into the rationale for the DOJ's policies may be gleaned from a written policy statement followed by a remarkably candid discussion of cartel sanctions for individuals organized by the OECD.⁵⁶ The U.S. paper argues that sanctions are needed for managers of guilty cartelists whether they are carrying out orders or acting on their own initiative; imprisonment may be necessary to stiffen a manager's will to resist illegal price fixing.⁵⁷ Imprisonment is desirable because of the signal it sends to society and the business community that price fixing is a serious crime with no redeeming features.⁵⁸ The comments of the U.S. representative at the conference were carefully paraphrased:

It has not been possible to develop convincing empirical data to support the argument that jail sentences sufficiently increase deterrence to offset the additional costs because there was no reliable way to determine the causes of things that have not happened. But there was anecdotal evidence of the effectiveness of sanctions against individuals And many defendants have offered DOJ to pay higher fines if they could avoid time in jail, but no defendant has ever offered to spend extra time in jail in return for a reduced financial fine⁵⁹

. . . .

The United States explained that it favored relatively short prison terms, compared to other crimes [P]rison sentences for antitrust crimes pale in comparison with sentences for other white collar crimes. For example, an embezzlement scheme causing harm comparable to the harm caused by vitamins cartel could have led to a prison sentence of up to 20 years Thus, although the average prison sentence in antitrust cases of 18 months is relatively long, it is relatively short compared to other white collar crimes.⁶⁰

⁵⁵ *Id.*

⁵⁶ OECD, *supra* note 1, at 99.

⁵⁷ *Id.* at 100.

⁵⁸ *Id.* at 101–02.

⁵⁹ *Id.* at 105.

⁶⁰ *Id.* at 107.

....

The United States confirmed that the fear of treble damages had a strong deterrent effect, but . . . [p]otential jail time had the most effect on individual behavior.⁶¹

....

As to prosecution in a multijurisdictional context, the increasing number of countries that provided for criminal penalties against individuals made multiple prosecutions of individuals more likely. In the past, the United States had made arrangements with other jurisdictions which investigated the same cartel to ensure that only one jurisdiction would prosecute an individual and only one would impose jail sentences.

Concerning the cost of criminal sanctions, the United States pointed out that the costs of jail sentences are only a minor cost factor, compared to costs of investigating and prosecuting cartels.⁶²

Finally, in a major retrospective of the Division's cartel enforcement, its position on pleas by individuals for "no-jail" deals was clarified:

[B]y 1999, the Antitrust Division's ability to successfully investigate and prosecute foreign nationals who violate U.S. antitrust laws had significantly advanced, [and] "no-jail" deals became a relic of the past. Division practice now is to insist on jail sentences for all defendants domestic and foreign. The Division will not agree to a "no-jail" sentence for any defendant, and our practice is not to remain silent at sentencing if a defendant argues for a no-jail sentence.⁶³

To summarize U.S. policy views, corporate penalties are both sub-optimal and complementary to individual penalties; fines, debarment, and similar penalties on individuals are minor considerations compared to prison; prison sentences will be sought for all corporate defendants; over time, the number of executives imprisoned per guilty corporation will rise; the costs of imprisonment are negligible; prison sentences for antitrust crimes are light compared to similarly injurious white-collar crimes; and double jeopardy is not an issue. In a set of consensus points, much of the U.S. policy was accepted by the other eight antitrust officials at the meeting⁶⁴; in particular, there is a

⁶¹ *Id.* at 111.

⁶² *Id.* at 112.

⁶³ Hammond, *supra* note 47, at 7.

⁶⁴ OECD, *supra* note 1, at 7-9.

trend in the OECD countries to accept the efficacy of imprisonment as a tool of enforcement as self-evident.⁶⁵

An interesting set of criticisms was leveled at the DOJ's imprisonment policies at a hearing of the Antitrust Modernization Commission. There a prominent U.S. antitrust defense lawyer testified that in his experience imprisonment is the DOJ's "biggest (and most effective) stick" in cartel enforcement.⁶⁶ Yet, the imprisonment policies of the DOJ underdeter because it prosecutes midlevel sales or marketing executives rather than the most senior responsible officers of the company; offers short sentences for agreeing to plead; sends the executives to minimum-security prisons; and seems indifferent to whether employers exercise any discipline whatsoever.⁶⁷ He asserts further that some prison sentences are substitutes for corporate fines:

The Division does say that it is focused on both hammering corporations with big fines and sending their price-fixing executives to jail. But the reality is that, despite vehement Division protestations to the contrary, a key element of the Division's enforcement approach appears to be a willingness to trade people (particularly senior executives) for money.⁶⁸

IV. SOURCES OF INFORMATION FOR THIS STUDY

One frequently cited source is the Workload Statistics of the Antitrust Division.⁶⁹ These data aggregate the Division's annual performance measures of its enforcement activity, such as indictments, fines, and incapacitation statistics. Hard-core cartel cases are for the most part equivalent to section 1 criminal cases. However, two major disadvantages of the Workload Statistics are: (1) the unit of observa-

⁶⁵ *Id.*

⁶⁶ See Tefft W. Smith, Comments for the Antitrust Modernization Commission Hearing on Criminal Remedies 7 (Nov. 3, 2005), available at http://govinfo.library.unt.edu/amc/commission_hearings/pdf.

⁶⁷ See *id.* at 9–10.

⁶⁸ *Id.* at 5.

⁶⁹ U.S. Dep't of Justice, Antitrust Div., *supra* note 48 (excerpts shown in Table 1 *infra*).

tion is the case and not the cartel with which a firm or individual is associated; and (2) they do not, with one trivial exception, distinguish international cartels from purely domestic conspiracies.⁷⁰ It is usually possible to link non-amnestied corporate or individual defendants to the cartel that they joined or managed by scanning press releases, plea agreements, informations, sentencing memoranda, or briefs posted on the Division's Web site.⁷¹ However, the DOJ Web site is an incomplete location for many legal documents about cartelists, especially for cartels prosecuted before about 1995. For the majority of smaller cartels, the DOJ Web site contains little about the final decisions on sentencing of individuals, especially dismissals, acquittals, and lost appeals.

To some extent, information on sentencing can be supplemented by press reports in local newspapers, wire reports, and the like. To develop as complete a record as possible on sentencing outcomes where none was available from the previously mentioned sources, I made requests for sentencing documents directly to the Division. These requests helped fill in nearly all of the sentencing outcomes of individuals alleged to have been involved in criminal international cartel activities from January 1990 to July 2010.⁷² Tracing

⁷⁰ The Division has a precise definition of an international cartel, namely, a conspiracy organized around a single product that is populated by defendants from two or more nations. Note that an international cartel can still operate totally within the United States and qualify as international, though few if any do. This is the definition followed in this article.

⁷¹ These documents are sometimes inconsistent in the name of the cartel market over time, so judgment may be required. For example, at times the vitamins B3 and B4 (choline chloride) cartels seem to have been distinguished from a third cartel involving six vitamin products; at other times the three cartels were lumped together as a single conspiracy. See CONNOR, *supra* note 23. Another example is the liquid crystal displays (LCDs) market that was cartelized by a huge global conspiracy. The DOJ began treating all defendants as members of a single cartel, but a year after its investigation began it identified three more duopolies that were separated from the main cartel on the basis of three U.S. electronics manufacturers as the buyers.

⁷² I am grateful to Ms. Janie Ingalls, the official in charge of the Antitrust Division's electronic archive of legal documents. She was exceedingly patient

every case is problematic because some individuals may be charged with civil infractions or non-section 1 crimes even though the corporate members of the cartel were convicted criminally. In other instances, what was initially reported as a criminal antitrust case later morphed into a civil matter handled by the Civil Division, the Securities and Exchange Commission, or some other regulatory agency.

V. DATA SAMPLE

I have assembled a sample of 233 names of individuals indicted or sentenced for criminal price-fixing by a U.S. court at the request of the Antitrust Division during 1990–2009.⁷³ All these individuals were executives directing hard-core, international price-fixing conspiracies. International cartels contain at least one individual who was a foreign national or at least one corporation is headquartered outside the United States.⁷⁴ In most cases, DOJ documents take note of the nationality of the non-U.S. participants. However, in other cases further research was required to determine whether the ultimate, controlling parent of a company in the cartel has its headquarters abroad. Because “international” is a membership concept, a few of these cartels were organized solely within U.S. territory. However, research shows that the great majority of the sampled cartels operated in multiple jurisdictions and were typically much larger in sales size than purely domestic schemes. Moreover, it is apparent that by any measure—sales, sanctions, or harm—international cartels have evolved into the major preoccupation of the DOJ since the early 1990s.

in complying with my inquiries about more than fifty individuals who were alleged cartelists. She retrieved these data while at the same time fulfilling her regular duties.

⁷³ These data are summarized *infra* table 2 and are available (upon request to the author) in an Excel spreadsheet entitled *Private Int’l Cartels: Individual Sanctions*, dated June 25, 2010.

⁷⁴ This is the DOJ’s definition of an “international” cartel. The definition was developed in the mid-1990s at a time when investigation of such cartels was severely hampered by the location of evidence or witnesses outside the jurisdiction and by blocking statutes of foreign countries.

Of the 233 corporate executives,⁷⁵ 228 have all the details necessary for this article's analysis.⁷⁶ The 226 named⁷⁷ cartelists are from eighteen countries: Belgium (2), Canada (5), Switzerland (5), Germany (20), Denmark (1), France (10), India (1), Italy (5), Japan (28), the Republic of Korea (12), Mexico (12), the Netherlands (2), Norway (2), Pakistan (2), Sweden (2), Taiwan (5), United Kingdom (12), and United States (107).⁷⁸

A. Disposition of the cases

One breakdown concerns the final disposition of the accused cartelists. Following DOJ practice, I placed the named executives into one of six categories: convicted by guilty plea, guilty at trial, acquitted at trial, fugitive, indictment dismissed, and unindicted coconspirator.⁷⁹ Of the 228 sampled cartel executives, by far the most common outcome (143, or 63%) is conviction through negotiated guilty pleas. However, twenty-eight indicted individuals (12%) decided to fight it out in court: of these, fifteen were found guilty at trial and thirteen were acquitted. Thus, the DOJ can claim a conviction rate of individual cartelists of 69%.⁸⁰ However, a prosecutorial success rate of only 54% at trial will strike many as quite low. (The DOJ Workload Statistics for 1990–99 show that for all section 1 criminal prosecutions of individuals, the DOJ won 96% of its cases.⁸¹)

⁷⁵ A few of the individuals may have been the owner-managers of partnerships or proprietorships. However, for convenience, I will at times refer to all such companies as corporations.

⁷⁶ Eight of the nineteen incomplete observations are individuals who were indicted in 2009 and are awaiting trial or sentencing. Most of the remaining persons were from old cases for which no information was available on the individual's trial outcome or sentence.

⁷⁷ Actually, two indicted individuals are mentioned, but their names were withheld. They are known by the name of the cartel, their nationality, and their employer.

⁷⁸ See *infra* table 1 for a complete list of the sample.

⁷⁹ See *infra* table 3.

⁸⁰ By contrast, virtually 100% of all indicted corporations are convicted for price fixing through guilty pleas.

⁸¹ U.S. Dep't of Justice, Antitrust Div., *supra* note 48.

Rather than poor evidence or trial preparation, the main reason for high losses at trial seems to be the type of witnesses available for jury trials. Absent audio or video tapes, most witnesses of the allegedly illegal conduct are themselves convicted price fixers; moreover, in international conspiracies, a high proportion are likely to be foreigners. Defense counsel tend to exploit the credibility of such witnesses in jury trials.

The DOJ has done a remarkable job in convicting both U.S. and non-U.S. executives. Persuading dozens of executives resident abroad to submit to stiff sanctions by U.S. courts is no mean accomplishment. Yet, there is one topic that gets scant attention in official speeches and for which no statistics are published by the Division: fugitives. Forty-seven of the charged persons (21%) are fugitives, according to the latest information available.⁸² Seven of the executives were indicted before 2000 (11% of all indicted persons) and forty after 1999 (24%). The fugitive rate is rising over time.

The most common nationality of the fugitives is Japanese; nineteen of the forty-seven fugitives (40%) are Japanese nationals.⁸³ Indeed, of the twenty-eight accused Japanese executives in the sample, only eight (28%) pleaded guilty and the remaining twenty (71%) have failed to surrender to U.S. courts. It is a puzzling fact that individuals can be held criminally liable for price-fixing conduct under the laws of both Japan and the United States and that an extradition treaty exists between the two nations,⁸⁴ yet the United States has never exercised this treaty for the numerous Japanese cartel fugitives.

⁸² Arrest warrants will eventually be issued against several indicted persons awaiting sentencing. For this reason, the number of fugitives may be undercounted.

⁸³ The remaining fugitives are: one from Switzerland, seven from Germany, three from France, one from Italy, two from the Republic of Korea, one from the Netherlands, six from Taiwan, four from the United Kingdom, and three from the United States. One famous U.K. case involves Ian Norris, who successfully resisted for several years extradition on criminal price-fixing charges. His appeal was heard by the House of Lords. However, in early 2010, Norris was extradited to the United States on the charge of obstruction of justice.

⁸⁴ Treaty on Extradition, U.S.-Japan, Mar. 3, 1978, 31 U.S.T. 892.

Finally, the two most unusual outcomes are dismissals (five cases) and unindicted coconspirators (five cases). Dismissal of indictments occurred at the request of the government. The most common reason for dismissal was cooperation as a witness for testimony at trial against a more culpable executive—often a cartel ringleader. In two cases, indictments against the mother and the wife were dismissed after other family members pleaded guilty. Five executives were carved out of their employer’s guilty plea and because of their cooperation never indicted.⁸⁵

B. Fines on individuals

According to the Division’s Workload Statistics for fiscal years 1990–2009, 538 executives that managed both domestic and international cartels were fined for criminal price fixing, a median average of 25 persons per year.⁸⁶ Graphical analysis shows that the number fined each year declined after the mid-1990s.⁸⁷ Moreover, the proportion of indicted persons who were fined also declined from a mid-1990s peak. On the other hand, the size of these fines per person has risen. The average annual fine in the early 1990s was \$47,100 per person, but there is a doubling during 1995–2004 and a new record high in the most recent semi-decade.⁸⁸ It is after 1995 that the first evidence appeared that the DOJ had begun aggressively to pursue international cartels.

⁸⁵ This is probably an undercount.

⁸⁶ See U.S. Dep’t of Justice, Antitrust Div., *supra* note 48. See also *infra* table 1.

⁸⁷ John M. Connor, *Cartels & Antitrust Portrayed: Private International Cartels from 1990 to 2008*, (Am. Antitrust Inst. Working Paper No. 09-06, 2009), available at <http://ssrn.com/abstract=1535131>. In slide 84, DOJ statistics show that the number of executives fined averaged about thirty-three per year from 1990–95, but declined to half that number by 2006–08. Moreover, slide 88 shows that the proportion of criminally charged executives who paid fines declined from about eighty percent in the mid-1990s to less than forty percent by 2006–08.

⁸⁸ There are three peaks in the trend: 1999, 2002, and 2007. These peaks are anomalies because of exceptionally large fines on one individual in each of the three years. I have eliminated two uniquely large fines (on Taubman and Koehler), the like of which have never been repeated.

The number of executives fined for their roles in international cartels rose from a very low level in the early 1990s, to about 3.9 per year in 1995–2004, and to 12.6 per year in 2005–09. Unlike the trend for domestic cartels, indicted managers of international conspiracies were fined about sixty-five percent of the time throughout the two decades—a slightly higher proportion than among all price fixers.⁸⁹ However, the size of fines imposed on international price fixers rose in tandem with those on domestic price fixers. Absolute fines rose from an average of \$134,500 per year in 1995–99, to \$165,500 in 2000–04, and to \$175,100 in 2005–09. As to the severity of sentences, the mean fine per executive leaped sixty-eight percent from the early 1990s to the late 1990s and then crept upward at more moderate rates in the two subsequent semi-decades.⁹⁰

C. Imprisonment of individuals

Published DOJ statistics on incarceration for domestic and international criminal price fixing tend to show more and longer prison sentences.⁹¹ Beginning after 2000 or 2001, the focus on the DOJ's recommended penalties tipped toward more frequent and more severe detention penalties.⁹² The number of executives imprisoned rose from an average of thirteen annually in 1990–99 to twenty-one per year in 2000–09.⁹³ According to Hammond, in the decade prior to federal fis-

⁸⁹ Most of the managers in international cartels hail from the United States. The first time a foreign national was sanctioned for price fixing was in September 1994, when Kazuhiko Watanabe, a Japanese citizen, was fined for his role in the Thermal Fax Paper cartel. See Press Release, U.S. Dep't of Justice, Two Japanese Fax Paper Companies Agree to Pay Fines Totaling More Than \$3.5 Million for Their Involvement in a Price Fixing Conspiracy (Sep. 26, 1995), available at http://www.justice.gov/opa/pr/Pre_96/September95/501.txt.html.

⁹⁰ I have eliminated two uniquely large fines, the like of which have never been repeated. Note that there are only three observations for the early 1990s. See, *infra* table 2.

⁹¹ See, e.g., U.S. DEP'T OF JUSTICE, ANTITRUST DIV., DIVISION UPDATE SPRING 2010, <http://www.justice.gov/atr/public/update/2010/criminal-program.html> (last visited Nov. 28, 2010).

⁹² See Hammond, *supra* note 47.

⁹³ See *infra* table 3.

cal year 2000, the share of all individuals sentenced to criminal price fixing doubled in the late 2000s relative to the decade of the 1990s.⁹⁴ Similarly, the length of prison sentences per person more than doubled from an average of 9 months in 1990–2000 to 22.5 months during 2005–09.⁹⁵ The years 2000–01 do indeed seem to be a turning point in the DOJ's incarceration policies for cartel violations. However, these Division Workload data are available only for combined domestic and international cartel offenses.

The DOJ has incrementally toughened its enforcement of international cartels since 1990. In Specialty Steel Pipes, a long-forgotten international cartel prosecuted in 1990, five U.S. citizens pleaded guilty and received prison sentences of twenty-four to seventy-two months.⁹⁶ These are lengthy sentences by contemporary standards. The first time a foreigner was imprisoned for price fixing was in March 1995, when Andrew Liebmann, a Canadian, was given a jail sentence of eight months in the Plastic Dinnerware cartel.⁹⁷ Another landmark was the

⁹⁴ Hammond, *supra* note 47, at 7. I am unable to replicate Hammond's numbers from the Division's Workload Statistics. He states that the proportion of individuals that were imprisoned averaged 37% in 1990–99; after 2000 that share grew, averaging 72.6% during 2005–09. I believe that Hammond is dividing the number of individuals imprisoned for section 1 offenses by the number criminally charged for the same offenses. If so, then the simple mean of the annual Workload imprisonment ratios for 1990–99 is 28%, not 37%; the 2005–09 average is 49%, not 72.6%. See *infra* table 3. In either case, the incarceration rate approximately doubled.

⁹⁵ Hammond, *supra* note 47, at 8. Here Hammond's numbers correspond closely to the Division's Workload Statistics.

⁹⁶ ROBERT H. LANDE & JOSHUA P. DAVIS, AN EVALUATION OF PRIVATE ANTITRUST ENFORCEMENT: 29 CASE STUDIES 94–96 (Interim Report 2006), available at <http://www.antitrustinstitute.org/files/550c.pdf>; Steve Culpepper, *Federal Indictment Says Buyer for River Bend Contractor Got Kickbacks in Price-Hike Scam*, BATON ROUGE ST. TIMES, Oct. 25, 1986, at 10-A (additional kickback charges made some of these sentences unusually high); *United States v. All Star Indus.*, 962 F.2d 465 (5th Cir. 1992) (one of the cases dealing with the sprawling Specialty Steel Pipes cartel, which is classified as international because one of the corporate defendants was Mannesmann AG, a German corporation; however, no German executives were sanctioned).

⁹⁷ *United States v. Andrew Liebmann*, No. 2:94-CR-00246-2 (E.D. Pa. 1994).

prosecution of six executives from Hoffmann-La Roche and BASF in May 1999 for their roles in the global vitamins cartel.⁹⁸

The DOJ announced two policies that stiffened their incarceration requests. Up until 1999, at most one manager was typically prosecuted per firm, but during 2000–09 “the Antitrust Division has routinely prosecuted multiple individuals from each corporate defendant.”⁹⁹ Moreover, the Vitamins case was the first time that prosecutors required foreign nationals to accept prison sentences as part of their plea agreements. After the Vitamins prosecutions in 1999, “‘no-jail’ deals became a relic of the past.”¹⁰⁰

Trends in U.S. imprisonment for managers of international cartels since 1990 are more pronounced than the all-cartel trends.¹⁰¹ The number of international-cartel executives imprisoned increased markedly during 1990–2009, and the rate of increase is larger than that of all cartel prosecutions. Similarly, the data collected for this article show that there is a strong upward trend over 1990–2009 in the proportion of indicted executives in international cartels that have been imprisoned. The imprisonment rate is up from about the forty-five percent range of indictments in the 1990s to the seventy percent range in later years.

⁹⁸ See *United States v. Sommer*, No. 99-CR-101-R (N.D. Tex. 1999); Hammond, *supra* note 47, at 6–8. Eventually fifteen vitamins executives would be sanctioned, not counting one anonymous Swiss fugitive. Fourteen would be fined and nine given prison sentences (six of them foreign nationals resident abroad) that averaged 9.4 months. See Hammond, *supra* note 47, at 7 (Hammond erroneously states that the May 1999 plea agreement with Dr. Kuno Sommer of Hoffmann-LaRoche was “the first that called for the imposition of jail time for a foreign national who had participated in an international cartel.” However, Sommer’s penal sentence is probably the first for a foreign national resident abroad.).

⁹⁹ Hammond, *supra* note 47, at 9.

¹⁰⁰ *Id.* at 7.

¹⁰¹ With one minor exception, DOJ statistics do not distinguish between domestic and international cartels. Thus, the statistics cited in this paragraph are calendar-year data. See *Private International Cartels: Individual Sanctions*, *supra* note 73, from which cited statistics are derived; John M. Connor, *Governments as Cartel Victims* (Am. Antitrust Inst. Working Paper No. 09-03, 2009), available at http://www.antitrustinstitute.org/archives/files/AAI%20Working%20Paper%2009-03_052120091755.pdf. (summarizing the cited statistics).

The trends in total prison and per capita sentences are sensitive to the inclusion or exclusion of the Specialty Steel Piping cartel mentioned above. Because it is a somewhat idiosyncratic case and because there were no imprisonments in 1991–93, I focus only on the years 1994–2009. The trend line for total annual prison sentences begins at about 50 months in the mid-1990s and rises steeply to about 250 months by 2007–09. However, a rather surprising outcome is that there is no increase in the severity of prison sentences in international cases. A fitted trend line is a U-shaped curve. It shows that the per capita sentence was about twenty-five months in 1994, dips to ten months in 2002, and returns to twenty-five in 2009. Thus, statements about the severity of prison sentences for international cartels are quite sensitive to the starting point.

The nationality of sanctioned individuals has changed markedly over time. Imprisoned executives initially came exclusively from the United States, then from Canada, then mostly from Western Europe, and most recently from Asia. By the end of 2009, the 148 incarcerated executives came predominantly from the United States (54%), Germany (7%), Korea (7%), Japan (5%), United Kingdom (5%), the Netherlands (5%), and nine other countries (17%).

The DOJ has carried out its threat to imprison multiple executives from the same corporation in many cases since 1999. Perhaps the extreme example of such multiple convictions is the DRAM cartel, in which six executives employed by the presumptive ringleader Samsung Corp. were jailed, plus five from Hynix Semiconductor and four from Infineon Technologies.¹⁰² What is even more remarkable, all but two of these fifteen employees were non-U.S. citizens. Several other examples of multiple incarcerations may be cited.¹⁰³

¹⁰² See Press Release, U.S. Dep't of Justice, Three Samsung Executives Agree to Plead Guilty, Serve Jail Time for Participating in DRAM Price Fixing Conspiracy (Mar. 22, 2006), available at http://www.justice.gov/atr/public/press_releases/2006/215199.htm. By mid-2010, sixteen individuals had been indicted in the huge LCD panel case, only four of them by our cut-off date.

¹⁰³ See generally U.S. Dep't of Justice, Antitrust Division Press Releases, U.S. Dep't of Justice, Antitrust Div, http://www.justice.gov/atr/public/press_releases/2010/index.html (last visited Nov. 11, 2010).

What do our data show on this policy? Prior to 1990, there were thirty-eight executives employed by twenty-two firms sentenced to jail for criminal price fixing. Of those twenty-two firms, fifty percent had only one executive jailed and fifty percent had two or three officers jailed. However, when one examines the 112 executives imprisoned after 1999, they were employed by sixty-seven corporate participants. Of those sixty-seven companies, sixty percent had but one employee imprisoned. The remaining forty percent had two or more executives incarcerated. Remarkably, there were slightly fewer multiple incarcerations after 1999 than up to 1999. In both periods, less than half of all imprisonments were at variance with the multiple-incarceration “policy.” A policy that has more exceptions than conforming outcomes is bound to breed cynicism in the legal community. Perhaps it is time to frame a more nuanced policy on multiple incarcerations.

Recall that beginning in 2000 the DOJ promulgated a policy that all guilty executives will face jail time.¹⁰⁴ This policy proscribing no-jail deals has generally been upheld, but not in every case. There were thirty-one executives fined but not jailed during 1990–2009. Our sample identifies thirteen guilty executives from nine international cartels who paid fines after 1999 but who did not incur incarceration. Although there are numerically many exceptions to the DOJ policy, the proportion of guilty executives evading a jail sentence did fall considerably: from twenty-nine percent up to 1999 to eight percent after 1999.

VI. SOME INTERESTING CASES

Executives from fifty international cartels have been prosecuted for criminal price fixing. The top thirty-two cartel cases¹⁰⁵ (by months of imprisonment) are shown in table 4. They comprise seventy-six percent of the total number of indictments and ninety-seven percent of the total number of months of imprisonment. Indeed, the top ten cartels account for the majority of prison-months.

¹⁰⁴ Hammond, *supra* note 47, at 7.

¹⁰⁵ The DOJ counts each corporation and individual indicted (or combinations of a few of them) as a separate case. It does not count cartels in its reports. “Cartels” encompass two or more companies and any number of executives in their employ.

Some of the leading cases may be unfamiliar to even seasoned observers of the DOJ's anticartel enforcement. The leading case is E-Rate, a sprawling case that has punished sixteen individuals for bid-rigging and fraud of a federal government school-Internet subsidy program; imprisonment totals 508 months so far.¹⁰⁶ The oldest case in the sample is Specialty Steel Piping, which was prosecuted in 1988–1990. Counting only convictions in 1990, five executives merited 240 prison-months, which makes this case the second most severe on record. Specialty Steel Piping demonstrates that rigorous enforcement is a long practice for the DOJ. Plastic Dinnerware¹⁰⁷ is another old case in the top ten, but the other eight cartels are of a more recent vintage. Another observation is that five of the top ten cartels engaged in bid rigging conduct, and all five rigged federal government bids. Connor has shown that cartels that have rigged government tenders tend to be punished especially severely.¹⁰⁸

The Antitrust Division has used imprisonment for some cases that were very difficult to prosecute. Vitamins was a landmark case, in part because six executives residing in Europe beyond the reach of U.S. law voluntarily submitted to U.S. courts in 1999 and accepted relatively heavy prison sentences for the time. More recently, eighteen executives were convicted between January 2004 and May 2007 in the far-flung DRAMs case; of the eighteen, only two were U.S. citizens, and, amazingly, not a single fugitive remains in DRAMs.¹⁰⁹

Other cartels are proving more difficult to crack. In cartels populated with Japanese or Taiwanese executives, prosecutors are often faced with executives who are unwilling to submit to U.S. justice; for

¹⁰⁶ See Press Release, U.S. Dep't of Justice, Justice Department Charges NEC in Probe into Federal E-Rate Program (May 27, 2004), available at http://www.justice.gov/atr/public/press_releases/2004/203845.htm. One of the corporate defendants was a Japanese computer manufacturer.

¹⁰⁷ See Press Release, U.S. Dep't of Justice, Antitrust Division Breaks Price Fixing Conspiracy in Disposable Plastic Dinnerware Industry (June 9, 1994), available at http://www.justice.gov/atr/public/press_releases/1994/211853.htm.

¹⁰⁸ See Connor, *supra* note 101.

¹⁰⁹ See Press Release, U.S. Dep't of Justice, *supra* note 102.

example, in the huge TFT-LCD cartel, up to late 2010 all four indicted executives were fugitives.¹¹⁰

VII. SUMMARY

The analysis in the previous section marks a beginning in understanding the role of imprisonment in U.S. criminal price fixing cases, but it cannot answer all of the possible difficulties with imprisonment proposed in the introduction.

What the data on U.S. convictions of executives for international cartel conduct since 1990 show is the following:

- Nationality is now quite diverse with almost half non-U.S. citizens.
- There are more fugitives, and the proportion of fugitives among all indicted persons more than doubled from the 1990s to the 2000s.
- Both fines and incarcerations are more frequent over time.
- The Antitrust Division convicts barely half of the executives that insist on jury trials.
- Fines per person doubled from the early 1990s through 2005–09 but the average fine remains low.
- Jail sentences per indictment are up 150% over the same period.
- The severity of incarceration has not necessarily increased since the early 1990s, but did more than double from its low point in 2001.
- The policy of more multiple incarcerations per firm instituted around 2000 has resulted in only a small increase since then.
- The policy of eliminating no-jail deals has not been achieved, but the trend is in that direction.

¹¹⁰ See *United States v. Cheng Yuan Lin*, No. CR 09-0110 MMC (filed N.D. Cal. Feb. 4, 2009), <http://www.justice.gov/atr/cases/f243500/243520.htm>, and *United States v. Sakae Someya*, No. CR-09-00329-PJH (filed N.D. Cal. Mar. 31, 2009), <http://www.justice.gov/atr/cases/f245100/245100.htm>. As of November 26, 2010, the following twelve executives of corporate defendants in the LCD cartel case were indicted but had not pleaded guilty: Duk Mo Koo, Cheng-Yuan Lin, Wen Jun Cheng, Hsin-Tsung Wang, Hsuan Bin Chen, Hui Hsiung, Lai-Juh Chen, Shiu Lung Leung, Borlong Bai, Tsannrong Lee, Cheng Luan Lin, and Wen Jun “Tony” Cheng. Normally, individuals who have agreed to submit to a U.S. court are indicted and plead guilty within a few days of each other; an indictment without a plea is almost a sure sign that most of the aforementioned executives are fugitives.

VIII. CONCLUSION

It is difficult to design an optimal mix of sanctions, one that will have the greatest impact in reducing cartel formations given constrained prosecutorial resources and uncertainty over sanctions that might be imposed on cartel participants in civil proceedings or other jurisdictions. The European Commission and most of its Member States are committed to a goal of general deterrence through ever larger corporate fines.¹¹¹ Relative to the harm being caused, European Union fines for hard-core cartel infringements are many times higher today than ten or twenty years ago, whereas U.S. fines have not risen.¹¹² Aside from Israel,¹¹³ few jurisdictions regularly impose lengthy imprisonment for antitrust crimes.¹¹⁴ When it comes to jail time for price fixers, the United States is virtually the world's policeman.

This article has identified the increasing internationalization and toughness of U.S. policy toward international price fixers. However, it also documents several problems with the U.S. policy increasing reliance on sanctions for executives rather than for corporations to deter international cartel activity. Among the problems are a high proportion of losses at trial, a rising tide of fugitives, an ambiguous record on increased severity of incarcerations, and a failure to eliminate no-jail guilty pleas.

¹¹¹ See, e.g., Guidelines on the Method of Settling Fines Imposed Pursuant to Article 23(2)(a) of Regulation No. 1/2003, 2006 O.J. (C 210/2).

¹¹² See EUROPEAN COMMISSION—COMPETITION—CARTELS, *Statistics*, http://ec.europa.eu/competition/cartels/overview/index_en.html (last visited Nov. 10, 2010).

¹¹³ See Scott D. Hammond, Deputy Assistant Att'y Gen., U.S. Dep't of Justice, Antitrust Div., *Charting New Waters in International Cartel Prosecutions*, Address to the National Institute of White Collar Crime § II(A)(3) (Mar. 2, 2006), available at <http://www.justice.gov/atr/public/speeches/214861.pdf>.

¹¹⁴ See OECD, *HARD CORE CARTELS: THIRD REPORT ON THE IMPLEMENTATION OF THE 1998 COUNCIL RECOMMENDATION § 3.2* (2005), available at <http://www.oecd.org/dataoecd/58/1/35863307.pdf>.

Table 1
DOJ Statistics on Individual Criminal Price-Fixing Sanctions, Domestic and International Cartels

Federal Fiscal Year	Number Charged	Number Fined	% Fined	Fines (\$000)	Fines/ Person(\$000)	Number Imprisoned	% Prison/ Charged	Months Prison	Prison Days/ Person
2009	65	27	41.5	605	22.4	35	53.85	834.9	725.6
2008	59	23	39.0	1485	64.6	19	32.20	471.2	754.3
2007	47	25	53.2	15,109	604.4	34	72.34	1032.0	923.3
2006	37	17	45.9	3650	214.7	19	51.35	177.0	283.3
2005	47	22	46.8	4483	203.8	18	38.30	432.6	730.9
2004	39	15	38.5	644	42.9	20	51.28	241.1	366.7
2003	28	16	57.1	470	29.4	15	53.57	307.1	622.7
2002	32	19	59.4	8,685 ^a	457.1	19	59.38	345.2	552.7
2001	39	20	51.3	2019	101.0	11	28.21	157.8	436.4
2000	60	43	71.7	5180	120.5	18	30.00	183.6	310.2
1999	46	50	108.7	12,273 ^b	245.5	28	60.87	219.0	237.9
1998	52	20	38.5	2499	125.0	5	9.62	42.8	260.2
1997	29	28	96.6	4400	157.1	3	10.34	25.9	263.0
1996	42	16	72.7	1572	98.3	5	22.73	79.9	486.2
1995	60	25	78.1	1211	48.4	16	50.00	128.3	243.9
1994	57	33	66.0	1240	37.6	9	18.00	49.2	166.3
1993	84	45	90.0	1868	41.5	14	28.00	155.4	337.6
1992	78	27	41.5	1275	47.2	11	16.92	81.8	226.2
1991	81	37	63.8	2806	75.8	22	37.93	216.8	299.7
1990	72	30	41.7	917	30.6	17	23.61	90.0	161.1
Total	929	538	-	72,391	-	338	-	5,272	-
Mean/year	45.5	26.9	61.1	3,778	138.4	16.0	36.56	233.5	403.7
Median/year	47.0	25.0	57.1	2,019	87.0	17.0	32.20	177.0	310.2

SOURCE: John M. Connor, DOJ Cartel Enforcement 1990–2009, spreadsheet completed in early 2010, summarizing data from the Antitrust Division's Workload Statistics (adapted from U.S. Dep't of Justice, Antitrust Div., Antitrust Division Workload Statistics FY 2000–2009, available at <http://www.justice.gov/atr/public/workload-statistics.html> and Antitrust Division Workload Statistics FY 1990–1999, available at <http://www.justice.gov/atr/public/246419.pdf>).

a. Average is \$65,833 if A. Alfred Taubman's \$7.5 million fine is removed.

b. Average is \$46,388 if Robert Kochler's \$10 million fine is removed.

Table 1 (continued)

DOJ Statistics on Individual Criminal Price-Fixing Sanctions, Domestic and International Cartels

<i>Federal Fiscal Year</i>	<i>Number in Other Confinement^c</i>	<i>Other Confinement/Charged</i>	<i>All Confinement/Charged</i>	<i>Days of Other Confinement</i>	<i>Other Confinement Days/Person</i>	<i>All Confinement Days/Person</i>
2009	9	13.85%	67.69%	2195	243.9	969.5
2008	11	18.64%	50.85%	2045	185.9	940.2
2007	5	10.64%	82.98%	1085	217.0	1140.3
2006	13	35.14%	86.49%	2760	212.3	495.6
2005	6	12.77%	51.06%	1270	211.7	942.6
2004	4	10.26%	61.54%	1575	393.8	760.5
2003	6	21.43%	75.00%	1025	170.8	793.6
2002	16	50.00%	109.38%	3607	225.4	778.1
2001	12	30.77%	58.97%	1844	153.7	590.0
2000	20	33.33%	63.33%	2567	128.4	438.6
1999	25	54.35%	115.22%	2850	114.0	351.9
1998	10	19.23%	28.85%	1530	153.0	413.2
1997	9	31.03%	41.38%	1270	141.1	404.1
1996	8	36.36%	59.09%	1148	143.5	629.7
1995	16	50.00%	100.00%	2933	183.3	427.2
1994	22	44.00%	62.00%	2475	112.5	278.8
1993	26	52.00%	80.00%	3552	136.6	474.2
1992	15	23.08%	40.00%	1734	115.6	341.8
1991	16	27.59%	65.52%	1519	94.9	394.7
1990	7	9.72%	33.33%	632	90.3	251.4
Total	256	—	—	39,616	—	—
Mean/yr.	13.0	20.02%	66.58%	1969.5	167.8	570.9
Median/yr.	12.0	30.77%	62.00%	1734.0	153.0	474.2

SOURCE: JOHN M. CONNOR, *DOJ Cartel Enforcement 1990–2009*, spreadsheet updated in early 2010.

c. Other Confinement includes court sentences to community treatment centers, house arrest, placement in halfway houses, and similar losses of personal freedom short of actual jail time. Some individuals receive sentences to both prison and other confinement.

Table 2
 Statistics on Individual Criminal Price-Fixing Sanctions, International Cartels

Calendar Year ^a	Charged Number	Persons Fined	Persons Fined %	Total Fines ^b (\$000)	Fines/Person (\$000)	Imprisoned Number	Prison/Charged %	Prison Months	Prison Days
2010 ^c	5	—	—	—	—	—	—	—	—
2009	14	6	43	602.8	100.5	5	36	99.1	3013
2008	20	15	75	6497.0	433.1	16	80	364	11,702
2007	23	19	83	160.7	8.5	18	78	324	7118
2006	17	15	88	2400.0	160.0	15	88	158	4806
2005	17	8	47	1370.0	171.3	11	65	238	7239
2004	15	10	67	2975.0	297.5	12	80	212	6448
2003	10	5	50	1150.0	230.0	5	50	22	669
2002	16	10	63	750.5	75.1	7	44	98	2980
2001	16	5	31	7900.0	1580.0	5	31	27	821
2000	16	9	56	1015.0	112.8	8	50	55.5	1688
1999	14	13	93	12,605.0 ^d	969.6	9	64	159	4836
1998	7	6	86	1340.0	223.3	4	57	111	3376
1997	12	10	83	955.0	95.5	2	17	8	243
1996	10	6	60	300.0	50.0	1	10	21	639
1995	8	7	88	315.0	45.0	7	88	80	2433
1994	7	2	29	215.0	107.5	1	14	36	1095
1993	0	0	—	0	0	0	0	0	0
1992	0	0	—	0	0	0	0	0	0
1991	0	0	—	0	0	0	0	0	0
1990	5	1	20	25.0	25.0	5	100	240	7300
Total	233	148	—	42,172.3	284.9	131	56	2252.6	68,516
Mean year	11.7	7.4	57.6	2,108.6	105.4	6.6	56	112.6	3426
Median year ^e	11.0	6.5	62.3	985 ^e	104.0	5.0	50	89.0	2607

SOURCE: JOHN M. CONNOR, *Private International Cartels* dated July 2010. This spreadsheet, first created in 1998, is continuously updated.
 a. The date charged is the day a guilty plea is filed; if no guilty plea, then the date of an indictment or an information is filed.
 b. Includes a small amount of court-ordered restitution.
 c. Four sentences pending and one suspected fugitive as of July 2010.
 d. Includes the single largest fine ever levied for a Sherman Act violation: \$10 million for Robert Koehler in *Graphite Electrodes*, which was paid by his employer.
 e. The median shown is among the 20 years above. The median fine of the 130 fined individuals is \$100,000. The median penalty for the 120 imprisoned is 10 months (or 304 days).

Table 3

Disposition of Individuals Charged for International Criminal Price-Fixing, International Cartels

<i>Fiscal Year Charged</i>	<i>Persons Charged</i>	<i>Guilty Plea</i>	<i>Guilty at Trial</i>	<i>Acquitted at Trial</i>	<i>Fugitive</i>	<i>Indictment Dismissed</i>	<i>Sanctioned</i>	<i>Fines/ Person Fined</i>	<i>Prison/ Person</i>
				<i>Number</i>				<i>(\$000)</i>	<i>Months</i>
2005–09	91	64	4	7	12	1	68	198.0	18.20
2000–04	74	37	4	1	28	3	41	188.4 ^a	5.60
1995–99	51	36	5	2	5	1	41	304.2 ^b	7.43
1990–94	12	6	1	3	2	0	7	20.0	23.00
1990–2009	228	143	15	13	47	5	158	284.9 ^c	16.3 ^d

SOURCE: Table 2 and JOHN M. CONNOR, *Private International Cartels* (July 7, 2010).

- a. One unusually large fine in this period was \$7.5 million; the median fine was \$112,500.
 b. One unusually large fine in this period was \$10 million; the median fine was \$50,000.
 c. One hundred forty-eight were fined; the median fine in 1990–2009 is \$85,000.
 d. One hundred thirty-one were imprisoned or placed on supervised probation, though the latter is uncommon in the last ten years; the median sentence per person in 1990–2009 is ten months.

Table 4
Notable Cases: Top Thirty-two International Cartels, by Executives' Months of Imprisonment, 1990–July 2010

<i>Cartel Name</i>	<i>Number of Indictments</i>	<i>Prison Sentence (months)</i>	<i>U.S. Fines (\$000)</i>	<i>Notes^a</i>
E-Rate, federal Internet program for schools	16	508	699.0	Bid rigging; all government; case open
Steel, specialty piping, United States	5	240	25.0	Bid rigging; old case; some government
Marine hose	14	211	925.0	Bid rigging; some government; case open
Shipping (marine freight lines) U.S.-Puerto Rico	5	142	804.0	
Concrete, ready-mix, Indiana, United States	10	139	710.0	Bid rigging; some government
DRAMs (digital random access memory semiconductors)	18	112	3,700.0	
Metal sling hoist and tie-down equipment	7	112	188.0	Bid rigging; all government
Plastic dinnerware, disposable foodservice	8	101	345.0	Old case
Lysine	7	99	1,250.0	
Magnetic iron oxide powder/pigment	4	60	20.0	Three fugitives
Top ten cases	94	1724	8666.0	
Plastic marine fenders, pilings	4	58	285.0	Bid rigging; government
Stamp auctions	7	40	547.5	Bid rigging
Construction, USAID-financed Egypt wastewater plant	2	36	25.0	Bid rigging; government
Aluminum phosphide	3	36	50.0	Two acquittals; early case
Choline chloride (vitamin B4), N. America	3	33	390.0	
Graphite electrodes	4	26	12,250.0	Largest fines
Ice, manufactured and packaged, N. America	2	24.03	0.1	Case open
Window blinds/coverings, PVC	2	24	5.0	
Vitamins, other	7	22.5	425.0	Landmark case
Vitamin B3 (niacin)	2	20	150.0	

a. All cartels with four or more months of imprisonment are included. "Old cases" are those completed before 1996.

Table 4 (continued)
 Notable Cases: Top Thirty-two International Cartels, by Executives' Months of Imprisonment, 1990–July 2010

<i>Cartel Name</i>	<i>Number of Indictments</i>	<i>Prison Sentence (months)</i>	<i>U.S. Fines (\$000)</i>	<i>Notes^a</i>
Auction houses, art, buyers' & sellers' fees	3	18	7,850.0	Bid rigging
California post-tensioning bridge	2	18	70.0	Bid rigging; government
Rubber processing chemicals	8	17	300.0	
Polyester staple fiber	2	16	220.0	
Carbon and graphite electrical, mechanical products	4	15	600.0	Case open; Ian Norris awaits sentencing
Airlines, cargo, fuel surcharge	4	14	200.0	Case open
Construction, heavy-lift marine	6	12	150.0	Bid rigging; some government
Parcel tankers, chemical shipping	5	10	575.0	
MCAA (monochloroacetic acid)	3	9	120.0	
Construction, natural gas pipelines, Colorado	3	4	10.0	Bid rigging;
Explosives, commercial in Kentucky, Indiana, Illinois	4	4	120.0	Bid rigging; old case
LCDs (liquid crystal displays), TFP (thin film) type	4	0	0	Case open; four fugitives
Total of thirty-two cartels	178	2,180.5		

SOURCE: JOHN M. CONNOR, *Private International Cartels* (April 2010).

a. All cartels with four or more months of imprisonment are included. "Old cases" are those completed before 1996.

Cartel deterrence: *The search for evidence and argument*

BY CHRISTOPHER HARDING*

Discussion and argument concerning the deterrent impact of anticartel enforcement measures have gained in significance and controversy as the whole regulatory enterprise and rhetoric of cartel regulation has expanded and developed. Regulators have become ever more emphatic in the denunciation of business cartels, and deterrence has therefore assumed a significant role in the justification of a stronger and more determined effort of legal control. In particular, cartelists need to be deterred into whistle blowing for leniency programs to work, and businesses need to be deterred into compliance to achieve the ultimate regulatory goal. Deterrence (rather than, for instance, economic redistribution or retributive justice) then becomes a leading, perhaps the leading objective within the legal control of cartels. Yet claims of deterrent effect are notoriously difficult to measure and assess. The discussion here examines the underlying problems of penetrating and measuring the deterrent impact of anticartel policies and sanctions and considers the possible methodologies for assessing deterrence in this context.

I. THE RHETORIC AND REALITY OF DETERRENCE

The deterrent effect of legal measures aimed at the regulation and control of business cartels is now a subject of considerable interest and debate. The following discussion investigates both the claims within the rhetoric of legal control and attempts that may be made to assess actual deterrent effect.

* Department of Law and Criminology, Aberystwyth University.

First, it would be useful to trace briefly the emergence of a rhetoric of deterrence and to probe its more exact aspirations. Why has talk about deterrence become so significant in the policy and practice of the legal control of business cartels? During the historically earlier stages of cartel regulation, when (at least outside the United States) the implementation (rather than enforcement) of competition policy and rules was largely an administrative and consensual matter,¹ the absence of strong and categorical censure meant also an absence of deterrence talk. While undesirable forms of horizontal restrictions (more rarely then termed “cartels,” as such)² were negotiated away, there was no need to deter any delinquent activity. Deterrence would enter the picture only when official policy toward most forms of “private” cartel hardened during the 1970s and 1980s so that determined cartelists had to go underground and start behaving like offenders rather than subjects of consensual regulation.³ Thus began a vicious circle and upward spiral of enforcement: the more secretive and more evasive the cartels became, the greater the powers of investigation and enforcement required by regulators, provoking ever more subterfuge on the part of companies, which in turn required yet greater powers of investigation and sanctioning, so transforming companies and their employees into criminal-like actors.⁴

In this way enforcement activity—more and more comprising a form of policing, the use of tough sanctions, and carrot-and-stick leniency arrangements to gain evidence—gradually moved up the competition regulators’ agenda.⁵ Recently, a British commentator on European competition law could assert that:

¹ See DAVID J. GERBER, *LAW AND COMPETITION IN TWENTIETH CENTURY EUROPE* (2001).

² See CHRISTOPHER HARDING & JULIAN JOSHUA, *REGULATING CARTELS IN EUROPE* 11–16 (2003) (discussing the etymology of the term “cartel”).

³ See William E. Kovacic, *Competition Policy and Cartels: the Design of Remedies*, in *CRIMINALIZATION OF COMPETITION LAW ENFORCEMENT* 41, 51 (Katalin J. Cseres, Maarten Pieter Schinkel & Flors O.W. Vogelaar eds., 2006).

⁴ See *id.* at 51–53.

⁵ See *id.*

There is a very real sense today among the world's competition authorities that, if competition law is about one thing above all, it is the detection and punishment of hard-core cartels. In the European Union, Mario Monti, the former Commissioner for Competition, once described cartels as "cancers on the open market economy," and the Supreme Court in the U.S. has referred to cartels as the "supreme evil of antitrust."⁶

As cartel activity became described in these terms, yet showed no sign of disappearing simply through the force of legal condemnation, the deterrent method naturally entered the picture—how else to secure respect for the prohibition? Thus at the present time, regulatory language is replete with the need to achieve deterrence. For instance, in a speech in October 2009, European Union Competition Commissioner Neelie Kroes proclaimed: "I don't want to merely destabilize cartels. I want to tear the ground from under them. This requires effective deterrence across a range of competition systems."⁷ And, at an Organisation for Economic Co-operation and Development roundtable discussion on anticartel enforcement in 2005, a national representative had opined that: "No single sanction is a sufficient deterrent, but it was important that a panoply [sic] of sanctions is available to combat cartels."⁸ The regulatory message is clear: combating cartels has become a priority, and legal action to do so must comprise effective deterrence.

Yet it remains far from clear what amounts to effective deterrence in this context, or indeed how deterrence may be measured. A major problem resides in the fact that, while the rhetoric is strong, it remains inexact. What (or who) more exactly should be deterred, beyond a broad sense of cartel activity? And when is it known whether something or somebody has been deterred, and by what? These questions must be addressed in any enquiry into the impact and effectiveness of anticartel measures, so as to achieve:

⁶ RICHARD WHISH, *COMPETITION LAW* 498 (5th ed. 2009).

⁷ Neelie Kroes, European Comm'r for Competition Policy, Remarks at the Anti-Cartel Enforcement: Criminal and Administrative Policy Panel Session, Speech/09/454 (Oct. 8, 2009).

⁸ ORG. FOR ECON. COOP. & DEV., *POLICY ROUNDTABLES, CARTEL SANCTIONS AGAINST INDIVIDUALS* 105 (2005) (quoted comment was made by Canada's representative).

- a more exact idea of the object of deterrence;
- a more exact idea of the aim of deterrent policy;
- a more reliable sense of an absence of cartel activity as a measure of deterrent effect (deterrent outcome); and
- a more confident knowledge of the connection between particular processes or instruments of deterrence and an apparently deterrent outcome (deterrent linkage).

A. *The object of deterrence*

This issue is complicated by the well-known problem of agency in relation to cartel action—the fact that cartel activity involves at one and the same time both corporate and human individual conduct. Immediately the question arises whether deterrent measures should be directed at companies, the individuals who work for and give expression to the actions of such companies, or both. This problem is well illustrated by the enforcement puzzle: it is sometimes argued that companies may not be deterred by fines, but executives will be deterred by the prospect of a prison term.⁹ Does this imply that there is no point in imposing financial penalties on a company and that resources should be devoted to proving a criminal case against individuals and securing prison terms for the latter? The question of *object* is also bedeviled by the problem of cartel identity. Are all cartels to be deterred? Presumably not; rather, only “hard core” private cartels (however defined) should be deterred.¹⁰ Moreover, is the identity of individual cartels always clear (in terms of market, time and membership)? Any meaningful measurement of deterrent effect requires an accurate sense of the unit of measurement—how many cartels, how many companies, how many individuals have been deterred?

⁹ See, e.g., *id* at 16; Donald I. Baker, *The Use of Criminal Law Remedies to Deter and Punish Cartels and Bid-Rigging*, 69 GEO. WASH. L. REV. 693, 713 (2001); Donald C. Klawiter, *After the Deluge: The Powerful Effect of Substantial Criminal Fines, Imprisonment, and Other Penalties in the Age of International Cartel Enforcement*, 69 GEO. WASH. L. REV. 745 (2001).

¹⁰ See ORG. FOR ECON. COOP. & DEV., *FIGHTING HARD CORE CARTELS: HARM, EFFECTIVE SANCTIONS AND LENIENCY PROGRAMMES* (2002).

B. *The aim of deterrence*

The point here is to press for a more explicit description of what is being sought or what will satisfy the deterrent objective. For, realistically, a spectrum of desirable outcomes might be listed. These could range from the *ideal*, that is, complete eradication, the elimination of all business cartels from this world, through to perhaps *more feasible* outcomes, for instance, the removal of cartels from a particular market, or the diversion of cartel activity to another geographical area or jurisdiction with softer enforcement, or the decision of a major company not to engage in cartel conduct in the future, or for particular executives to desist in the future. Or, in more general terms, is the aim or emphasis to be placed on individual deterrence (actual offenders deterred for the future) or general deterrence (other potential offenders deterred)? Are some of the more limited (but perhaps more realistic) outcomes, for example, cleaning up in one market, or securing one company's change of policy, sufficient in political terms or as value-for-money in terms of the resources committed to enforcement?

C. *Outcome and linkage*

This is closely tied into the question of the aim of deterrent policies, just discussed, since it is also the question of whether an aim has been achieved. Determination of whether there has been any deterrent effect is a well-known problem of criminology and penology in relation to discussion of deterrence of criminal behavior.¹¹ Just as there may be a range of (greater or lesser) deterrent aims, so too there may in fact be a range of (greater or lesser) deterrent outcomes, which may or may not match the aims. There are then three main questions. First, and most obviously, has there been any desistence from cartel conduct (and how is this reliably known)? Second, if so, has any measure or policy led to that outcome? Third, does any apparently deterrent outcome match the deterrent aim, or is it happenstance?

All of this may be illustrated through a simple example. Suppose that a competition authority detected and legally established the

¹¹ See, e.g., Travis C. Pratt, Francis T. Cullen, Kristie R. Blevins, Leah E. Daigle & Tamara D. Madensen, *The Empirical Status of Deterrence Theory: A Meta-Analysis*, in *TAKING STOCK: THE STATUS OF CRIMINOLOGICAL THEORY* 367 (Francis T. Cullen, John Paul Wright & Kristie R. Blevins eds., 2009).

operation of a cartel in the market for x and then imposed large fines on the companies and prison terms on a number of executives involved in the cartel. Subsequently, there was no evidence of a cartel in market x during the following ten years. The competition authority then claimed that its enforcement policy was successfully deterrent. What would need to be shown for such a claim to be persuasive?

First, it would have to be shown that there was convincing evidence of no further cartels in that market. For instance, it should be considered whether companies successfully hid the existence of a cartel, or whether, despite suspicion, enforcement agents had decided not to open any investigation (through lack of resources or perceived difficulty of proof). In short, what comprises sufficient evidence of a cartel-free market?

Second, the competition authority's deterrent aim would need to be verified. This may not be straightforward. For instance, the authority might publicly proclaim "zero tolerance" and dedicate itself to the complete eradication of all cartels, but say to itself more privately that clear-up in market x would be a good public result, even if the companies diverted their cartel activity to related market y or another geographical area or jurisdiction where there was less suspicion and lower enforcement risks.

Third, it should be asked whether the apparent demise of cartelization was the result of the corporate fines, the prison terms, or both in tandem. Or it may be asked, in a more nuanced way, whether the apparent deterrent effect was the product of salience rather than threat: the combination of those sanctions and the existence of a leniency program, and the circumstance that in relation to one cartel at that time, a particular member of the cartel decided to opt for leniency, so busting the cartel. This last question shades into that of specific and general deterrence. On the one hand, did the busting of that cartel dissuade its participants from further cartel activity? That would assume that the latter remained active in the market and retained their identity, and that may be a large assumption, since companies may divert into another market, be subject to corporate restructuring, and individual personnel may well change. Or, on the other hand, were all the future actors in market x dissuaded from any cartel involvement? The latter outcome would of course include the

former, but it would represent not only a wider achievement but also suggest some different lines of deterrent impact.

Or, to illustrate the complexities further, suppose for the moment something else: that research into the above scenario suggested that cartelization in the market for x had been dissuaded for a period of ten years, owing to the combined effect of the threat of a range of sanctions and the operation of a leniency program, leading to a perception on the part of producers of x that the market in question was a high risk market in terms of enforcement. That might appear (and would certainly be presented) as a good score in terms of deterrence policy. But, even if taken at face value, it remains a limited score (for instance, in terms of time and market scope). Care should be taken in confidently generalizing from such a finding (as some competition agencies have occasionally argued) to its application to other markets, other jurisdictions or other actors.¹² As in the case of crime more generally, “successful” enforcement activity may result in the relocation of delinquent activity or other adaptive tactics.

There may well be, therefore, a mismatch between the confident rhetoric and a far from certain and, indeed, rather impenetrable reality. But the subject is naturally problematical in this way, since deterrence talk is inevitably an uncertain mix of sanctions and probability. On one view, waving the big stick may in itself be sufficient: strategies of deterrence are like a card game and calling bluff, especially when the deterrent talk starts to encompass the vocabulary of “zero tolerance,” sanctioning “milestones,” and the metaphor of disease. Provided that sufficient menace is conveyed, the subjects will comply irrespective of the real probability of penal action.¹³ But in the sophisticated world of cartel control, probability is likely to be an important factor, given the likelihood of a strong awareness of the variables affecting the use of the stick. It is at this point that some more scientific testing of what is in the minds of the players on both sides would prove valuable.

¹² See, e.g., *infra* section IV (discussing European Union Competition Commissioner Neelie Kroes’s use of Office of Fair Trading research findings).

¹³ A crude example would be the “simple society” example of a family, in which a small child readily believes in the certainty of a parent’s threatened sanction.

II. THE PROBLEM OF THE DARK FIGURE AND ELUSIVE “BEFORE AND AFTER” COUNTS

The starting point for any review and analysis of the deterrent impact of measures of legal control would seem to be the measurement of that which the measures seek to control and eliminate. It is necessary to find evidence¹⁴ of dissuasion, and in simple terms this would entail a quantitative measuring of any lesser amount of prohibited activity. Where the deterrent effect is x , the total amount of conduct to be prohibited is y , and the amount of conduct after application of the deterrent measure is z , then the measurement of deterrent impact could be: $x = (y - z)$. Leaving aside for the moment the limitations of just counting numbers, the first problem is to find convincing data of both y and z .

Is the relevant measure of y the total number of cartels? The dark figure of cartel activity is especially problematical. In the first place, like much illegal or criminal activity, it is naturally hidden, so that in practical terms its extent has to be discussed as some kind of research-based estimate. Second, in the case of cartels, there is some fuzziness as to what is being measured, as a useful indication of the size and nature of the problem or pathological condition. Should the unit of measurement be the number of cartels, the number of companies involved in cartels, the volume or value of trade affected, or any evidence of cartelization or cartel activities (such as price fixing or market sharing)?¹⁵ The fragile nature of the process of assessment may soon be evident, if just three methodological examples are taken:

- The calculation of y is necessarily based on an estimate, derived from (perhaps) some historical evidence of proven cartel activity in particu-

¹⁴ Some data is needed that might be used to show a dissuasive effect, since there may be other explanations of the amount of cartel activity in any given time or place.

¹⁵ See, e.g., Margaret Levenstein, Valerie Y. Suslow & Lynda J. Oswald, *Contemporary International Cartels and Developing Countries: Economic Effects and Implications for Competition Policy* (Int'l Agric. Trade Consortium, Working Paper No. 14590, Oct. 2003). This article discusses both the existence of cartels and the economic effect and significance of cartels in developing countries. This approach may well be more illuminating and pertinent than simply trying to count the number of cartels; but it illustrates well the problem of estimating the subject matter of legal control.

lar markets or (perhaps more significantly) theorizing as to the likelihood of cartelization in certain types of markets.

- Using the number of cartels as the unit of measurement is bedeviled by problems of definition: what constitutes a single cartel, in time,¹⁶ space¹⁷ and participation?¹⁸
- Using broader evidence of some cartel activity (such as price fixing) as the unit of measurement will not provide an indication of the delinquent significance or the pattern of offending.

What is absent, and very difficult to establish, is any kind of full or reliable database recording the extent of cartel activity, not to mention its economic significance, more precise nature, geographical and market distribution, and pattern of anticompetitive strategy. In short, *y* is very uncertain. In their examination of cartel activity in developing countries, Levenstein, Suslow and Oswald sum the matter up in the following terms:

There is also a regrettable lesson for empirical research. The effects of private . . . international cartels on developing countries are quite difficult to determine, even on an individual country or product basis. There is anecdotal evidence about prices and barriers to entry, but few definitive conclusions can be drawn. There are enormous difficulties in estimating the quantitative impact of cartels on developing country incomes because of the secrecy under which cartels operate, the lack of antitrust prosecutions in developing countries themselves (leading to a lack of information on the activities of cartels in developing country markets), and the general lack of data on individual transactions that might have been influenced by the existence of a cartel.¹⁹

The same problems of data collection and measurement apply to *z*, the potentially lesser amount of cartel activity following the appli-

¹⁶ What are the start and end points of a cartel arrangement? How should a defunct and a subsequently revived cartel, in the same market and with same participants, be counted? In the European Union context, this has emerged as the issue of the “single continuing infringement.”

¹⁷ Should a cartel that is both national and international in scope be counted twice? Does the national “section” of an international cartel qualify as a separate cartel (as it could for jurisdictional and legal purposes)?

¹⁸ Does the cartel comprise just competing producers (the more obvious membership) or include also such actors as “consultancies” who organize meetings or keep records?

¹⁹ Levenstein, Suslow & Oswald, *supra* note 15, at 38.

cation of measures of legal control. Additionally, it has to be decided what will be the relevant frame within which z will be calculated, since for practical purposes the research cannot be open-ended but must be limited by reference to a time period, geographical area and market context. This frame has to be convincing for purposes of measuring deterrent effect (for instance, a period of two years may be regarded as too short to be meaningful).

Full and accurate data on the extent and nature of cartel activity, even in jurisdictions with active anticartel enforcement, is largely wishful thinking. Considering the problems faced by competition authorities²⁰ (with their sometimes considerable resources for investigation) in their quest for evidence of cartel activity, it is unlikely that researchers will fare well in their search for the complete picture. Estimates, based either on models usually worked out by economists or legal case histories, then, seem to be next best option.

A. Economists' projections

There have been some attempts to estimate the existence of cartels on the basis of a calculated likelihood of cartelization in particular markets.²¹ Often, such an exercise is carried out as an aid to the legal process of detection, to enable regulators to focus their efforts on the best hunting grounds for discovering and busting cartels. For instance, Grout and Sonderegger produced a report in 2005 for the U.K. Office of Fair Trading (OFT) on predicting the existence of cartels, in order to "help inform the process of deciding where to allocate effort in the detection process."²² The methodology of this research combined three approaches: first, drawing upon theoretical literature

²⁰ See, e.g., Simon J. Evenett, Margaret C. Levenstein & Valerie Y. Suslow, *International Cartel Enforcement: Lessons from the 1990s*, at 7 (Univ. Mass.-Amherst, Econ. Dep't Working Paper No. 1-1-2001, 2001) (discussing cartels' "strategies for survival," including methods of preventing detection by competition authorities).

²¹ See, e.g., PAUL A. GROUT & SILVIA SONDEREGGER, PREDICTING CARTELS: DISCUSSION PAPER (No. OFT 773, Mar. 2005); Joseph E. Harrington, *Detecting Cartels*, in HANDBOOK OF ANTITRUST ECONOMICS 213 (Paolo Buccirossi ed., 2008).

²² GROUT & SONDEREGGER, *supra* note 21, ¶ 1.2.

for a model of cartel stability and formation; second, collecting data from recent legal cases; and third, carrying out a small number of case studies of cartels in specific industries.²³ It was conceded that there was some tension between these approaches. In particular, the economists' theoretical literature tended to underestimate the role of communication in cartel sustainability, in contrast to the data gained from the regression analysis and case studies in the legal literature.²⁴ The latter data suggested that "parties might be more likely to engage in overtly collusive practices specifically in those circumstances that are predicted by the theory as being adverse to collusion."²⁵ This potential methodological collision led the authors to comment that "marrying up the evidence from the three approaches is not straightforward."²⁶

Friederiszick and Maier-Rigaud classify the economics-based method of cartel detection adopted by Grout and Sonderegger as "top-down," in that it screens several sectors in order to identify industries that are prone to cartelization.²⁷ On the other hand, a "bottom-up" approach would focus on a particular sector or market and may avoid some of the perceived shortcomings of "top-down" methodology, such as an inherent bias toward market structures traditionally associated with collusion and "coarse" broad sector classifications, such as "telecommunications."²⁸ While economists may contest the virtues of different screening models, they have to concede the limitations of such theoretical predictions, arising in particular from the limited availability of information. But much depends on the purpose of the research: for instance, whether to predict the existence of cartels as an aid to enforcement or to gain a fuller and more accurate knowledge of the existence of cartels and their economic impact. If the objective is

²³ *Id.*

²⁴ *Id.* ¶ 1.6.

²⁵ *Id.* ¶ 6.3.

²⁶ *Id.*

²⁷ Hans W. Friederiszick & Frank P. Maier-Rigaud, *The Role of Economics in Cartel Detection in Europe*, in *THE MORE ECONOMIC APPROACH IN EUROPEAN COMPETITION LAW* 179, 193 (Dieter Schmidtchen, Max Albert & Stefan Voigt eds., 2007).

²⁸ *Id.* at 195 n.41.

the latter, then it may have to be accepted that there are serious limits on what may be gained from any attempt to count and construct a quantitative picture. As Grout and Sonderegger comment:

We cannot distinguish between industries that genuinely have no cartels and those that have cartels but these have not been discovered. Each appears as a zero in the cartel data set. As a result, if there are a significant number of industries where cartels have yet to be discovered, it will be difficult to fit a model to the cartel data even if economic variables explain a great deal of the location of cartels across industries.²⁹

B. Empirical market studies and legal case histories

An alternative approach (which is empirical rather than theoretical) is to search for and examine evidence of actual cartel activity, which may be used as a basis for estimating the existence of cartels elsewhere or more generally. Grout and Sonderegger use this approach partly in their study, in referring to legal case histories and undertaking case studies.³⁰ Deborah L. Spar's illuminating enquiry into the factors that favor cartelization in different markets is an earlier example of a major study that, "rather than refer to deductive models of cartel behavior," went back "to the markets themselves."³¹ Spar was able to investigate the operation of cartels in four significant international raw materials markets (diamonds, uranium, silver and gold)³² taking a longer term historical view but also acknowledging "the score of people who shared with me the knowledge of their industries, markets and trading patterns"³³ on condition of anonymity. This research predated the upsurge of cartel criminalization and partly used data from earlier, more "innocent" times when cartels did not need to be secretive.³⁴ Starting in the mid 1990s,

²⁹ GROUT & SONDEREGGER, *supra* note 21, ¶ 4.4.

³⁰ *Id.* ¶ 1.2.

³¹ DEBORAH L. SPAR, *THE COOPERATIVE EDGE: THE INTERNAL POLITICS OF INTERNATIONAL CARTELS* 2-3 (1994).

³² *Id.* at 39-217.

³³ *Id.* at xi.

³⁴ There is of course an informative body of material on cartel activity in the earlier part of the twentieth century, more easily collected at a time when

detailed data on actual cartel activity had to be drawn from legal records of successful cartel prosecutions.

Although such legal records provide accurate detail of cartel activity and can aid an understanding of cartel operation, there are clear limitations on the extent to which they may be used to generalize a broader picture of the extent and character of cartels. Such cases provide a sample selected through prosecuting strategies and as such may not be reliably cast as representative. There is a risk, for example, that detection of cartel activity in one market will itself generate evidence of similar activity and involvement in related markets, diverting regulatory attention to further and easier detection there, and thereby confirming the idea that certain markets are especially prone to cartelization and that there are corporate usual suspects and recidivists. More generally, any deductions from actual cases have to be tempered with the possibility that those cases are to some extent the product of enforcement policy, preferences, and opportunities.

All of this suggests that the construction of quantitative profiles and before-and-after surveys, or even snapshots, are very problematical in this context, arising from problems in determining what should be counted in the first place, from the difficulty in uncovering sufficient information, and from the fragility of any model for projecting a wider picture of cartel activity.

III. RATIONAL ACTOR THEORY AND OPTIMAL DETERRENCE

The idea (especially associated with the Chicago school) that businesses behave rationally as calculating, profit-seeking actors³⁵ who calmly weigh the economic advantages and disadvantages of infringing rules has been influential in the context of antitrust law, leading to a great deal of reliance upon theories of "optimal deterrence." Thus

cartel operations were quite open. *See, e.g.*, ERVIN HEXNER, *THE INTERNATIONAL STEEL CARTEL* (1943); ERVIN HEXNER, *INTERNATIONAL CARTELS* (1946); GEORGE W. STOCKING & MYRON W. WATKINS, *CARTELS IN ACTION; CASE STUDIES IN INTERNATIONAL BUSINESS DIPLOMACY* (1946).

³⁵ *See, e.g.*, H. S. Geria, *A Micro-Microeconomic Approach to Antitrust Law: Games Managers Play*, 86 MICH. L. REV. 892 (1988).

the International Competition Network Working Group on Cartels has declared that business executives conduct a cost-benefit analysis to determine whether the benefit of cartel activity is worth the risk of being caught and punished,³⁶ so that, in the view of the U.S. Department of Justice, setting a penalty at an “optimal” level, which matches the violation’s expected net gain divided by the probability of detection and conviction, “would result in the socially optimal level of price fixing, which in this case is zero.”³⁷ The Department of Justice has happily, even obsequiously, acknowledged the Chicago school’s influence in antitrust matters, for instance in eulogizing the work of such of its leading lights as Richard Posner.³⁸ Much deterrence talk in relation to cartel activity has drawn on the argument and econometric calculations of “optimal deterrence.”³⁹

This is economic theory used confidently as a model of deterrence, since the argument follows logically from an unshakeable assumption of rational behavior. This argument has been used to justify, first, very large corporate fines as optimally deterrent,⁴⁰ and, sec-

³⁶ INT’L COMPETITION NETWORK WORKING GROUP ON CARTELS, DEFINING HARD-CORE CARTEL CONDUCT: EFFECTIVE INSTITUTIONS, EFFECTIVE PENALTIES 51–52 (2005).

³⁷ Douglas. H. Ginsburg, Assistant Att’y Gen., Antitrust Div., Statement before the United States Sentencing Commission, Hearings Concerning Alternatives to Incarceration (July 15, 1986).

³⁸ See, e.g., Press Release, U.S. Dep’t of Justice, The Honorable Richard A. Posner Receives Justice Department’s 2003 John Sherman Award (Oct. 30, 2003), available at http://www.justice.gov/atr/public/press_releases/2003/201428.htm (containing this statement by R. Hewitt Pate: “Judge Posner’s work has been critical to promoting a sounder understanding of antitrust law. The Antitrust Division and antitrust practitioners worldwide are tremendously grateful for the time and energy he has devoted to antitrust issues, including his valuable writings, thoughtful analyses, and dedication to providing an intellectually rigorous foundation for antitrust enforcement.”).

³⁹ See William M. Landes, *Optimal Sanctions for Antitrust Violations*, 50 U. CHI. L. REV. 652 (1983). Much optimal deterrence argument builds upon the classic work of Gary Becker and Ronald Coase. See, e.g., Gary Becker, *Crime and Punishment: An Economic Approach*, 76 J. POL. ECON. 169 (1968); Ronald Coase, *The Problem of Social Cost*, 3 J.L. & ECON. 1 (1960).

⁴⁰ See, e.g., Wouter P.J. Wils, *Optimal Antitrust Fines: Theory and Practice*, 29 WORLD COMPETITION: L. & ECON. REV. 183 (2006); Wouter P.J. Wils, *The European*

ond, the imprisonment of individuals⁴¹ involved in the rational business calculation, and has been reflected in the rhetoric of “sentencing milestones” calculated in either the amount of financial penalty or totals of annual jail days imposed on executives.⁴² Such optimal deterrence theory, as advocated by economists, is inspired by considerations of economic efficiency rather than normative judgment. The theory and its provenance are clearly encapsulated in William Landes’ statement that:

The optimal penalty should equal the net harm to persons other than the offender, adjusted upward if the probability of apprehension and conviction is less than one. This sanction encourages efficient behavior. It will only deter those violations that impose deadweight losses greater than the cost savings brought about by the violation. It will not deter efficient violations, those where cost savings exceed the deadweight loss.⁴³

Whatever the justification for optimal sanctions from an economic perspective, there is clear evidence from a legal or criminological perspective that such sanctions are not effective as deterrents of cartel activity generally.⁴⁴ Stucke has recently argued that:

despite (i) escalating criminal and civil fines in the U.S. (and abroad), (ii) treble private damages, (iii) longer jail sentences, and (iv) generous leniency program, the United States has not reached optimal deterrence. Before the U.S. responds with greater fines and jail sentences, it makes sense to evaluate several assumptions underlying optimal deterrence theory. . . .⁴⁵

Commission’s 2006 Guidelines on Antitrust Fines: A Legal and Economic Analysis, 30 *WORLD COMPETITION: L. & ECON. REV.* 197 (2007).

⁴¹ See, e.g., Gregory Werden & Marilyn Simon, *Why Price Fixers Should Go to Prison*, 32 *ANTITRUST BULL.* 917 (1987).

⁴² See, e.g., Donald C. Klawiter & Jennifer M. Driscoll, *Sentencing Individuals in Antitrust Cases: The Proper Balance* 23 *ANTITRUST* 75 (2009).

⁴³ Landes, *supra* note 39, at 678.

⁴⁴ See, e.g., Michael Orey, *Price Fixing: the Perpetual Sequel*, *BUS. WK.*, Sept. 28, 2009 (“for all the splashy headlines, stiff sanctions, and caught-on-tape teaching moments generated by the ADM case, price fixing appears to be as pervasive as ever”).

⁴⁵ Maurice E. Stucke, *Am I a Price-Fixer? A Behavioral Economic Analysis of Cartels*, in *CRIMINALISING CARTELS: A CRITICAL INTERDISCIPLINARY STUDY OF AN INTERNATIONAL REGULATORY MOVEMENT* ch. 3 (Caron Beaton-Wells & Ariel Ezrachi eds., 2011).

Such a critique is part of the claim now being made by behavioral economists that evidence and methodology should be drawn from other areas of social science, such as psychology and sociology, to appreciate the limits inherent in the assumption of rational calculation and decision making.⁴⁶ In particular, the argument of behavioral economics separates the human and corporate elements in business activity and questions the relevance of predictions based upon neoclassical economic theory and the latter's "unrealistic and simplifying assumptions about human nature."⁴⁷ Indeed, it has been emphatically asserted that "the rational choice model of human motivation was at best grossly incomplete, and at worst, simply wrong."⁴⁸

Viewed in particular in the light of such a critical onslaught, the limitations of optimal deterrence argument appear clear enough.⁴⁹ What is interesting is the resilience of the argument in the antitrust context and the willingness of competition authorities and some lawyers to employ the model. It is worthwhile speculating, therefore, about the ways in which such a model of behavior and decision making may be seen as serving some enforcement interests and how it may contribute to the process of penal expansion, which embraces not only a body of more severe and widely applied penalties but also the rhetoric of deterrence as a significant motor of legal control.

IV. ABANDONMENT RATES

Another approach to measuring deterrent effect is to address directly the impact of known enforcement activity on future potential

⁴⁶ See Maurice E. Stucke, *Behavioral Economists at the Gate: Antitrust in the Twenty-First Century*, 38 LOY. U. CHI. L.J. 513 (2007).

⁴⁷ *Id.* at 513.

⁴⁸ Charles R. P. Pouncy, *The Rational Rogue: Neoclassical Economic Ideology in the Regulation of the Financial Professional*, 26 VAND. L. REV. 263, 302 (2002). For a useful and recent overview of the critique of rational actor and optimal deterrence theory in the antitrust context, see generally Stucke, *supra* note 45; Stucke, *supra* note 46; Maurice E. Stucke, *Morality and Antitrust*, 2006 COLUM. BUS. L. REV. 443 (2006) (outlining Stucke's main critical thrust against a reliance on the optimal deterrence argument).

⁴⁹ See, e.g., Stucke, *supra* note 45 (providing a list of dispositional and situational factors that are potentially relevant to decisions whether or not to engage in antitrust violations).

offending by identifying the level of subsequent desistence resulting from such knowledge. Such an enquiry establishes an offense abandonment rate as a measure of general deterrent effect. Abandonment rates can be combined with a measure of the economic benefit of cartel closure to provide some quantifiable idea of the beneficial impact of enforcement activity (as discussed below).

Such research was commissioned by the U.K. Office of Fair Trading (OFT) as a study of the impact of its enforcement of the rules relating to mergers, cartels, and cases of dominance.⁵⁰ This research was based upon, first, 30 interviews with competition lawyers, economists, and firms' managers responsible for competition compliance, carried out during 2006; and, second, telephone surveys of 234 senior competition lawyers based in London and Brussels in 2006, and 202 British companies in early 2007.⁵¹ The interviews and surveys probed the extent of abandonment or modification of proposed mergers or other potentially anticompetitive conduct following recent competition authority interventions and investigations in the relevant sector.⁵² The survey found that "companies abandoned or significantly modified a large number of possible anti-competitive agreements and conduct because of the risk of OFT investigation."⁵³ In the case of cartels, the research reported from the survey of lawyers an abandonment ration of 5:1 (i.e., 5 cartels abandoned per actual OFT decision in the period 2000–06)⁵⁴ and from the survey of companies an abandonment rate of 16:1.⁵⁵ This led to a very upbeat assessment of the deterrent impact of enforcement activity:

⁵⁰ OFFICE OF FAIR TRADING, THE DETERRENT EFFECT OF COMPETITION ENFORCEMENT BY THE OFT: DISCUSSION PAPER (No. OFT 963, Nov. 2007) [hereinafter OFT 963]. See also OFFICE OF FAIR TRADING, THE DETERRENT EFFECT OF COMPETITION ENFORCEMENT BY THE OFT: SUMMARY OF COMMENTS (No. OFT 963a, Mar. 2008) [hereinafter OFT 963a].

⁵¹ OFT 963, *supra* note 50, at 17.

⁵² *Id.* at 7 (respondents were asked to identify behavior that was abandoned or modified primarily because of the risk of OFT investigation).

⁵³ *Id.*

⁵⁴ *Id.*

⁵⁵ *Id.* at 8.

The research confirms that the OFT/[Competition Commission's] merger control and the OFT's competition law enforcement work are successful in preventing other anticompetitive behavior from taking place and that the benefits of OFT work go well beyond the financial benefits in terms of lower prices that consumers get as a direct result of our merger and infringement decisions. Given that the direct effect of competition enforcement in 2006/7 was £116m, OFT estimates that, based on the scale of the deterrence effect, the benefits to consumers from OFT work may be at least a further £600m per year.⁵⁶

It is interesting to note that this positive research message was quickly taken up by then-European Union Competition Commissioner Neelie Kroes, who simply applied this conclusion from the British research to European-level enforcement to proclaim a similar value for money outcome in the case of the European Commission (said to be a "deterrence gain" of twenty billion euros a year for the period 2005–07).⁵⁷

However, these strong assertions of deterrent effect and deterrence gain should be handled with some caution. A number of points were made regarding the methodology of the research in the invited comments on the OFT discussion document.⁵⁸ Most importantly, it was argued first that the deterrent impact could be better understood by examining the type of cartel (for instance, bid rigging or price fixing) and the parties' motivations for engaging in cartel conduct.⁵⁹ Second, it was suggested that modified and abandoned cartels should be separated, since the former might have been of a more inadvertent and the latter of a more deliberate nature.⁶⁰ Third, the sample was relatively small and could be expanded to cover more industries, espe-

⁵⁶ *Id.* at 9. This quantified beneficial effect was calculated by the OFT, not by the researchers, Deloitte. It can then be compared with enforcement costs (an OFT annual budget of about £70m) in making an enforcement "value for money" calculation. "Direct effect" means the direct financial benefits in terms of lower prices to consumers following enforcement (e.g., when a cartel has been busted).

⁵⁷ See Kroes, *supra* note 7.

⁵⁸ See OFT 963a, *supra* note 50.

⁵⁹ *Id.* ¶ 2.10.

⁶⁰ *Id.*

cially upstream industries.⁶¹ Fourth, the sample did not include individuals or firms who had been involved previously in established infringements.⁶² Thus the research was saying little about individual or specific deterrence, or the situation of repeat offenders, the more dedicated cartelists; the sample may have been skewed away from the more determined, bolder end of the cartelization spectrum. Fifth, the research did not probe the relative impact of different types of enforcement action or sanction. And finally, it was argued that competition lawyers and compliance managers may have a tendency and interest in exaggerating the number of infringements that had been averted.⁶³

Thus, while this approach may be seen as a “practical and plausible way of measuring deterrent effect,”⁶⁴ it requires further refinement to produce very persuasive conclusions, and certainly the European Commission’s rush to apply the OFT findings in another enforcement context would appear to be, at the least, hasty.

Some further research commissioned by the OFT also sought to probe the deterrent and other impact of enforcement activity, this time focusing on the possible outcomes of OFT investigation of bid rigging in the U.K. construction industry.⁶⁵ The research surveyed the views of procurers and companies on the impact of competition enforcement on practice and activities in relation to procurement and the making of bids in this one economic sector in the United Kingdom.⁶⁶

⁶¹ *Id.*

⁶² *Id.* For an example of recently published research that does address impact on companies that have been involved in infringement proceedings, see Barry J. Rodger, *A Study of Compliance Post-OFT Infringement Action*, 5 EUR. COMPETITION J. 65 (2009) (companies were asked about any altered awareness of, or attitudes towards, compliance after being subject to an infringement decision by the OFT under the U.K. Competition Act 1998).

⁶³ OFT 963a, *supra* note 50, ¶¶ 2.5–2.10.

⁶⁴ *Id.* ¶ 2.5.

⁶⁵ OFFICE OF FAIR TRADING, *EVALUATION OF THE IMPACT OF THE OFT’S INVESTIGATION INTO BID RIGGING IN THE CONSTRUCTION INDUSTRY* (No. OFT 1240, June 2010) [hereinafter OFT 1240].

⁶⁶ *Id.* More specifically, the research used questionnaires and some in-depth interviews with contractors and procurers.

Significantly, however, much of the research was carried out before the OFT issued its Statement of Objections to 112 construction companies in April 2008,⁶⁷ so the impact of that major enforcement activity was not properly within the scope of the research findings. The overall findings of this research were less optimistic regarding deterrent effect. In discussing the impact of OFT investigations and other enforcement activity on both the legal knowledge and the behavior of contractors and procurers, a majority of respondents reported that there had been no impact.⁶⁸ The researchers reported for instance that:

the risk of an OFT investigation had not made any impact on the majority of contractors surveyed. 69 per cent of those aware of OFT activities and 77 per cent of those aware of the six previous cases reported that they had made no changes to their practices. However, 32 per cent of those aware of OFT activities and 17 per cent of those aware of the specific cases did report they had made some changes. For those firms that did change business practices, restricting information sharing between firms is the most frequently cited change.⁶⁹

The overall conclusion was that there was a very low level of awareness of any of the OFT's activities directed at the construction sector, particularly the six cases completed between 2004 and 2006, and respondents did not consider "that there was any clear message about bid rigging coming from the OFT during this period."⁷⁰ Some of these research findings are revealing and informative, but largely in reporting an absence of deterrent impact and in particular providing an idea of the level of awareness of the legal framework and of the extent and kind of enforcement activity. These findings do not match the confidence conveyed in many regulatory statements about deterrent impact. In the context of the U.K. construction industry, such impact is unlikely to have been increased by the subsequent reluctance of the OFT to make use of the criminal law process and

⁶⁷ See Press Release, Office of Fair Trading, OFT Issues Statement of Objections Against 112 Construction Companies (Apr. 17, 2008), available at <http://www.of.gov.uk/news-and-updates/press/2008/52-08>.

⁶⁸ OFT 1240, *supra* note 65, ¶¶ 4.57–4.61.

⁶⁹ *Id.* ¶ 4.59.

⁷⁰ *Id.* ¶ 5.14.

criminal sanctions after establishing widespread and significant illegal bid rigging.⁷¹

This kind of desistence or abandonment rate research is a promising approach, but the sample of respondents and their provenance in all important results so far suggest that in this context the targets of deterrent strategy comprise a spectrum of actors, ranging from those with a low awareness of competition law and policy, through to the more mildly inclined toward anticompetitive behavior, and then the determined recidivist actors. Regulators ought not to easily assume that their enforcement actions are well-known and convey menace. It is interesting to note from some of this research that respondents may concede the effectiveness of strong criminal law sanctions, yet remain ill-informed regarding the existence or real application of such sanctions. For instance, the research into bid rigging in the U.K. construction industry showed that respondents considered that certain types of sanctions would prove very deterrent—in particular, blacklisting, criminal prosecution and large corporate fines—but at the same time listed “better advertising of OFT activities” as a significant deterrent.⁷² Awareness of, and belief in the probable application of sanctions, is crucial.

V. DIVERSION AS A MEASURE OF DETERRENT EFFECT

Another possible measure of deterrent effect is the evidence of displacement or “diversion”⁷³ of illegal activity to another area or jurisdiction that is regarded as safer in relation to enforcement and legal control. Such relocation of prohibited conduct is a familiar phenomenon of crime control,⁷⁴ and it is unsurprising that it should also

⁷¹ See Brent Fisse, *Recent OFT Cartel Decisions Illustrate Fundamental Flaws in UK Cartel Law* (Oct. 4, 2009), http://www.brentfisse.com/images/Fisse_Recent_OFT_Cartel_Decisions_041009.pdf.

⁷² OFT 1240, *supra* note 65, ¶ 4.62.

⁷³ Sometimes the term “carve out” (i.e., carving out a jurisdiction from the cartel’s operation) may be used to describe such diversion, but this is not to be confused with the frequent use of “carve out” to describe an individual cartel member being selected (or even sacrificed) for prosecution.

⁷⁴ See, e.g., Nicole Stelle Garnett, *Relocating Disorder*, 91 VA. L. REV. 1075 (2005).

happen in relation to cartel activity. Evidence of enforcement-provoked displacement is then a measure of deterrent impact in relation to one area or jurisdiction, but of limited effect in relation to the total or global management of offending behavior: the latter is in effect exported to a more favorable location. Nonetheless, research into such diversionary activity is valuable for providing some understanding of the working of deterrent measures and is an important part of the comparative study of crime control.

An example of the methodology that may be used in exploring this kind of diversionary outcome in the context of cartels is provided by Clarke and Evenett's study⁷⁵ of the international Vitamins Cartel, investigated and sanctioned by both the U.S. Department of Justice and the European Commission in the 1990s. Rather than examining the impact of specific enforcement activity the research considered the economic circumstances of the cartel's operation by establishing a correlation between evidence of overcharge in the relevant markets and the known extent of enforcement activity in different jurisdictions.⁷⁶ To put the matter simply, the researchers were "interested in evaluating the hypothesis that, while a cartel is in operation, the conspirators will tend to raise prices less in those destinations with active cartel enforcement regimes."⁷⁷ The underlying assumption—certainly reasonable as a business and legal strategy—is that cartel members will prefer to remain "under the radar screen" in countries perceived to have strong enforcement regimes and quietly get on with the business of fixing and raising prices in countries with weaker enforcement.⁷⁸

Clarke and Evenett were able to draw upon the legally established facts of the Vitamins Cartel's operations and correlate the latter with trade flow and sales figures in the relevant countries during the relevant period.⁷⁹ The researchers established a benchmark level of sales

⁷⁵ Julian L. Clarke & Simon J. Evenett, *The Deterrent Effects of National Anticartel Laws: Evidence from the International Vitamins Cartel*, 48 ANTITRUST BULL. 689 (2003).

⁷⁶ *Id.* at 719–25.

⁷⁷ *Id.* at 691.

⁷⁸ *Id.* at 692.

⁷⁹ *Id.* at 725.

which would have prevailed in the absence of cartel activity and in this way identified the level of overcharge in different countries, taking into account also the volume of exports to particular countries.⁸⁰ As the researchers explained:

the following eight economies where the headquarters of the members of the vitamins cartel are located were identified: Belgium, Canada, France, Germany, Japan, the Netherlands, Switzerland, and the United States. Each of these economies exported substantial amounts of vitamins over the years 1985–1999. The goal is to examine how these trade flows were distorted—if at all—by the creation of the vitamins cartel.⁸¹

These data was correlated with evidence of “active” anticartel enforcement (actual prosecution of or legal proceedings against cartel activity), leading eventually to the conclusion that:

after the formation of the vitamins cartel, exports from countries where the cartel conspirators’ headquarters were located to those nations in Asia, Western Europe, and Latin America that did not have active cartel enforcement regimes tended to rise in value more than in those nations that had such regimes. Given that industry studies suggest that the demand for vitamins is price inelastic, this finding is consistent with the hypothesis that the vitamins cartel raised prices more in nations without active cartel enforcement regimes.⁸²

The authors’ overall conclusion is that “strong cartel enforcement regimes have a deterrent value.”⁸³ Such a conclusion is, of course, drawn at a very general level and does not necessarily inform much about more specific aspects of deterrent strategy as distinct from a broad perception of strong and active enforcement. But it does say something about the impact of enforcement on determined cartelists and about the importance of a clear awareness of legal and enforcement activity. These conclusions also appear to be supported by anecdotal evidence.⁸⁴ But in the final analysis such research findings also

⁸⁰ On the methodology for doing this, see *id.* at 702–04.

⁸¹ *Id.* at 706–07.

⁸² *Id.* at 692.

⁸³ *Id.* at 718.

⁸⁴ Examples include some preference for organizing cartel meetings in “safe” jurisdictions or the comments of some of the individuals captured talking on the “Lysine tapes.” See Scott D. Hammond, Deputy Assistant Att’y

say something about the resilience of cartelists and their canny and adaptive strategies in the face of legal control.

VI. RECIDIVIST BIOGRAPHIES

So far, four main approaches to researching the deterrent effect of anticartel measures have been discussed: (1) “before and after” global quantitative measuring; (2) optimal deterrence, based on abstract economic calculations; (3) abandonment rates; and (4) the measurement of cartel diversion or relocation. On the one hand, a simple observation of contemporary business activity suggests cartel resilience and therefore, negatively, a *limited* deterrent effect of anticartel enforcement. On the other hand, a study of abandonment and diversion suggests, positively, *some* deterrent effect without being more specific as to how and why it comes about. Assuming therefore a present situation of *limited deterrent impact*, research needs to probe somehow the dynamic of that deterrence that does take place.

While much of the research has contemplated the general deterrent effect on all potential cartels and cartelists,⁸⁵ it may be useful to focus attention rather on the experience of committed corporate and individual violators who have directly experienced the enforcement process, especially since the (possibly very large) dark figure of unknown and uninvestigated cartels is likely to remain dark. But it is now possible, after some years of enforcement activity, to construct a database of market actors whose cartel involvement has been established a number of times, and to present biographies of such companies and their executives as deterred or undeterred players in the cartel game. Proven recidivism, or alternatively evidence of subsequent compliance, may illuminate some of the factors that either promote or do not promote deterrence.

Gen., Antitrust Div., Caught in the Act: Inside an International Cartel, Address to the Organisation for Economic Co-operation and Development Competition Committee (Oct. 18, 2005), *available at* <http://www.justice.gov/atr/public/speeches/speech-hammond.html>.

⁸⁵ See, e.g., John Braithwaite & Toni Makkai, *Testing an Expected Utility Model of Corporate Deterrence*, 25 LAW & SOC'Y REV. 7 (1991).

There is now a body of evidence of cartel recidivism, the same actors continuing or repeating their cartel infringements, sometimes in the very same markets.⁸⁶ More systematic surveys of legally established prohibited cartel activity are beginning to appear and serve to verify repeat offending on the part of some major players in certain markets, confirming a hitherto impressionistic reading of reported cases. For instance, Connor and Helmer's study of international cartels operating between 1990 and 2005 has summarized the tip of the "recidivist iceberg" in the following terms:

Recidivism bedevils the international cartel scene [Table E] . . . lists the 11 companies with the worst records as serial price fixers: each has been caught ten times or more engaging in international hard-core cartels. Most of the 11 are conglomerates with interests in petroleum or chemical manufacturing. Seven of the eleven corporations were members of the great vitamins cartels. Nine of the top 11 recidivists hail from the [European Union], and the remaining two are Japanese firms. These 11 companies are simply the proverbial "tip of the iceberg," because we have found 174 documented instances of cartel recidivism; of these 86 companies recorded three or more cartel violations.⁸⁷

Connor and Helmers explain that their account is an underestimate of the extent of recidivist behavior—in particular it does not include national as distinct from international cartels established as violations, and some of the 174 companies had also been involved in earlier (pre-1990) EU violations that could be added to their tally.⁸⁸

This picture is confirmed by the recent European-focused study by Combe and Monnier, who completed a systematic study of all cartels established by the European Commission from 1969 through 2007.⁸⁹ These authors reported that recidivism was significant in their sample:

⁸⁶ See, e.g., Emmanuel Combe & Constance Monnier, *Cartel Profiles in the European Union*, CONCURRENCES 3-2007, at 181; John M. Connor & C. Gustav Helmers, *Statistics on Modern Private International Cartels, 1990–2005* (Am. Antitrust Inst., Working Paper No. 07-01, 2007); John M. Connor, *Recidivism Revealed: Private International Cartels 1990–2009*, 6 COMPETITION POL'Y INT'L (2010).

⁸⁷ Connor & Helmers, *supra* note 86, at 23.

⁸⁸ *Id.* at 25.

⁸⁹ Combe & Monnier, *supra* note 86 (constructing a profile of the main characteristics of the cartels, while also analyzing cartel duration, probability

in twenty-two percent of the cases, at least one firm was a recidivist, and some of the companies were multirecidivists.⁹⁰ Although most research would suggest that there is no clear correlation between industry or economic sector and recidivism, the chemicals industry appears to be especially cartel-laden, since all the cartels with three recidivist members were in the chemicals sector.⁹¹ Bearing in mind that the data from such surveys is partly the consequence of enforcement practice and strategies, it nonetheless confirms the earlier more impressionistic sense of recidivist behavior. There is moreover evidence not just of recidivist attitude but also of more immediate defiance. In the case of the Graphite Electrodes Cartel, in Europe, it was proven that members of the cartel continued their collusive behavior for one year after the European Commission's investigation began.⁹²

Study of established actual recidivism is likely to be informative. It is, first of all, based on objective data, since the facts of proven repeated offending speak for themselves and the later or continuing breaches are unlikely to be accidental. Similarly, follow-up studies of the careers of sanctioned executives can provide an illuminating comment on deterrent effect, especially in those cases (anecdotally more and more frequent) when individuals (usually European or East Asian) serve prison terms but then return to a flourishing career.⁹³ Second, actual case histo-

of detection and the impact of leniency programs on cartel detection). *See also* Emmanuel Combe & Constance Monnier, *Cartels in Europe: Main Features*, CONCURRENCES 2-2010, at 23.

⁹⁰ Combe & Monnier, *supra* note 86.

⁹¹ Combe & Monnier, *supra* note 86, at 182. *See also* Connor & Helmers, *supra* note 86, at 23.

⁹² *See* Case C-308/94, SGL Carbon v. Comm'n, 2006 E.C.R. I-5977, at ¶ 64.

⁹³ *See, e.g.,* Andreas Stephan, *Lame Duck or Black Mamba: Can the UK Cartel Offence Enhance Deterrence?* 46-48 (Univ. East Anglia Ctr. for Competition Policy, Working Paper No. 08-19, 2008) (reporting the case of Roland Br?nnimann, a former Hoffmann-La Roche executive, appointed as President and CEO of Synthes-Stratec's European and Latin American operations in 2000 following release from a prison term in the United States). *See also* Press Release, Synthes Global, Synthes-Stratec Strengthens Group Management Committee and Management of the Operations in Europe and Latin America (May 5, 2000), available at <http://www.synthes.com/html/Mai-5-2000-Synthes-Stratec.4479.0.html> (Synthes-Stratec's Chairman and CEO welcomed the convict

ries enable the study of particular sanctions and routes to detection and conviction, and comparisons across jurisdictions and national business cultures. Third, these cases involve significant economic actors whose strategies have considerable impact on competition—such parties have a high level of “antitrust awareness” while being significant targets of enforcement, at the sharp end of that enforcement process. At the same time, their economic context enables some study of the challenges of enforcement in relation to sometimes-complex corporate structures in the case of international conglomerates and in relation to dealing with a distance between senior corporate management and the marketing actions of individual executives. Fourth, legal case histories can be combined with economic and market case histories to consider the possible impact of market context on cartel behavior. Finally, these case studies can draw upon a wealth of documentary evidence, some arising from the extensive and exhaustive legal proceedings, some accessible more indirectly in the form of statements and evidence by both companies and individuals outside the legal process—some biographical and autobiographical material is even starting to appear⁹⁴ (although that should be handled with some caution).⁹⁵

executive, stating that the latter “accepted his responsibility . . . and the matter is now in the past. . . . I am very pleased that Dr Brönnimann, an expert with international experience, is joining Synthes-Stratec, and will assist us in strengthening our management team.”). Barry James, *EU Executive Seeks Broader Powers in Battling Cartels*, INT’L HERALD TRIB., Oct. 24, 2000, at 13 (highlighting the case of Robert Koehler, who returned to his position as chairman and CEO of SGL Carbon AG in Germany after conviction and paying a fine of \$10 million in the United States).

⁹⁴ For example, consider the case of Mark Whitacre, the former President of the BioProducts Division of Archer-Daniels-Midland (ADM) and an FBI informant on the Lysine Cartel from 1992 to 1995. Whitacre has now achieved a kind of celebrity status, and his story has provided the basis for multiple books and films. See, e.g., KURT EICHENWALD, *THE INFORMANT* (2001); JAMES B. LIEBER, *RATS IN THE GRAIN* (2002); *THE INFORMANT* (Warner Brothers 2009). See also Interview by Feedinfo News Service with Mark Whitacre, *Lysine Cartel Whistleblower on Price Fixing and Rebuilding His Life after Prison* (Jan. 13, 2009), available at <http://www.feedinfo.com> (in which Whitacre appears as a rehabilitated character).

⁹⁵ See, e.g., Christine E. Parker, Natalie Stepanenko & Paul Ainsworth, *ACCC Enforcement and Compliance Project: The Impact of ACCC Enforcement*

A brief example of a potentially revealing corporate “outlaw” biography of this kind would be the case of the multinational company and antitrust recidivist, Dutch conglomerate AkzoNobel.⁹⁶ This company was ranked at number four, equal to its rank in Connor and Helmers’s table of eleven largest international cartel recidivists in the period 1990–2005,⁹⁷ and is still involved in legal proceedings relating to antitrust violations.⁹⁸ But beginning in 2000, there appeared to be a change of direction at the senior level. When agreeing in 2006 to a corporate plea of guilty to U.S. charges of price fixing in the hydrogen peroxide market, CEO Hans Wijers took the opportunity to state:

We regret AkzoNobel’s past conduct and I am determined that we should put the company’s previous breaches of competition law behind us. We are fully committed to ensuring that events such as this do not occur again and now operate a zero tolerance policy for those who take part in any anti-competitive behavior.⁹⁹

The introduction to AkzoNobel’s *Competition Law Compliance Manual* explains that “penalties for breaching competition law are increas-

Activity in Cartel Cases (Univ. of Melbourne Faculty of Law, Research Paper Series No. 87, 2006) (offering an example of an approach that combines elements of abandonment rate research and case studies of delinquent companies).

⁹⁶ AkzoNobel is a multinational producer of paints, coatings, and specialty chemicals, based in the Netherlands and formed from the merger between Akzo and Nobel Industries in 1994 and the acquisition of ICI in 2008. It was rated the world’s most profitable company in 2008, after divesting itself of its pharmaceuticals business. It is active in some eighty countries. See AKZO NOBEL N.V., ABOUT AKZONOBEL, <http://www.akzonobel.com/aboutus/> (last visited Nov. 5, 2010).

⁹⁷ Connor & Helmers, *supra* note 86, at 23 (table E).

⁹⁸ See, e.g., Case C-97/08, Akzo Nobel N.V. v. Comm’n, 2009 E.C.R. I-0000 (in which the parent company’s liability in the Choline Chloride Cartel was confirmed).

⁹⁹ Press Release, Akzo Nobel N.V., Akzo Nobel Reaches Agreement with U.S. Department of Justice (Mar. 15, 2006), available at <http://www.cisionwire.com/akzonobel/akzo-nobel-reaches-agreement-with-u-s--department-of-justice, c200706>. But it seems to have taken some time for zero tolerance to take root—in 2001, Erik Anders Broström retained his position in the company following a three months prison term in the United States, in recognition of his full cooperation with the authorities. See Stephan, *supra* note 93, at 47.

ingly severe, especially in the case of a company such as AkzoNobel, which is unfortunately viewed as a repeat offender by the competition authorities."¹⁰⁰ The company has been cooperative in investigations during the last decade but is still counting the cost of its anticompetitive history and, as recently as November 2009, was fined by the European Commission for its involvement in the Heat Stabilisers Cartel, the investigation of which began in 2003.¹⁰¹ It appears that the company had taken stock of the accumulating cost of its antitrust noncompliance. In its Report for 2009, the company noted that it had made provision of 188 million euros for its anticipated antitrust bill and that

in the light of future developments, such as (a) the outcome of investigations by the various antitrust authorities, (b) potential lawsuits by (direct or indirect) purchasers, (c) possible future civil settlements, and (d) rulings or judgments in the pending investigations or in related civil suits, the antitrust cases are likely to result in additional liabilities and related costs. At this point in time, we cannot estimate any additional amount of loss or range of loss in excess of the recorded amounts with sufficient certainty to allow such amount or range of amounts to be meaningful. Moreover, if and to the extent that the contingent liabilities materialize, they are typically paid over a number of years and the timing of such payments cannot be predicted with confidence. The company believes that the aggregate amount of any additional fines or civil damages to be paid will not materially affect the company's financial position. The aggregate amount, however, could be material to our results of operations or cash flows in any one accounting period.¹⁰²

Such statements are very suggestive. In particular, they point to a deterrent impact of a particular kind, the outcome appearing to be a corporate decision at the senior level that the *aggregate long-term impact of sanctions* directed at a *well-known violator* (with almost outlaw status) have become sufficiently damaging to its business, and suffi-

¹⁰⁰ AKZONOBEL N.V., COMPETITION LAW COMPLIANCE MANUAL 4 (2008), available at http://www.akzonobel.com/system/images/AkzoNobel_Competition_Law_Compliance_Manual_tcm9-16085.pdf.

¹⁰¹ Case COMP/38.589, Heat Stabilisers, 2010 O.J. (C307/05).

¹⁰² AKZONOBEL N.V., REPORT 2009, NOTE 21: CONTINGENT LIABILITIES AND COMMITMENTS ¶ 8 (2009), available at <http://report.akzonobel.com/2009/financialstatements/notes/>.

ciently uncertain in their result though certain to happen, that it would be prudent to *take control of internal anticompetitive tendencies*. This may lead to some illuminating conclusions, although of course the latter would be applicable, strictly speaking, only to the case of a high-profile recidivist company. In particular, there may be some interesting reflections on the aggregate and long-term impact of sanctions and leniency-based prosecutions, as distinct from that of specific fines or prison terms, and of the possible distinction between senior management policy and anticompetitive behavior at the operational level of companies.¹⁰³

The simple question might be whether or not the case of AkzoNobel is an instance of effective deterrence. The answer to that question would appear to be both yes and no: there has been deterrence of a kind, but the “corporate biography” brings forward evidence of a complex process at work.

VII. WHAT TO LOOK FOR: DETERRENCE OR COMPLIANCE?

That last observation prompts the reminder that, after all, deterrence is but part of a wider picture of compliance, in the sense of being just one among a number of possible routes to compliance. Deterrence is an element of what Hart referred to as the “external” aspect of legal obligation:

At any given moment the life of any society which lives by rules, legal or not, is likely to consist in a tension between those who, on the one hand, accept and voluntarily co-operate in maintaining the rules, and so see their own and other persons’ behaviour in terms of the rules, and those who, on the other hand, reject the rules and attend to them only from the external point of view as a sign of possible punishment.¹⁰⁴

¹⁰³ AkzoNobel may provide a good illustration of a large multinational company struggling to enforce its compliance policy in relation to widespread corporate activity. The situation gives rise to questions of legal responsibility (as addressed, e.g., in *Akzo Nobel*, 2009 E.C.R. I-0000), ethical questions of corporate social responsibility, and practical questions of “agency costs.”

¹⁰⁴ H.L.A. HART, *THE CONCEPT OF LAW* 88 (1961).

Some companies may be naturally competition compliant (“the right thing to do”), others may be so on considered reflection (“the sensible and reasonable thing to do”), while others may be noncompliant (“the thing to do only if coerced”). It is the last group who may then need to be deterred, and any discussion of deterrence should investigate its necessity and value relative to other ways of securing a compliant attitude. One tentative conclusion from the discussion above, and one which may emerge from a fuller reading of antitrust recidivist biographies, is that a combination of strategies and measures may over time achieve a measure of deterrence—or, perhaps it should be expressed, *conversion* from a culture of noncompliance to one of compliance. It may be argued, for example, that the cumulative impact of leniency programs and a range of sanctions—in particular, corporate fines, claims for damages and personal disqualification (rather than imprisonment)—could lead the management of a company eventually to conclude: “Enough, let’s reform our ways and inculcate a different mindset within our ranks.” If that is the outcome, it may be questioned whether it matters much that it is described as successful deterrence, if the long-term result is compliance.

This reflection suggests the virtue in some shift of emphasis from deterrence research to compliance research, especially considering some of the methodological and theoretical hurdles involved in the assessment of deterrent impact. A more holistic enquiry into the motors of regulatory compliance may prove to be more illuminating in understanding the working and effectiveness of systems of regulation. Such, for instance is the approach taken by the ongoing Australian Competition and Consumer Commission (ACCC) Enforcement and Compliance Project.¹⁰⁵ The ultimate aim of this project is to

test and explain variation in a number of factors that previous research and general opinion see as influencing business compliance with regulation—awareness of the rules, the perception of regulatory threat, perception of the costs and gains of compliance, perceptions and opinions of the regulatory enforcement agency (the ACCC), and commitment to the values of the rules and motivation to comply with them—and perhaps most significantly to test what influence, if any, the actual experience of a regu-

¹⁰⁵ For information about the project, see Melbourne Law School, *Cartel Project* <http://cartel.law.unimelb.edu.au> (last visited Nov. 3, 2010).

latory enforcement action has on businesses' perception of these factors and on their compliance.¹⁰⁶

Such an approach, detaching itself from the rhetoric and policy of deterrence (and not even using that word) may capture more effectively the complexity and nuance of business behavior and attitude within the framework of regulation, so as better to investigate and understand the effect of the latter on the former.

¹⁰⁶ Vibeke Lehmann Nielsen & Christine Parker, *The ACCC Enforcement and Compliance Survey: Report of Preliminary Findings* 199 (Ctr. for Competition & Consumer Policy, Austl. Nat'l Univ. 2005). See also U.K. OFFICE OF FAIR TRADING, DRIVERS OF COMPLIANCE AND NON-COMPLIANCE WITH COMPETITION LAW (No. OFT 1227, May 2010), available at http://www.offt.gov.uk/shared_offt/reports/comp_policy/oft1227.pdf.

*D*eterrence and the impact of
calculative thinking on business
compliance with competition
and consumer regulation

BY CHRISTINE PARKER* AND
VIBEKE LEHMANN NIELSEN**

A number of countries, including Australia, have recently drastically increased the sanctions available for cartel conduct, on the assumption that businesses make decisions about their regulatory compliance behavior on the basis of self-interested calculations about the costs and gains of that behavior. Policymakers often assume that higher sanctions will automatically mean greater deterrence and therefore more compliance. This article sets out a more holistic model of calculative thinking about the costs and gains of compliance and noncompliance. We go on to test this model using data about business firms' compliance management responses to Australia's competition and consumer protection law. We find that enforcement

* Professor, Law School, University of Melbourne, VIC 3010, Australia.

** Associate Professor, Political Science, University of Aarhus, Denmark.

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probability is more important than sanction severity, that business belief in the positive business case for compliance is also important, and that fundamental firm characteristics (size, resources, and management style) are also significantly and independently related to compliance management behavior. We conclude that higher sanctions on their own are unlikely to lead to higher compliance with Australian competition and consumer protection law.

I. INTRODUCTION

Australia is one of the many countries that has recently radically increased the penalties available for cartel conduct and even criminalized this conduct in order to make jail available as a sanction for involved individuals.¹ According to the Organisation for Economic Cooperation and Development (OECD), which is coordinating the worldwide movement to “fight” hard core cartels, the principal purpose of sanctions in cartel cases is deterrence.² The optimal fine should both cancel out the gains of noncompliance and take into account the low probability of a cartel being detected. This means that fines against companies should be many multiples of their gains and that individuals should also be sanctioned to provide additional deterrence.³

¹ In 2007, penalties increased from AUD 10 million for companies to either AUD 10 million or three times the value of the illegal benefit or, when the value of the illegal benefit cannot be ascertained, ten percent of the turnover in the preceding twelve months, whichever is the larger. In 2009, certain cartel conduct was criminalized and jail penalties of up to ten years became available for involved individuals. Previously only civil penalties of up to AUD 500,000 could be assessed against individuals. Note that these changes had been foreshadowed, but had not actually occurred, at the time that the data in this article were collected. Caron Beaton-Wells, *Criminalising Cartels: Australia's Slow Conversion*, 31 *WORLD COMPETITION* 205 (2008). See also Christopher Harding, *Business Collusion as a Criminological Phenomenon: Exploring the Global Criminalisation of Business Cartels*, 12 *CRITICAL CRIMINOLOGY* 181 (2006).

² ORG. FOR ECON. COOP. & DEV. (OECD), *FIGHTING HARD CORE CARTELS: HARM, EFFECTIVE SANCTIONS AND LENIENCY PROGRAMMES* 72 (2002).

³ *Id.* at 25–27. See also Peter Whelan, *A Principled Argument for Personal Criminal Sanctions as Punishment Under EC Cartel Law*, 4 *COMPETITION L. REV.* 7, 30–35 (2007); Wouter P.J. Wils, *Optimal Antitrust Fines: Theory and Practice*, 29 *WORLD COMPETITION* 183 (2006).

The policy of increasing sanctions for cartel conduct assumes that there are still noncompliant business people who have made a calculated and self-interested decision that the gains of noncompliance outweigh the costs. It further assumes that these people can be frightened into compliance if the costs of noncompliance become weightier.⁴ This article tests these assumptions in one country, Australia, just before penalties for cartel behavior and other anticompetitive conduct were increased. We systematically test the impact of the various costs and gains of compliance and noncompliance, including the deterrence of legal sanctions, on firms' competition and consumer protection compliance management systems and practices. We identify which perceived costs and gains of compliance and noncompliance make a difference and whether there is any margin for influencing the behavior of those firms that comply least through the deterrence of legal sanctions.

On the basis of our evidence we argue that giving the Australian competition regulator bigger sticks to fight cartels was a policy solution that was simply "too easy" to work on its own. Lawmakers and regulators need to base policy on more textured analyses of the impact of firms' perceptions of costs and gains on their compliance behavior. This article therefore begins by setting out in section II, as comprehensively as possible, the various aspects of business firms' calculative thinking that are likely to have an impact on compliance, drawing on previous empirical research on regulatory compliance. From this we derive a holistic model of the different elements of calculative thinking that affect compliance. We see the derivation of this holistic model in itself as an important corrective to simplistic deterrence. Section III of the article describes our study and the measures we use to test the various elements of our model. Section IV reports and discusses our results, and section V concludes.

This in-depth investigation of the elements of deterrence within one regulatory regime allows us to identify whether there is in fact room for changes in regulatory enforcement to lead to marginal gains

⁴ See Christine Parker, *Criminalisation and Compliance: The Gap Between Rhetoric and Reality*, in *CRIMINALISING CARTELS: CRITICAL STUDIES OF AN INTERNATIONAL REGULATORY MOVEMENT* (Caron Beaton-Wells & Ariel Ezrachi eds., 2011).

in deterrence. It is not, however, our purpose in this article to test the extent to which calculative self-interested thinking is more or less significant than other competing explanations for compliance, such as people's belief in the legitimacy and justice of the law and regulators or social pressures to comply out of conformance.⁵ Common sense and previous research all suggest that calculative, self-interested thinking does play an important, but not always supreme, part in motivating business compliance and noncompliance.⁶ We leave to further research, and another day, the precise interactions and relativities between self-interested, normative, and social motivations to comply.⁷

⁵ For these types of discussions, see generally TOM R. TYLER, *WHY PEOPLE OBEY THE LAW* (2006) (submitting that people primarily obey law because they believe in respecting legitimate authority, not simply because they fear punishment); Soeren Winter & Peter J. May, *Motivation for Compliance with Environmental Regulations*, 20 J. POL'Y ANALYSIS & MGMT. 675 (2001) (discussing the degree to which awareness of rules, capacity to comply with rules, and social motivations foster compliance with regulations); Vibeke Lehmann Nielsen & Christine Parker, *To What Extent Do Third Parties Influence Business Compliance?*, 35 J.L. & SOC'Y 309 (2008); Christine Parker & Vibeke Lehmann Nielsen, *What Do Australian Businesses Think of the ACCC and Does It Matter?*, 35 FED. L. REV. 187 (2007) (reporting on representative quantitative evidence on how large Australian businesses perceive the Australian Competition and Consumer Commission (ACCC) as a regulator); Parker, *supra* note 4.

⁶ See, e.g., John Braithwaite & Toni Makkai, *Testing an Expected Utility Model of Corporate Deterrence*, 25 LAW & SOC'Y REV. 7, 10 (1991); Diane Vaughan, *Rational Choice, Situated Action, and the Social Control of Organizations*, 23 LAW & SOC'Y REV. 27, 27-28 (1998).

⁷ For these types of discussions, see generally IAN AYRES & JOHN BRAITHWHITE, *RESPONSIVE REGULATION: TRANSCENDING THE DEREGULATION DEBATE* (1992) (drawing on studies of regulation from around the world and modern game theory to outline innovative suggestions for improving regulatory compliance); Julien Etienne, *The Impact of Regulatory Policy on Individual Behaviour: A Goal Framing Theory Approach* (Centre for Analysis of Risk and Regulation, Discussion Paper No. 59, 2010) (identifying variables and mechanisms through which regulatory policy influences individual choices); SALLY S. SIMPSON, *CORPORATE CRIME, LAW, AND SOCIAL CONTROL* (2002) (examining whether imposition of criminal punishment and stigmatization will be effective in bolstering corporate crime control); Mark C. Suchman, *On Beyond Interest: Rational, Normative and Cognitive Perspectives in the Social Scientific Study of Law*, 3 WIS. L. REV. 475 (1997) (discussing responses to law by addressing three different perspectives on decision making); Dorothy Thornton, Neil A. Gunningham & Robert A. Kagan, *General*

II. CALCULATIVE THINKING AND BUSINESS COMPLIANCE: OUR MODEL

A. Introduction

It is our aim to set out as fully and systematically as possible the elements of calculative thinking that might affect a business firm's compliance behavior and to test the extent to which variation in these elements has any impact on compliance management systems and practices. On the cost side of the noncompliance ledger, these elements include not just those formal legal sanctions that are often the chief concern of policy makers and enforcement agencies, but also informal and third party sanctions. We also factor in the opportunity costs of positive compliance, on the one hand, and the positive gains of compliance (beyond avoiding the sanctions for noncompliance) on the other.

B. Costs of noncompliance

Classical deterrence theory proposed that people would be deterred from breaking the law when the legal penalty they would receive for a breach multiplied by the likelihood of swift detection and conviction outweighed the gain.⁸

But it is not only the deterrence of formal legal sanctions that can provide calculative motivations for compliance. Informal economic and social sanctions applied by various third parties in the case of breach, such as stock price declines and social embarrassment among family and peers, may be even more effective at influencing compliance behavior.⁹

Deterrence and Corporate Environmental Behavior, 27 *LAW & POL'Y* 262, 281 (2005) (finding that "general deterrence" enhances compliance with regulatory laws not by enhancing the perceived threat of legal punishment, but by providing "reassurance" that compliance is not "foolish" and by serving as a "reminder to check on the reliability of [firms'] exiting compliance routines").

⁸ See, e.g., John T. Scholz, *Enforcement Policy and Corporate Misconduct: The Changing Perspective of Deterrence Theory*, 60 *L. & CONTEMP. PROBS.* 253, 254 (1997); CHARLES R. TITTLE, *SANCTION AND SOCIAL DEVIANCE: THE QUESTION OF DETERRENCE* (1980).

⁹ See Harold G. Grasnick & Robert J. Bursik, *Conscience, Significant Others, and Rational Choice: Extending the Deterrence Model*, 24 *LAW & SOC'Y REV.* 837, 839-42 (1990); see also SIMPSON, *supra* note 7, at 43; Thornton, Gunningham & Kagan, *supra* note 7, at 264.

To the extent that informal economic and social sanctions augment formal enforcement activity, we would expect individuals and businesses to be more motivated to comply with the law because the mere level of cost of noncompliance has increased. Moreover third party informal social and economic sanctions can bring to bear a range of costs of noncompliance that can be much more relevant to an individual or firm's own priorities than the application of a legal penalty.¹⁰ Indeed, in an age when much of business is about managing brand value and reputation, we would expect that the financial and moral costs of bad publicity from noncompliance would loom particularly large in businesses' thinking about the costs and gains of compliance and noncompliance.¹¹ We would also expect individuals and firms to comply more consistently when they feel they are being monitored from a number of different angles rather than just by the official regulatory agency.¹²

Therefore we expect the likelihood and severity of both formal legal penalties and reaction by a range of social and economic stakeholders to noncompliance to have an influence on compliance behavior.

C. Gains of noncompliance

However, neither formal nor informal sanctions for noncompliance may be effective at motivating compliance behavior if business firms value the gains of noncompliance more greatly than avoiding the consequences of noncompliance. Regulators therefore generally try to set their sanctions by reference to the gains of the breach. Thus in cartel cases, classical deterrence theory requires us to calculate the optimal fine as the extra profit obtained by the cartel behavior multiplied by

¹⁰ See JOHN BRAITHWAITE, *CRIME, SHAME AND REINTEGRATION* 69–70 (1989); see also TITTLE, *supra* note 8, at 320.

¹¹ See generally, BRENT FISSE & JOHN BRAITHWAITE, *THE IMPACT OF PUBLICITY ON CORPORATE OFFENDERS* (1983) (discussing the role of adverse publicity in controlling corporate crime).

¹² See generally NEIL GUNNINGHAM, ROBERT A. KAGAN & DOROTHY THORNTON, *SHADES OF GREEN: BUSINESS, REGULATION AND ENVIRONMENT* (2003) (suggesting that compliance is influenced by a complex interaction between regulations, community pressure, economic constraints, and corporate management styles); Nielsen & Parker, *supra* note 5.

the probability of detection. This is not a very useful general measure for survey research into how different factors prospectively affect compliance behavior because the optimal fine can be sensibly calculated only by reference to each specific case after the breach has already occurred. Any estimate of the value that a business would place on noncompliance with the law is completely hypothetical and therefore nonsensical in the absence of information about a specific set of circumstances of breach. For the purposes of empirical research into general perceptions of the costs and gains of compliance before a breach has occurred, it is more helpful to think about the potential gains of noncompliance as one of the opportunity costs of compliance.

D. Costs and gains of compliance

Policy discussions of deterrence theory and sanctioning generally focus on using sanctions to increase the costs of noncompliance to a level that outweighs the gains of noncompliance. The costs and gains of compliance, however, should logically also be an important part of any self-interested calculation about compliance behavior by business. Yet the costs and gains of compliance are rarely included in the deterrence model.

The costs of compliance include the costs that organizations incur in becoming aware of their legal responsibilities, understanding how the various actions of individuals and teams within the organization might lead to breaches of those responsibilities, and making, implementing, and monitoring controls to prevent breaches. Moreover, the costs of compliance with the law include a range of opportunity costs. As we have already seen, the opportunity costs of compliance include, of course, the potential gains of noncompliance. But they can also include forgone opportunities for innovation and profit making. Indeed, businesses sometimes argue that the costs of compliance include the over-deterrence or “chilling” of socially or economically useful business behavior by inhibiting “responsible risk taking and commercial decision making.”¹³

To counteract business worries about the costs of compliance, regulators sometimes invest resources not only in legal enforcement and

¹³ KAREN YEUNG, *SECURING COMPLIANCE: A PRINCIPLED APPROACH* 65–66 (2004).

education about the sanctions for breaking the law, but also in education and dialogue with businesses about the positive business case for compliance (such as improvements in customer retention and satisfaction) that seek to connect compliance with internal business goals and efficiencies.¹⁴ It is also the strategy adopted by lawyers and internal “compliance champions” who seek to persuade business leaders that it is in their own long-term self-interest to comply.¹⁵ Similarly, just as certain third parties might economically or socially sanction non-compliance, they might also (albeit rarely) provide rewards for compliance, such as consumers paying a higher price for compliant products.¹⁶

Therefore we expect the range of costs and gains of compliance to influence compliance behavior. We therefore measure costs and gains of compliance in a way that is broad enough to incorporate costs and gains relevant to businesses’ own internal goals and purposes.

E. Perceptions of cost and gain

Arguments for the power of deterrence tend to assume that business people make fully informed, rational choices about compliance and noncompliance. But people’s perceptions of calculative reasons for compliance are often not in fact accurate and rational. People do not necessarily know the objective likelihood or severity of being caught in noncompliance. Moreover their perceptions of risk are affected by a range of cognitive biases.¹⁷ Individual personalities, lev-

¹⁴ See, e.g., EUGENE BARDACH & ROBERT KAGAN, *GOING BY THE BOOK: THE PROBLEM OF REGULATORY UNREASONABLENESS* 177 (1982). See generally JAY SIGLER & JOSEPH MURPHY, *INTERACTIVE CORPORATE COMPLIANCE: AN ALTERNATIVE TO REGULATORY COMPULSION* (1988) (contending that regulatory reform would be more successful if built upon closer cooperation between business and government).

¹⁵ See CHRISTINE PARKER, *THE OPEN CORPORATION: EFFECTIVE SELF-REGULATION AND DEMOCRACY* 63–66 (2002).

¹⁶ See, e.g., DAVID VOGEL, *THE MARKET FOR VIRTUE: THE POTENTIAL AND LIMITS OF CORPORATE SOCIAL RESPONSIBILITY* 48–51 (2005).

¹⁷ See Paul H. Robinson & John M. Darley, *Does Criminal Law Deter? A Behavioural Science Investigation*, 24 OXFORD J. LEGAL STUD. 173, 179–97 (2004).

els of emotionality, and senses of moral obligation to obey the law each play a part in how individuals perceive the costs and gains of noncompliance¹⁸ and, indeed, whether they even seek out information about the costs and gains of compliance and noncompliance at all.¹⁹

Even commercial firms, which we might expect to make some effort to engage in soundly based calculative thinking about compliance with the law, “have not been particularly attentive to penalty information, nor have they made special efforts to obtain timely and accurate information.”²⁰ Indeed a raft of research on organizational theory, rational neoinstitutionalism, and behavioral economics shows that apparently rational choices in business decision making are often not objectively optimal.²¹ In addition to the individual quirks and biases of calculative thinking exhibited by employees and officers in a firm, the ways individuals interact with one another in different work teams will also affect overall firm thinking on the costs and gains of compliance.²²

This does not mean that calculations of the costs and gains of compliance are not important to business thinking, decision making,

¹⁸ See Toni Makkai & John Braithwaite, *The Dialectics of Corporate Deterrence*, 31 J. RES. CRIME & DELINQ. 347 (1994). See also John T. Scholz & Neil Pinney, *Duty, Fear, and Tax Compliance*, 39 AM. J. POL. SCI. 490 (1995) (arguing that compliance with income tax regulation is motivated, fundamentally, by citizens’ beliefs about their duty to obey laws).

¹⁹ See, e.g., Toni Makkai & John Braithwaite, *The Limits of the Economic Analysis of Regulation: An Empirical Case and a Case for Empiricism*, 15 LAW & POL’Y 271, 279 (1993); Thornton, Gunningham & Kagan, *supra* note 7, at 280.

²⁰ Thornton, Gunningham & Kagan, *supra* note 7, at 279.

²¹ See, e.g., EMMA DAWNAY & HETAN SHAH, *BEHAVIOURAL ECONOMICS: SEVEN PRINCIPLES FOR POLICY-MAKERS* (2005); FISSE & BRAITHWAITE, *supra* note 11, at 101–32; Herbert A. Simon, *A Behavioral Model of Rational Choice*, 69 Q.J. ECON. 99, 101 (1995); SIMPSON, *supra* note 7, at 91–92.

²² See generally Jennifer A. Howard-Grenville, Jennifer Nash, & Cary Coglianese, *Constructing the License to Operate: Internal Factors and their Influence on Corporate Environmental Decisions*, 30 LAW & POL’Y 73 (2008) (discussing how a company’s “license to operate” is ultimately constructed by internal, rather than external, factors, such as managerial incentives, organizational culture, and organizational identity). See also SIMPSON, *supra* note 7, at 135.

and behavior. Decision making and behavior that are not optimally rational will often still be consistent and predictable and, therefore, amenable to empirical study. But it will be people's perceptions of costs and gains rather than objective estimates of costs and gains that are most likely to be relevant to their behavior.²³

Therefore we test the impact of business managers' subjective perceptions of costs and gains in order to understand their firms' behavior, rather than calculating objective likelihoods of the costs and gains of compliance and noncompliance.

F. Firm history

One clear finding from previous empirical research on business deterrence is that many business managers do not make, or act on, cost-benefit calculations about compliance—until something like a regulatory enforcement action or publicly reported breach or accident brings the risks of noncompliance to their attention.²⁴

Therefore we expect firm history—whether businesses have had a regulatory investigation or criticism by stakeholders in the recent past—to influence business calculations about the risks of noncompliance and therefore compliance behavior.

G. Size, resources, and management style

Arguments for the power of deterrence also assume that business firms have the capacity and resources to make meaningful calcula-

²³ See Braithwaite & Makkai, *supra* note 6, at 7–9; Makkai & Braithwaite, *supra* note 19; TITTLE, *supra* note 8, at 323.

²⁴ See, e.g., Hazel Genn, *Business Responses to the Regulation of Health and Safety in England*, 15 LAW & POL'Y 219, 223 (1993); ANDREW HOPKINS, MAKING SAFETY WORK: GETTING MANAGEMENT COMMITMENT TO OCCUPATIONAL HEALTH AND SAFETY 88–95 (1995); DAVID McCAFFREY & DAVID HART, WALL STREET POLICES ITSELF: HOW SECURITIES FIRMS MANAGE THE LEGAL HAZARDS OF COMPETITIVE PRESSURES 87 (1998); John Mendeloff & Wayne B. Gray, *Inside the Black Box: How Do OSHA Inspections Lead to Reductions in Workplace Industries?*, 27 LAW & POL'Y 219, 220–21 (2005); John T. Scholz & Wayne B. Gray, *OSHA Enforcement and Workplace Injuries: A Behavioral Approach to Risk Assessment*, 3 J. RISK & UNCERTAINTY 283, 302 (1990).

tions about the costs and gains relevant to their self-interest and to act on those calculations.

However, firms of different sizes will likely have different capacities to manage their own compliance and their risk of noncompliance. Larger businesses would be expected to have more opportunities for noncompliance, but also greater capacity to implement compliance management systems.²⁵ Furthermore, they are likely to perceive themselves as more visible to a range of stakeholders because of their size and reputation.²⁶ Similarly, companies that have greater resources to understand the law and their strategic environment might also have a higher perception of the risks from various external stakeholders if they breach the law. They should also be in a better position to implement compliance systems and other management behaviors.²⁷

Similarly, we expect firms that are better managed to be more aware of external stakeholders (and the risks associated with breach in relation to a range of stakeholders) and to be in a better position to manage compliance.

Therefore we expect firm size, resources, and management style all to influence compliance behavior.

H. Market position

We expect that the extent to which firms fear different sanctions, particularly informal social and economic losses in relation to customers, depends on their market position and their vulnerability to market competition. Greater sensitivity to risk is expected for those with larger brand presence, more contact with consumers, and more

²⁵ See Susmita Dasgupta, Hemamala Hettige & David Wheeler, *What Improves Environmental Compliance? Evidence from Mexican Industry*, 39 J. ENVTL. ECON. & MGMT. 39 (2000); Dan R. Dalton & Idalene F. Kesner, *On the Dynamics of Corporate Size and Illegal Activity: An Empirical Assessment*, 7 J. BUS. ETHICS 861, 865 (1988). Cf. MARSHALL B. CLINARD, & PETER C. YEAGER, *CORPORATE CRIME* (1980).

²⁶ See VOGEL, *supra* note 16, at 46–74.

²⁷ See RICHARD W. SCOTT & GERALD F. DAVIS, *ORGANIZATIONS AND ORGANIZING: RATIONAL, NATURAL AND OPEN SYSTEM PERSPECTIVES* 120–21 (2007).

“substitutable” products.²⁸ On the other hand, those in a more vulnerable market position might feel a profit squeeze that places them under greater pressure to engage in cartel conduct to ensure profits and stabilize their business.²⁹ In other words, they might value the gains of noncompliance more greatly.

Therefore we expect market position to influence compliance behavior.

I. Compliance management

In the business firm context, even where firm leaders perceive the costs and gains of compliance and noncompliance and seek to act on them, they cannot necessarily influence every individual’s behavior. They must act through management.

Therefore rather than seeking to test the impact of the perception of costs and gains on actual incidents of noncompliance, we test its impact on compliance management behavior, such as implementation of compliance systems and habits of management, that seek to identify and remedy risks of noncompliance.

We see this as a better test of calculative thinking on businesses as a whole than merely looking at the impact on incidents of noncompliance. We more logically expect to see the effect of calculative thinking on management behavior to try to avoid noncompliance. Ideally, we would go on to test the impact on incidents of noncompliance. However, in a regulatory set-up like the Australian consumer and competition law (described further in the next section), incidents of noncompliance rarely become publicly known. It is therefore virtually impossible to do statistical analysis to test the impact of various factors on compliance as there are not enough cases of known noncom-

²⁸ See VOGEL, *supra* note 16, at 53.

²⁹ See generally Gilbert Geis, *White Collar Crime: The Heavy Electrical Equipment Antitrust Case of 1961*, in CRIMINAL BEHAVIOR SYSTEMS: A TYPOLOGY 139 (Marshall B. Clinard & Richard Quinney eds., 1967) (discussing the modus operandi of conspirators involved in antitrust violations); Sally S. Simpson, *The Decomposition of Antitrust: Testing a Multi-Level Longitudinal Model of Profit Squeeze*, 51 AM. SOC. REV. 859, 859 (1986) (suggesting that “only certain forms of antitrust criminality are related to profit-squeeze; others occur within a munificent environment while some are unrelated to economic conditions”).

pliance, and we do not know whether the publicly known cases are most of the cases or only the tip of the iceberg.³⁰

We expect that a calculating business would respond to perceptions of deterrence by seeking to ensure compliance with the law by putting in place systems for ensuring compliance and in fact managing compliance well. This compliance management behavior may or may not lead directly to actual compliance with the law in all circumstances, although we would generally expect businesses' compliance management activities to lead to actual compliance—suggesting that measures of compliance management activities will act as a reasonable proxy for compliance in a situation in which it is very difficult to measure actual compliance.³¹

J. Our model

Our article comprehensively tests whether different types of calculative thinking about compliance by management—not just the deterrence of legal sanctions—actually influence compliance management behavior.

Figures 1 and 2 summarize the various aspects of calculative thinking about compliance and noncompliance we see as relevant based on the discussion above. We make the statistical analyses in two stages (shown in figures 1 and 2, respectively) since the control variables (size, resources, management oversight and planning, market position, and firm history) are likely to be more fundamental explanations for differences in compliance management behavior than calculative thinking about the costs and gains of compliance and noncompliance. These control variables are likely to provide explanations of compliance management behavior that lie behind the differences in perceptions of costs and gains. If so, the statistics in second stage will show to what degree differences in perceptions of costs and gains in themselves have any explanatory power or whether it is all caused by the controls that we include in the second stage.

³⁰ See, e.g., Vibeke Lehmann Nielsen & Christine Parker, *The ACCC Enforcement and Compliance Survey: Report of Preliminary Findings* 30–64 (Ctr. for Competition & Consumer Policy, Austl. Nat'l Univ., 2005).

³¹ See Christine Parker & Vibeke Lehmann Nielsen, *Corporate Compliance Systems: Could They Make Any Difference?*, 41 ADMIN. & SOC'Y 3 (2009).

Figure 1
Explanatory Model Stage One

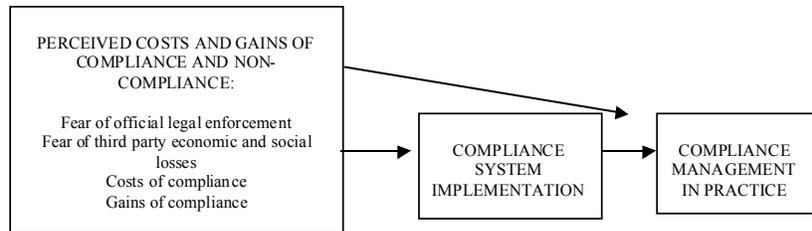
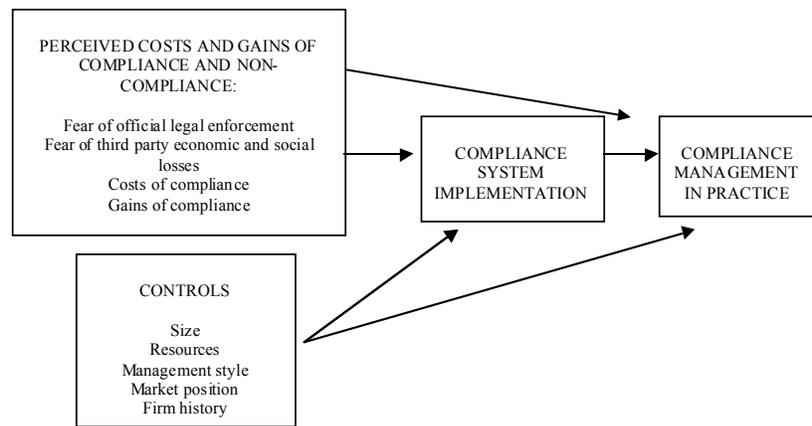


Figure 2
Explanatory Model Stage Two



III. DATA AND MEASURES

A. The context: Australian Competition and Consumer Law

Our data come from a quantitative survey of business experience of enforcement and compliance in relation to Australia’s national competition and consumer protection legislation, the Trade Practices Act (TPA).³² The TPA applies to all Australian businesses and prohibits certain anticompetitive conduct³³ (e.g., price fixing and abuse of

³² Trade Practices Act 1974 (Cth) (Austl.).

³³ *Id.* at pt. IV.

market power), unfair trading practices³⁴ (especially misleading and deceptive advertising), noncompliance with legislated product safety standards,³⁵ and unconscionable conduct in business dealings.³⁶ The Australian Competition and Consumer Commission (ACCC) has used a range of educative, persuasive, and deterrent methods to build compliance with the TPA against the background of a well-entrenched history of market-sharing and noncompetition in Australian business at the time the TPA was first introduced in 1974.³⁷

The regulatory enforcement agency for the TPA, the Trade Practices Commission (now the ACCC), was given a very challenging job at the time the TPA was passed in 1974. Anticompetitive practices, or “orderly marketing” as it was euphemistically known, was normal business in Australia.³⁸ The TPA prohibited all sorts of anticompetitive conduct, as well as misleading and deceptive conduct and certain other unfair practices, for the first time. Civil fines were available for breach of the anticompetitive conduct provisions.³⁹ Criminal fines were theoretically available for breach of the consumer protection provisions, but very rarely used.⁴⁰

It was only during the 1980s that the ACCC became active in enforcement litigation.⁴¹ In the early 1990s the ACCC became a con-

³⁴ *Id.* at pt. V, div. 1.

³⁵ *Id.* at pt. V, div. 1(A).

³⁶ *Id.* at pt. IVA.

³⁷ See, e.g., ACCC, *Trade Practices Compliance Programs*, <http://www.accc.gov.au/content/index.phtml/itemId/54418> (last visited Oct. 29, 2010).

³⁸ See, e.g., PETER KARMEL & MAUREEN BRUNT, *THE STRUCTURE OF THE AUSTRALIAN ECONOMY* 94–95 (1962); DAVID MARR, *BARWICK* 185 (1980); Warren Pengilly, *Price Fixing in the NSW Liquor Industry: A Case Study of Collusion*, 46 *AUSTL. Q.* 42, 44–45 (1974).

³⁹ Trade Practices Act, pt. IV, div. 1(C).

⁴⁰ *Id.* at pt. VC, § 75AZC.

⁴¹ See PETER GRABOSKY & JOHN BRAITHWAITE, *OF MANNERS GENTLE: ENFORCEMENT STRATEGIES OF AUSTRALIAN BUSINESS REGULATORY AGENCIES* 92–93 (1986); David K. Round, John J. Siegfried & Anna J. Baillie, *Collusive Markets in Australia: An Assessment of the Economic Characteristics and Judicial Penalties*, 24 *AUSTL. BUS. L. REV.* 292, 298 (1996).

sciously aggressive and strategic regulator.⁴² Since the 1990s the ACCC has seen the deterrence of formal legal sanctions, informal shame, and the other costs associated with being prosecuted as very important ways to make sure that businesses calculate compliance as in their self-interest.⁴³ Recently the ACCC finally succeeded in advocating that the Australian government criminalize price-fixing and bid rigging (previously only a civil offense).⁴⁴ The deterrence of jail penalties is now available for cartel conduct. The data used in this study were collected before cartel conduct was criminalized.

Enforcement of the consumer protection provisions has occurred to a large extent through private litigation between businesses and, to a lesser extent, businesses and consumers.⁴⁵ In relation to anticompetitive conduct, only a handful of private suits have been brought to trial (although a few more appear to have been settled), and thus private enforcement is a negligible threat compared with the situation in the United States.⁴⁶

⁴² See generally FRED BRENCHLEY, ALLAN FELS: A PORTRAIT OF POWER (2003); Allan Fels, Chairman, Austl. Competition & Consumer Comm'n, The Trade Practices Act—The Past, the Present and the Future, Address before the Trade Practices Consumer Law Conference (May 27, 2000) (transcript available at <http://www.accc.gov.au/content/index.phtml/itemId/255566>); Hank Spier & Tim Grimwade, *International Engagement in Competition Law Enforcement: The Future for Australia*, 5 TRADE PRAC. L.J. 232 (1997).

⁴³ See Christine Parker, *The Compliance Trap: The Moral Message in Responsive Regulatory Enforcement*, 40 LAW & SOC'Y REV. 591, 604 (2006).

⁴⁴ See generally Beaton-Wells, *supra* note 1.

⁴⁵ ACCC, *How Is the Trade Practices Act Enforced?*, <http://www.accc.gov.au/content/index.phtml/itemId/277794> (last visited Nov. 1, 2010).

⁴⁶ See David Round, *Consumer Protection: At the Mercy of the Market for Damages*, 10 COMPETITION & CONSUMER L.J. 231 (2003) (discussing four private actions for anticompetitive conduct that went to trial in the early 1980s, and why no further cases have been brought); Rhonda L. Smith, *Further to Round on Penalties, Damages and Pt. IV of the TPA*, 11 COMPETITION & CONSUMER L.J. 97 (2003) (discussing two actions for damages in relation to pt. IV of the TPA that were settled); Brendan Sweeney, *The Role of Damages in Regulating Horizontal Price-Fixing: Comparing the Situation in the United States, Europe and Australia*, 30 MELB. U. L. REV. 837, 868 (2006) (citing the cases that have gone to trial, mentioning the settlement of the vitamins cartel matter and citing a number of cases that were commenced but did not go to trial and presumably settled).

B. Survey

The largest 2321 Australian businesses trading in 2004 and readily contactable were identified (through the publicly available Dun & Bradstreet commercial list⁴⁷), with special efforts made to include all those large businesses that had been the target of ACCC enforcement activity in the previous seven years, as identified by ACCC Annual Reports.⁴⁸ The most senior person in the organization responsible for trade practices compliance⁴⁹ was contacted and asked to fill in a questionnaire relating to his or her firm's experience of enforcement and compliance in relation to the TPA and the ACCC. The businesses were surveyed with a mailed self-completion questionnaire and repeated telephone follow-up yielding 999 responses—a response rate of 43%,⁵⁰ which compares well with the 35.5% average response rates for similar questionnaire research of top management of business.⁵¹ Forty-two percent of those who filled out a questionnaire were chief executive officers, company secretaries or chief financial officers, and a further twenty percent general counsel or compliance managers. The high rank and position of those who actually filled out the questionnaire

⁴⁷ Dun & Bradstreet is a global provider of commercial and business information. They own a proprietary database of businesses all over the world. The authors purchased a list of the largest businesses in Australia that included contact information and certain other basic information from Dun and Bradstreet, which was used as the basis for the sample for the survey. See DUN & BRADSTREET, <http://dnb.com.au> (last visited Nov. 8, 2010).

⁴⁸ Two hundred seventy-three of the 2321 businesses surveyed were identified in this way.

⁴⁹ We contacted first the compliance manager, then the in-house counsel, the company secretary, the chief financial officer and, finally, the chief executive officer, in that order, depending on which positions existed in the business.

⁵⁰ This underestimates the actual response rate; we cut 4.3% of the responses actually received from the study because those respondents were too small (less than 100 employees) for our sample of large businesses. If we, quite reasonably, assume that similarly 4.3% of the entire list of companies surveyed (including nonrespondents) were “too small,” then we would have a response rate of 45%. For a full report of the survey, including the sample and methodology, see Nielsen & Parker, *supra* note 30, at 287.

⁵¹ See generally Yehuda Baruch, *Response Rate in Academic Studies—A Comparative Analysis*, 52 HUM. REL. 421 (1999).

for each organization suggests that the person in the organization best informed about trade practices compliance did indeed fill out our questionnaire. The profile of our respondents compares well with the profile of the whole list of the largest Australian businesses in terms of size and industry.⁵²

C. Measures

Each of our measures is based on our respondents' self-reported answers to questions in our surveys. The wording of each question was based on our earlier qualitative and documentary research on the nature of ACCC enforcement activities and their impact on business compliance,⁵³ as well as theoretical considerations and previous studies.

Self-reported measures are particularly useful where the object of interest is a perception or attitude (e.g., the measures in table 1). Self-reports can also be useful in relation to matters that only the respondents themselves are likely to know (e.g., the measures in tables A13 and A14 in the technical appendix). A problem with self-reported measures is that respondents might show social desirability or other biases that make it difficult for them to answer questions truthfully. Like other researchers, we sought to overcome this set of potential reliability problems by making (and following through on) strict guarantees of confidentiality and anonymity in our handling of the data in order to ensure that respondents felt they could safely answer questions honestly.

Moreover, to the extent possible, we framed our questions as specifically as possible so that it would be relatively easy for the person filling out the questionnaire to objectively determine whether the answer should be yes or no, eliminating as far as possible the element of subjectivity that makes it easier to respond in a socially desirable way (e.g., the questions in table A13). Most of our survey measures consisted of multiple items, which is also believed to increase the reliability of data.

⁵² See Nielsen & Parker, *supra* note 30, at 12–13.

⁵³ See generally Christine Parker & Natalie Stepanenko, ACCC Compliance and Enforcement Project: Preliminary Research Report (Aug. 2003) (unpublished manuscript) (on file with the Australian National University and available at <http://cccp.anu.edu.au/Preliminary%20Research%20Report.pdf>).

Nevertheless our results should be interpreted bearing in mind that they rely on self-reports only and therefore may reflect limited knowledge and the way respondents feel they should think and behave.

Previous studies of deterrence have sometimes been criticized for drawing attention to the costs and gains of noncompliance when respondents might not have thought in a calculative manner about compliance in the first place. It has been suggested that researchers thereby created the phenomenon that they were seeking to identify or explain.⁵⁴ Our methodology partially overcomes this problem by asking the person responsible for trade practices compliance in the organization to complete the questionnaire on behalf of the organization, and also to report how “most managers in the organization” think about the given matter. This means that those whose thinking is actually being reported have not had their attention artificially drawn to the various costs and gains of compliance and noncompliance; the person who does fill out the survey is the person most likely to have already thought about these matters. However, this is not a perfect way of dealing with this problem because for the many respondents without a dedicated compliance position, the person filling out the survey would have been essentially reporting his or her own views.

1. MEASURES OF PERCEIVED COSTS AND GAINS OF COMPLIANCE AND NONCOMPLIANCE *We use nine aggregate measures of different aspects of businesses’ perceptions of costs and gains of compliance and noncompliance based on previous analyses of the same data.*⁵⁵ *The nine measures are summarized in table 1.*

We measure the extent to which our respondents’ firms fear various formal legal sanctions available in principle under the TPA. But we also asked respondents how their organizations in practice perceived the resources and the capacity of the ACCC to find noncompliance and take enforcement action, the possibility of investigation, the

⁵⁴ See Vaughan, *supra* note 6 at 28–29; Makkai & Braithwaite, *supra* note 19, at 285–86.

⁵⁵ See Christine Parker & Vibeke Lehmann Nielsen, *How Much Does it Hurt? How Australian Businesses Think About the Costs and Gains of Compliance with the Trade Practices Act*, 32 MELB. U. L. REV. 554 (2008) (see the technical appendix for more detailed information and statistics on each of the measures).

threshold for prosecution, and the level of sanctions actually in use (as opposed to those available in the legislation). We also asked respondents about their perceptions of whether various third parties—their consumers, suppliers, and business partners—were monitoring respondents' compliance with the TPA. These measures of perception add a different dimension to our understanding of calculative thinking from measures of the sanctions available in theory.

Table 1
Measures of Costs and Gains of Compliance and Noncompliance

<i>Measure</i>	<i>Mean (1–5)</i>	<i>Standard Deviation</i>
Fear of formal legal sanctions (serious sanctions)	4.25	0.65
Fear of formal legal sanctions (very serious sanctions)	4.71	0.44
Perceived likelihood of ACCC enforcement action	3.14	0.67
Perceived severity of ACCC enforcement action	3.50	0.76
Perceived risk of being caught by third parties	3.19	0.86
Fear of third party economic losses	3.37	0.85
Fear of third party social losses	3.54	0.83
Perceived costs of compliance	2.23	0.91
Perceived gains of compliance.	3.40	1.26

Similarly, since the ACCC relies primarily on complaints from customers, competitors, or business partners to prompt investigations and enforcement actions,⁵⁶ the measure of perception of monitoring of compliance by third parties gives us a sense of how likely businesses believe it is that the ACCC would actually find out about noncompli-

⁵⁶ Because the ACCC does to a large extent rely on third party complaints as the basis for investigations and prosecutions, it might be suggested that the two variables “perceived likelihood of ACCC enforcement action” and “perceived risk of being caught by third parties” should be used in one single measure. We checked whether there was a high correlation between these two measures and found that the correlation is .393 significant at the 0.01 level (two-tailed). This is not a very high level of correlation, and as indicated in tables 2 and 3, each of the two variables maintains its own individual significance in regression analyses. Therefore the two variables have been kept separate.

ance or that third parties would be in a position to consider informally sanctioning the firm.

We also expand the focus beyond the impact of enforcement through formal legal means by measuring firms' worries about informal economic and social losses in relation to various "third parties" if they are "accused of breaches of the TPA one day in the future." We also measure firms' perceptions of the costs and gains of compliance in terms of their organizational goals.

2. MEASURES OF CONTROLS *In addition to testing the impact of calculative thinking on compliance management behavior (by means of the measures above), we also test the impact of a number of control variables that we see as more fundamental explanations of differences in compliance management behavior: size (measured by number of employees), organizational resources, long-term management, market position, and firm history.⁵⁷ The details of each of these measures are provided in the technical appendix. In previous analyses of our respondents' compliance behavior, we have found the level of management oversight and planning to be very important, and size and resources to be influential.⁵⁸ In earlier analyses we controlled for industry to reflect different levels of likelihood of compliance scrutiny by the regulator and third parties. It had no effect, however, so we left it out.*

Two aspects of firm history—previous investigation by the ACCC for potential breach and previous criticism of business or industry for breach—are relevant. We measure whether the organization had been investigated by the ACCC for an alleged breach of the TPA in the previous six years.⁵⁹ An investigation by the ACCC would likely have

⁵⁷ The authors have tested the relationship between these various factors and respondents' perceptions of the costs and gains of compliance and non-compliance in an earlier paper using the same data. See Parker & Nielsen, *supra* note 55.

⁵⁸ See generally Christine Parker & Vibeke Lehmann Nielsen, *Do Businesses Take Compliance Systems Seriously? An Empirical Study of the Implementation of Trade Practices Compliance Systems in Australia*, 30 MELB. U. L. REV. 441 (2006); Parker & Nielsen, *supra* note 31.

⁵⁹ Fourteen percent (141) of all respondents self-reported they had been the subject of an ACCC investigation of an alleged breach by their business. Note that the people filling out the questionnaire should generally have had

attracted third party attention. The vast majority of ACCC investigations (over 90%) result in a settlement or court order in which the business suffers some adverse enforcement consequence (e.g., payment of compensation, financial penalties, or implementation of a compliance system).⁶⁰ Therefore experiencing an ACCC investigation is virtually equivalent to experiencing an adverse enforcement outcome.

We also measure how often various external parties criticized each business's trade practices compliance.⁶¹

3. DEPENDENT VARIABLES: COMPLIANCE MANAGEMENT BEHAVIOR We test the extent of influence of calculative thinking and the control variables on two compliance management behaviors of the businesses—implementation of formal compliance systems and the way compliance is managed in practice. The measures of implementation of formal compliance systems and compliance management in practice are based on previous analyses of the same data.⁶²

enough knowledge to remember whether there had been an ACCC investigation in the previous six years as the median length of years they had spent working in the organization was six (with a mean of nine). It was necessary to go back six years in order to get enough cases of companies having had ACCC investigations for statistical manipulation. We use a self-report measure, rather than official ACCC records of investigation, on the basis that it is more relevant to measure those businesses that actually remember having been investigated by the ACCC.

⁶⁰ See Parker & Stepanenko, *supra* note 53, at 19–25.

⁶¹ Within each group and overall, only a very few businesses reported that external parties had criticized them or others in their industry. Most of the respondent businesses have never been criticized (53%). This distribution of the actual experience of criticism is consistent with the respondents' perception of the risk of complaints; 48% of respondents reported that they agreed that their customers were keeping a close eye on their compliance with the TPA. (Pearson correlation = 0.201** (** significant at a 0.01 level—two-tailed)). For the purposes of the analyses reported below, we divided the respondents into three groups—those who had experienced no criticism from any of the named groups; those who had experienced criticism from one to seven of the groups; and those who had experienced criticism from eight to fifteen of the groups). In an attempt to avoid self-serving denials, the question asked not only whether the firm but also whether comparable “others” had been criticized. When such criticism is known, even if indirect, it becomes part of the firm's history.

⁶² See Parker & Nielsen, *supra* note 58; Parker & Nielsen, *supra* note 31.

The items that make up the measure of implementation of formal compliance systems were grouped into four different indices (see details on each index in the technical appendix) measuring the implementation of system elements concerning: (1) complaints handling, (2) communication and training from the top of the organisation to employees, (3) management accountability and whistleblowing for compliance up the organisation, and (4) compliance performance measurement and discipline throughout the whole organization. We use these four measures to look at four different dimensions of compliance system implementation (rather than one index of all the items) because costs and gains will not necessarily motivate businesses to implement all potential aspects of compliance systems equally.⁶³ On the other hand, using these four indices rather than looking at variation in each of the twenty-one elements individually gives a clearer picture that takes into account the fact that there are different ways of performing the different functions of a compliance system. We also report our results below for a single composite measure of compliance system implementation all in all (including all four indices) as a check on the robustness of the findings in relation to the four separate indices.

Implementation of a compliance system is aimed at putting formal structures in place that managers and employees can use to identify, prevent, and correct noncompliance. This should be helpful in influencing the way activities are managed in practice to improve actual compliance. But it is not enough on its own.⁶⁴ Therefore, we also measure how well the business respondents actually manage compliance in practice in everyday decision making and functioning by asking a series of specific statements about what business manage-

⁶³ These four indices are treated as formative indices made by adding the score for each variable together. The logic behind this is that the more elements the business has implemented, the more it is trying to comply. In contrast to reflective indices, we do not necessarily expect interdependency between the variables included in the index. Therefore it makes no sense to test for reliability.

⁶⁴ See SIMPSON, *supra* note 7, at 144–45; Marie McKendall, Beverly De Marr, & Catherine Jones-Ridders, *Ethical Compliance Programs and Corporate Illegality: Testing the Assumptions of the Corporate Sentencing Guidelines*, 37 J. BUS. ETHICS 367 (2002); Parker & Nielsen, *supra* note 31.

Table 2
Explaining Variation in Compliance Management Behavior: Stage One

<i>Explanatory variables</i>	<i>Complaints handling</i>	<i>Communication & training</i>	<i>Management accountability & whistle-blowing</i>	<i>Compliance performance measurement & discipline</i>	<i>Composite of all four indices</i>	<i>Compliance management in practice</i>
Fear of legal sanctions						
Very serious sanctions	.04 (0.82)	-.02 (0.49)	-.10** (2.34)	-.09** (2.07)	-.05 (1.24)	.05 (1.34)
Serious sanctions	-.04 (0.87)	-.06* (1.45)	-.03 (0.77)	.04 (0.82)	-.03 (0.68)	.10** (2.79)
Perceived likelihood and severity of detection and enforcement action						
Perceived likelihood of ACCC enforcement	.12*** (2.93)	.21*** (5.90)	.13*** (3.35)	.09* (2.32)	.20*** (5.62)	.12*** (3.64)
Perceived severity of ACCC enforcement	-.02 (0.50)	.05 (1.42)	.02 (0.43)	-.01 (0.15)	.03 (0.85)	.01 (0.30)
Perceived risk of complaints	.14*** (4.16)	.11*** (3.58)	.07* (2.01)	.11*** (3.25)	.14*** (4.43)	.07* (2.44)
Fear of informal third party economic and social losses						
Worries about economic losses	.0 (0.42)	-.09* (1.92)	.03 (0.51)	.04 (0.87)	-.03 (0.68)	.01 (0.19)
Worries about social losses	.02 (0.50)	.04 (0.79)	.02 (0.36)	-.05 (0.99)	.03 (0.55)	.07 (1.61)

Perceived costs and gains of compliance				
Costs of compliance	.20 (5.51)	.37 (11.22)	.34 (9.58)	.40 (12.57)
Gains of compliance	.19 (5.28)	.07* (2.19)	.05 (1.45)	.15 (3.63)
Compliance system implementation				
Complaints handling	-	-	-	.18 (6.07)
Communication & training	-	-	-	.30 (8.09)
Management accountability & whistle-blowing	-	-	-	.13 (43.89)
Compliance performance measurement & discipline	-	-	-	.04 (1.41)
Model statistics:				
N =	839	839	839	837
Adjusted R ²	0.20	0.32	0.21	0.38
F-value of full model	24.42***	45.49***	26.20***	57.11***
			24.30***	58.23***

Note: *** = p < 0.005; ** = p < 0.01; * = p < 0.05 (two-tailed). Cell entries are standardized regression coefficients with the absolute value of t-statistics in parentheses.

Table 3
Explaining Variation in Compliance Management Behavior: Stage Two

<i>Explanatory variables</i>	<i>Complaints handling</i>	<i>Communication & training</i>	<i>Management accountability & whistle-blowing</i>	<i>Compliance performance measurement & discipline</i>	<i>Composite of all four indices</i>	<i>Compliance management in practice</i>
Fear of legal sanctions						
Very serious sanctions	.04 (1.00)	-.02 (0.55)	-.07 (1.81)	-.09** (2.13)	-.04 (1.12)	.05 (1.55)
Serious sanctions	-.04 (0.10)	-.05 (1.36)	-.04 (0.84)	.04 (0.97)	-.02 (0.61)	.10*** (2.76)
Perceived likelihood and severity of detection and enforcement action						
Perceived likelihood of ACCC enforcement	.08*** (2.04)	.14*** (4.03)	.07 (1.83)	.02 (0.43)	.12*** (3.54)	.10*** (3.25)
Perceived severity of ACCC enforcement	-.03 (0.90)	.03 (0.90)	-.01 (0.21)	-.00 (0.05)	.01 (0.31)	-.01 (0.38)
Perceived risk of complaints	.12*** (3.42)	.09*** (2.90)	.03 (.96)	.09*** (2.58)	.10*** (3.50)	.06* (2.30)
Fear of informal third party economic and social losses						
Worries about economic losses	.03 (0.65)	-.06 (1.43)	.03 (0.65)	.04 (0.73)	-.02 (0.37)	.01 (0.37)
Worries about social losses	.01 (0.27)	.04 (0.83)	.01 (0.25)	-.06 (1.24)	.02 (0.49)	.03 (0.82)
Perceived costs and gains of compliance						
Costs of compliance	.16*** (4.42)	.28*** (8.52)	.26*** (7.14)	.26*** (6.95)	.30*** (9.81)	-.02 (0.62)
Gains of compliance	.18*** (4.90)	.05 (1.46)	.03 (0.86)	.07 (1.86)	.09 (3.00)	.09*** (3.32)

Compliance system implementation			
Complaints handling	-	-	.15*** (5.26)
Communication & training	-	-	.25*** (7.04)
Management accountability & whistle-blowing	-	-	.13*** (3.86)
Compliance performance measurement & discipline	-	-	.01 (0.34)
Size	.07 (1.95)	.10*** (2.89)	.08* (2.27)
Organizational resources	.13***	.15***	.13*** (4.92)
Management oversight and planning	.06 (1.91)	.08* (2.43)	.07** (2.61)
Perceived market position	.09** (2.79)	.00 (0.11)	.06* (2.20)
Firm history	.03 (0.92)	.12*** (3.71)	.16*** (5.89)
Investigated by the ACCC	.02 (0.59)	.06 (1.77)	.05 (1.68)
Level of criticism experienced			
Model statistics:			
N =	807	807	805
Adjusted R ²	0.24***	0.25	0.45
F-value of full model	17.58***	19.10***	45.60***
		16.92***	51.11***

Note: *** = p < 0.005; ** = p < 0.01; * = p < 0.05 (two-tailed). Cell entries are standardized regression coefficients with the absolute value of t-statistics in parentheses.

ment actually does in order to make sure they comply with the TPA (see technical appendix).

D. Research strategy

The explanatory model (as shown above in figures 1 and 2) has been estimated using ordinary least squares (OLS) regression. Appropriate visual inspections and statistical tests were conducted to verify that OLS regression assumptions were met for these models. To test the robustness of the model—and as far as possible exclude the possibility that our findings are not simply random experimental effects created by the large number of variables—we first of all used low p-values making it harder to get significant results. Secondly, we double-checked the results by estimating the model including only significant variables. This did not change the results. Third, we tested for multicorrelation, and found nothing above level of tolerance. Finally, we also estimated the model including the most theoretically likely interaction variables (between size of company and each different worry). None of these turned out to be significant, which is why they were left out of the model in the end.

Tables 2 and 3 show the results of our tests of stages 1 and 2 of our model, respectively. The boldface entries in tables 2 and 3 indicate where a significant association exists between the two variables, controlling for all the other variables. The number of asterisks indicates how confident we can be about the strength of the significance: *** $p < 0.005$; ** $p < 0.01$; * $p < 0.05$ (two-tailed). The adjusted R^2 value shown near the bottom of each column indicates the total explanatory power of all the factors shown. All are reasonably high.

III. RESULTS AND DISCUSSION

A. Likelihood versus severity of enforcement

First we consider the impact of fear of the costs of noncompliance, that is, deterrence, on businesses' compliance behavior. What stands out in our results is that it is the perceived likelihood of detection and enforcement—not the severity and fearsomeness of the sanctions—that makes a difference to compliance management behavior. Both the perceived risk of complaints from customers, suppliers, and business partners (which could lead to both ACCC enforcement and informal third

party sanctions) and the perceived likelihood of ACCC enforcement make a significant and positive difference to all aspects of compliance management behavior in stage one of our analysis (table 2). Even when we take into account underlying factors like size, resources, and previous history with the ACCC in stage two of our analysis (table 3), the likelihood of detection and enforcement by third parties and the ACCC still remains important for most aspects of compliance management behavior and for compliance system implementation overall.

By contrast, variation in respondents' perceptions of the severity of the sanctions applied is of less consistent importance. Fear of economic and social sanctions applied by third parties is not significant at all.⁶⁵ Nor is respondents' assessment of the severity of ACCC enforcement as it is put into action.

⁶⁵ But note that in previous analyses of the same data where we have conducted more detailed analyses that disaggregate different groups of third parties, we have found that worries about social losses from shareholders and employees can make a difference to what businesses actually do. See Nielsen & Parker, *supra* note 5, and Parker & Nielsen, *supra* note 55.

Note that in our analyses we used the measures of worries about third party social and economic losses shown in the technical appendix, that is indices running from 1–5. It might be argued that the relationship between worries about third party sanctions and business behavior should be modelled in one of two other ways.

First, there might be some “tipping point” at which a certain degree of worry about third parties motivates change in compliance behavior. Inspection of the data, however, could not identify any consistent tipping point at which a certain degree of worry about third parties was, on average, associated with a significant change in compliance behavior. (This inspection was carried out by running a one way ANOVA-test of each variable measuring worries about third parties against the dependent variables to see whether there was any significant difference in the score on the dependent variable associated with one of the five levels of worry compared to the other four.)

Second, in light of the fact that most businesses worry quite a lot about most third parties, it might be only worries above the average that we can expect to have any effect on behavior. Therefore we checked whether worrying about specific third parties more than average has an effect on compliance behavior using dummy variables measuring whether each business rates their worries about third parties in the event of noncompliance as higher than the mean. This did not make any difference either.

Our analysis, however, reveals a more confusing story about the impact of fear of the legal penalties available on the books (as opposed to those put into action through actual ACCC enforcement action). Fear of “serious” sanctions (that is, penalties of under AUD100,000, corrective advertising, and loss of morale in the organization) does make a positive and significant difference in compliance management in practice. This influence holds strong through both stages of our analysis, whether or not we take our control factors into account (table 3). It does not, however, make a positive difference in formal compliance management systems.⁶⁶

When we look at the effect of fear of “very serious” sanctions (that is, higher financial penalties, media publicity, and private litigation to obtain damages for losses) on compliance management behavior, this picture becomes more confusing. There is a significant, negative association between fear of very serious sanctions and implementation of certain elements of compliance systems, and no positive influence. That is, those who fear very serious sanctions more might actually do less to implement compliance systems, particularly the compliance performance measurement and discipline aspects of compliance systems (see table 3). Perhaps those who do the least to implement the enforcement aspects of their own compliance systems (that is, they do not measure what is happening in their organization or punish those who breach compliance policies) have more reason to fear the most serious penalties.

Previous empirical research of this kind has consistently found that it is the perceived likelihood or certainty of detection, more than the perceived severity of the sanctions used, that changes behavior.⁶⁷ Our results certainly confirm that in the Australian trade practices regime variation in businesses’ perceptions of the likelihood of detection and enforcement by the ACCC and third parties goes much fur-

⁶⁶ Indeed it has a negative influence on one aspect of formal compliance system implementation in the first stage of our analysis, although this disappears once we take the control factors into account.

⁶⁷ See Braithwaite & Makkai, *supra* note 6, at 8–9 (on compliance by nursing homes with quality of care regulation); Raymond Paternoster & Leeann Iovanni, *The Deterrent Effects of Perceived Severity: A Reexamination*, 64 SOC. FORCES 751, 777 (1986) (on individual crime).

ther toward explaining variation in compliance behavior than variation in their perceptions of the severity of sanctions available.

This does not necessarily mean that severe penalties are not an important influence on Australian businesses' competition and consumer compliance behavior.⁶⁸ Logically, business people must fear the formal and informal sanctions of enforcement in order to even begin to worry about the likelihood of facing detection and enforcement action. But, equally, if a businessperson does not think there is any great likelihood of anyone ever scrutinizing his behavior for breaches of the law, then it does not matter how much they fear the penalty for breach, it will make no difference to their behavior. A regulator that wants to make a difference to compliance behavior needs to be perceived as having both fearsome sanctions and all-seeing eyes and spies—big brother with a big stick!

Our results show clearly that in the Australian trade practices regime, there is room to change businesses' perceptions of the risk of detection in a way that will likely influence their compliance behavior. Some already fear detection in a way that raises their compliance behavior while others do not. If the latter group feared detection more, then their behavior would likely change, even without penalties going up. This suggests that regulators should first try to increase businesses' perception of the likelihood of being caught if they want to increase the power of deterrence, as there is clear evidence of a potential margin for improvement if those who comply least feared detection more.

B. The power of the business case for compliance

Our model predicted that, beyond deterrence, there is another aspect of calculative thinking that should logically be relevant to business decisions about compliance behavior: the perceived costs and gains for the business of compliance. Including these costs and gains

⁶⁸ For studies where fine magnitude was found to be significant in increasing deterrence in environmental regulation, see Jay P. Shimshack & Michael B. Ward, *Regulator Reputation, Enforcement and Environmental Compliance*, 50 J. ENVTL. ECON. & MGMT. 519 (2005); Sarah L. Stafford, *The Effect of Punishment on Firm Compliance with Hazardous Waste Regulations*, 44 J. ENVTL. ECON. & MGMT. 290 (2002).

broadens our analysis beyond merely the costs associated specifically with the regulatory enforcement process.

We might expect businesses that perceive the costs of compliance to be high to do less to implement competition and consumer compliance systems. But this is not what we find. Rather, the higher they perceive the costs of compliance to be, the more our respondents have implemented formal compliance systems. This holds true in both stages of our analysis. There are two (possibly complementary) interpretations of this finding. One interpretation is that those businesses that feel it is easy and inexpensive to comply do not feel the need to put in place formal compliance management systems in order to do so. This interpretation is supported by the fact that there is no link between assessment of the costs of compliance and compliance management in practice, our more behavioral assessment of compliance. In other words, some firms might find it more difficult to comply and therefore need to put in place expensive compliance systems, while others might find it more “easy and natural” and therefore less costly to comply without formal compliance systems. But this does not necessarily reflect different outcomes in terms of compliance management in practice. A second interpretation is that those businesses that do more to implement compliance systems also spend more on compliance. In other words, greater compliance system implementation leads to greater assessment of the costs of compliance, not the other way around. These businesses may spend more on compliance systems because they have to in order to comply (consistent with the first explanation), or the decision to spend on compliance systems may itself be influenced by largely noneconomic considerations about what these firms feel they need to do to signal their institutional legitimacy to others.⁶⁹ We can only conclude that, whatever the reason some firms implement formal compliance systems, these same firms are also those that see compliance as more costly.

On the other hand, firms that see the gains of compliance as higher also have better compliance management in practice (in both stages of our analysis). There is also some indication that those who do more to implement compliance systems (especially complaint-han-

⁶⁹ See Lauren B. Edelman & Mark C. Suchman, *Legal Environments of Organizations*, 23 ANN. REV. SOC. 479 (1997).

ding elements) also see the gains of compliance as greater. We cannot say for sure which comes first, the belief that compliance has benefits for the business or the implementation of compliance system elements. We can say that those who choose to implement compliance systems perceive both the costs and gains of compliance to be higher than those who do not⁷⁰—suggesting that they see the costs of implementing a compliance system as worth it for the benefits of compliance that they believe (or hope) it brings.

Perhaps this is wishful thinking on the part of these businesses. Much of the association between perception of gains of compliance and implementation of formal compliance systems disappears once we include size and resources in our analysis (see table 3 as compared with table 2). It may be that those businesses that can already afford to implement compliance systems do so and then rationalize their spending by convincing themselves that their businesses get a huge benefit from their compliance. Nevertheless these results suggest that regulators that focus on building up business appreciation for the positive business case for compliance might find that this can be quite powerful in supporting good compliance management. There is some support for this in our own previous analysis of the same data set where we found that it was difficult to identify what factors lead to increased appreciation of the business gains of compliance:

Nonetheless, those factors that are significant [in explaining increased business appreciation of the gains of compliance] all suggest that an appreciation of the gains of compliance is not endogenous in the sense of being sourced from good management. Rather, such perception is gained from the experience of engagement, criticism and investigation by the ACCC and other third parties.⁷¹

C. Specific deterrence: Previous ACCC investigation and stakeholder criticism

We expected a firm history of ACCC investigation or stakeholder criticism in relation to noncompliance to be associated with greater efforts to ensure compliance. We do find a strong effect of having

⁷⁰ There is a significant, positive correlation between perceptions of the costs and gains of compliance: Pearson correlation = 0.396** (** = significant at the 0.01 level (two-tailed)).

⁷¹ Parker & Nielsen, *supra* note 55, at 597.

been previously investigated by the ACCC on implementation of formal compliance systems. This does not however extend beyond implementation of formal systems to more substantive changes in compliance management behavior as measured by compliance management in practice. This suggests that the specific deterrent effect of ACCC enforcement in the past could generally be quite superficial.

Stakeholder criticism in the past makes no difference to compliance management behavior, suggesting once again that third parties are less important in influencing behavior than we hypothesized.

D. Things that regulators cannot change: Underlying features of the firm and its environment

We included a range of control variables in our model in order to recognize that business firms' various approaches to calculating the risks and benefits of compliance, and their compliance management behaviors, might differ due to fundamental factors internal to the firm and its market position. To the extent this is so, it will be very difficult for regulators to influence firms' calculations about the costs and gains of compliance and noncompliance at all. Our final results address this question.

Our results confirm that certain underlying features of the firm—level of resources and management oversight and planning—are of fundamental importance to compliance management behavior, especially compliance management in practice.

As expected, larger businesses do more to implement most aspects of compliance systems. Those with more resources do more on all aspects of compliance management—both implementation of formal systems and compliance management in practice. Businesses' level of management oversight and planning is quite important for greater compliance management in practice. Perceived market position in terms of substitutability of the products or services offered by the firm is positively associated with greater implementation of some aspects of compliance management systems—complaints handling and compliance performance measurement and discipline—presumably because these firms felt more accountable to clients and consumers.

Overall, adding these factors into the second stage of our analyses does not make a huge difference to the influence of perceived costs and gains on compliance management behaviors (table 3 compared with table 2). Our analyses show that the underlying aspects of the business respondents relating to their size, resources, and management style explain some of the influence of calculative thinking on compliance behavior, but mostly add to our understanding of what influences compliance management behavior in its own right, rather than taking some of the explanatory power out of calculative thinking.

E. Formal compliance systems and compliance management in practice

Finally, as expected, we find a strong positive association between most elements of formal compliance systems and compliance management in practice.⁷² This remains true even when we introduce the control factors into the analysis in stage 2 of our analyses (table 3). We see compliance management in practice as a better measure of whether firms are actually changing their management behavior in a way that is likely to have an impact on incidents of noncompliance. Formal compliance systems should contribute to this, but formal compliance systems on their own are not enough if they do not contribute to compliance management in practice.

Some aspects of calculative thinking and some control factors, however, have an influence on formal compliance system implementation but not on compliance management in practice. This is true of size, perceived market position, and a history of investigation by the ACCC. These three factors may give rise to more formal, less embedded management approaches to compliance. Having an experience of regulatory enforcement, in particular, makes a big difference to formal features of firm compliance system implementation. We do not however find it makes a difference to compliance management in practice. The ACCC and other regulators therefore need to be careful that they do not prompt formal changes that do not equate to substantive changes.

⁷² Parker & Nielsen, *supra* note 31.

The likelihood of ACCC or third party detection of wrongdoing, high perceived gains of compliance, organizational resources, and management oversight and planning are all, on the other hand, associated with both greater implementation of formal systems and also better compliance management in practice—suggesting that these factors lead to deeper management commitment to avoiding noncompliance.

IV. CONCLUSION

Competition regulators like the ACCC advocate for very high penalties for offenses like price fixing in order to “cancel out” the low probabilities of detection for this kind of behavior—and make it in business people’s overall calculative self-interest to comply. Giving regulators bigger and bigger sticks might seem like an easy route to greater deterrence. But logic and evidence show that there is no easy route to deterrence.

In this article we have measured the costs and gains of compliance and noncompliance more holistically and then compared the influence of business firm perceptions of different types of costs and gains on their compliance management. We measure actual perceptions of costs and gains of compliance and noncompliance in a real situation rather than modelling it or using hypothetical scenarios. This means we are able to identify an explanation for variation in compliance management within this regime as it currently stands. We are also able to draw some tentative conclusions about the most promising ways to improve compliance in this regime based on variations in management behavior that already occur.

We find that it is not so much differences in perceptions of the severity of penalties that make any difference to compliance in the Australian trade practices regime; rather, variations in the assessment of the risk of detection and in the perceptions of the costs and gains of spending on compliance are what make a difference.

This suggests first that, in this regime at least, regulators should not only have big sticks but must also work out how to make business people feel as if big brother’s eyes and spies (the regulator and various third parties) will always find out about their wrongdoings.

We find no evidence that increasing fear of penalties will significantly increase compliance. Other deterrence research in other areas has also consistently found that increasing perceptions of likelihood of detection are a more powerful way to change compliance behavior than increasing perceptions of severity of sanctions.⁷³ This is especially true in regulatory contexts where detection of wrongdoing is particularly problematic, such as cartel activity.⁷⁴ Logically, too, it was obvious even to the early classic deterrence theorists that severity of penalty and likelihood of sanction work together to deter noncompliance. It is at least as important to increase businesses' perception of likelihood of being found out as it is to increase penalties. If this can be done, higher penalties may not be necessary. But even if higher penalties are introduced, they will be much more effective if there is also a higher perception of likelihood of detection, and they may be useless if businesses do not see detection as very likely at all.

We cannot say for sure that introducing drastically different penalties like jail will not make a difference. It seems plausible that a certain base level of fear of penalties is important for maintaining existing compliance behavior. This must be an important part of what Gunningham, Thornton and Kagan call the "implicit general deterrence"⁷⁵ of sustained enforcement activity that does not necessarily show up in statistical regressions. A drastic increase in penalty, such as the introduction of imprisonment or financial penalties many, many times higher than before, might still make a marginal change in the power of deterrence by lifting the whole baseline. A study of a single regime, like ours, is not very apt to test this proposition. It is necessary to conduct research that compares compliance within a regime before and after radically higher penalties are introduced or compares otherwise

⁷³ See, e.g., Braithwaite & Makkai, *supra* note 6; Paternoster & Iovanni, *supra* note 67, at 769–70. Cf. Patrick Edwards, *Choices That Increase Compliance*, 10 POL'Y STUD. REV. 6 (1991/92).

⁷⁴ Contrast pollution regulation, where inspection and monitoring to detect wrongdoing is easy, at least in principle (although it might be expensive): Stafford, *supra* note 68; Shimshack & Ward, *supra* note 68.

⁷⁵ Neil Gunningham, Dorothy Thornton, & Robert A. Kagan, *Motivating Management: Corporate Compliance in Environmental Protection*, 27 LAW & POL'Y 289, 309 (2005).

similar regimes with drastically different penalties. These types of studies could test what degree of change in penalties makes what kind of difference to business people's behavior in different contexts.

The temptation for policy makers and regulators is, however, to simplistically assume that increasing penalties will automatically lead to a concomitant increase in deterrence and compliance. Because increasing available penalties in the books is easier (and less expensive) than increasing detection capabilities in practice, this is a very strong temptation. As we have stated, we find no evidence to bear out the assumption that bigger sticks can make up for a lack of big brother's eyes and spies.

The practical problem is that the probability of detection and successful enforcement action against business offenders is often not very high because the resources and capacity of enforcement agencies are stretched thin in most areas of business regulation.⁷⁶ The policy lesson is that governments need to be politically committed to treating seriously the business misconduct that they outlaw by giving resources to enforcement or establishing formal "watchdogs." One might be suspicious of governments that put big penalties on the books and proclaim that they are therefore tough on corporate crime but do not lend the regulator the financial and political support to enforce properly to actually increase deterrence by increasing likelihood of detection.

The second lesson from our findings is that if businesses truly think that the gains to their businesses from compliance are high, they will do more to implement good compliance management behaviors, even if this also costs them a lot. Often we are suspicious that tools aimed at educating and persuading business about the "business case" for compliance are not very effective. Our results suggests that they may well be worth the effort. The less positive side is that it might be hard to change business people's minds about this. Those who are committed to complying anyway may well simply believe that is in their interests to comply, while those who do not, will not. In other words seeing the material gains of compliance is more of a rationaliza-

⁷⁶ See Brent Fisse, *Sentencing Options Against Corporation*, 1 CRIM. L. F. 211 (1990); HARRY GLASBEEK, *WEALTH BY STEALTH: CORPORATE CRIME, CORPORATE LAW, AND THE PERVERSION OF DEMOCRACY* 118 (2002).

tion for doing what they want to do anyway for good firms, not necessarily something that can change the behavior of bad firms.

Finally, we find that firm size, resources and management style make a difference to compliance behavior. These variables may be acting as proxies for the capacity to perceive and act on risks, especially longer terms risks, in a sophisticated way. Larger, better-resourced and better-managed businesses probably have a stronger sense of the calculative reasons for compliance and do more to comply because they are institutionally programmed to act in conformance with social norms of compliance. But these underlying factors do not fully account for the way in which calculative factors influence compliance management behavior. There are some firms in which calculative thinking is associated with doing more to comply regardless of size, resources, management style, or firm history. This means that the various aspects of calculative thinking that we do find to be important in motivating compliance management behavior cannot generally be “explained away” by more fundamental underlying characteristics of the firms we studied.

Firms’ perceptions of the costs and gains of compliance and non-compliance are therefore a very important part of the story that explains their compliance behavior. Our results show that it is a part of the story that must be read and understood with careful attention to the twists and turns of its own plot and subplots. We must be wary of falling for the simple fairy tale that higher sanctions lead to greater compliance.

TECHNICAL APPENDIX

The two measures of fear of formal legal sanctions—“very serious sanctions” and “serious sanctions”—were created by adding together the various items shown in tables A1 and A2 and by using the mean score for each respondent in our analyses. Putting each of these sets of measures together into one index was supported by factor analysis as indicated by the Cronbach’s Alpha scores for each of the indices shown in tables A1 and A2. Cronbach’s Alpha scores measure how reliably a set of items (for example, questions in a survey) measure a single unidimensional latent variable. An index with a Cronbach’s Alpha score of 0.70 or higher is considered a strong index.

Table A1

Fear of Formal Legal Sanctions (Serious Sanctions)

Perceived Costs of Sanction		Means and Standard Deviation
Mean = 4.25 Standard Deviation = 0.65 Cronbach's Alpha = 0.80 n = 973		
<i>How much of a problem do you think senior management of your organisation would find the following costs if you were ever caught by the ACCC in breaching the Trade Practices Act?</i>		1-5: "very small problem" to "very large problem"
Serious Sanctions (n=969-973)		
Conviction in court and a fine of \$ 100,000		4.48 (0.70)
An enforceable undertaking to improve trade practices compliance systems and pay compensation to consumers of \$ 100 000		4.45 (0.73)
Publication of advertising that corrected former advertising or informed about our breach		4.06 (0.93)
Loss of morale in our organisation		4.02 (0.91)

Table A2

Fear of Formal Legal Sanctions (Very Serious Sanctions)

Perceived Costs of Sanction		Means and Standard Deviation
Mean = 4.71 Standard Deviation = 0.44 Cronbach's Alpha = 0.71 n = 965		
<i>How much of a problem do you think senior management of your organisation would find the following costs if you were ever caught by the ACCC in breaching the Trade Practices Act?</i>		1-5: "very small problem" to "very large problem"
Very Serious Sanctions (n=967-973)		
Conviction in court and a fine of \$1 million		4.84 (0.46)
An enforceable undertaking to improve trade practices compliance systems and pay compensation to consumers of \$1 million		4.82 (0.49)
A private law suit where the ACCC takes a representative action on behalf of victims		4.69 (0.60)
Announcement of an investigation of your organisation at a televised press conference by the Chairman of the ACCC		4.51 (0.79)

Table A3

Perceived Likelihood of ACCC Enforcement

	Mean (Standard Deviation)	Whole Measure
	1 to 5 ("Strongly disagree" to "Strongly agree")	
Likelihood of ACCC Enforcement		Mean: 3.14
If we breach the TPA the chances of the ACCC catching us are large	3.35 (1.01)	Std. dev.: 0.67 Min: 1 Max: 5 Cronbach's Alpha: 0.73
If we were caught by the ACCC in breach of the TPA the prospects of ACCC enforcement against the organisation are large	3.77 (0.91)	
It is easy for the ACCC to find out when organisations breach the law	2.82 (1.03)	
In the light of the size and complexity of their task the ACCC has appropriate resources	2.67 (1.01)	
A breach of the TPA does not have to be severe before the ACCC bothers to do anything about it	3.18 (1.02)	
The investigative staff of the ACCC are very competent compared to the staff and lawyers of the companies they are regulating	2.89 (0.80)	
The ACCC is generally keeping a close eye on our industry	3.23 (1.07)	

Table A4

Perceived Severity of ACCC Enforcement

	Mean (Standard Deviation)	Whole Measure
	1 to 5 ("Strongly disagree" to "Strongly agree")	
The level of sanctions imposed for trade practices breaches is generally very high	3.35 (0.98)	Mean: 3.5 Std. dev.: 0.76
The ACCC has a wide range of effective sanctions against non-complying organisations	3.65 (0.90)	Min: 1 Max: 5 Cronbach's Alpha: 0.44

Table A5

Perceived Risk of Complaints from Third Parties

	Mean (Standard Deviation)	Whole Measure
Mark the number closest to the view of most managers in your organisation:	1 to 5 ("Strongly disagree" to "Strongly agree")	
Our customers are aware of the TPA and keep a close eye on our compliance	3.59 (1.00)	n = 927
Our suppliers are keeping a close eye on our trade practices.	3.52 (0.96)	Mean: 3.19 Std. dev.: 0.86 Min: 1
Our business partners focus a lot on the TPA and keep an eye on our compliance	3.47 (0.95)	Max: 5 Cronbach's Alpha =0.86

Table A6

Worries About Economic Losses (n=924-964)

	Mean (Standard Deviation)	Whole Measure
If your organisation were accused of breaches of the TPA one day in the future, how much would your organisation worry about <i>economic</i> losses in relation to the following groups of people: (n=924-964)	1 to 5 ("Worry very little" to "Worry very much")	
Your customers	4.18 (0.99)	n = 966
Your shareholders	4.08 (1.06)	Mean: 3.37
Your employees	3.87 (1.04)	Std. dev.: 0.85
The media	3.52 (1.27)	Min: 1
Your business partners	3.50 (1.12)	Max: 5
Consumer groups/NGOs	3.13 (1.29)	
Informal business networks	2.99 (1.17)	
Other organisations in your industry	2.90 (1.23)	
Your suppliers	2.82 (1.28)	
Your industry association	2.73 (1.31)	

Table A7

Worries About Social Losses (n=924-964)

If your organisation were accused of breaches of the TPA one day in the future, how much would your organisation worry about losing the <i>respect</i> and <i>esteem</i> the following groups of people: (n=939-973)	Mean (Standard Deviation) 1 to 5 ("Worry very little" to "Worry very much")	Whole Measure n = 975 Mean: 3.54 Std. dev.: 0.83 Min: 1 Max: 5
Your customers	4.41 (0.87)	
Your shareholders	4.22 (1.02)	
Your employees	4.13 (0.97)	
Your business partners	3.83 (1.02)	
The media	3.66 (1.22)	
Consumer groups/NGOs	3.51 (1.20)	
Other organisations in your industry	3.28 (1.24)	
Your industry association	3.27 (1.24)	
Your suppliers	3.26 (1.23)	
Informal business networks	3.21 (1.19)	
Lawyers/compliance professionals	3.14 (1.26)	
Politicians	3.13 (1.30)	
Relatives	3.03 (1.27)	

Table A8

Costs of Compliance

Costs of Compliance (n = 961-977) Mean = 2.23 Standard Deviation = 0.91 Cronbach's Alpha = 0.88 n = 977	Means and Standard Deviation
<i>How large do you believe that each of the following types of compliance costs with the Trade Practices Act is to your organisation?</i>	1-5: "very small" to "very large"
Expenses on lawyers and/or compliance professionals whenever we have plans or ideas that are relevant to the TPA	2.53 (1.21)
Costs of compliance systems and training	2.26 (1.12)
Administrative costs: Time and money spent on paper-work in relation to the TPA	2.17 (1.03)
The costs of a lost opportunity e.g. not being able to take over another company	2.14 (1.13)
Production costs e.g. more expensive ways of production	2.02 (1.01)

Table A9
Gains of Compliance

Gains of Compliance (n = 957-970)	
Mean = 3.40	
Standard Deviation = 1.26	
Cronbach's Alpha = 0.95	
n = 970	
<i>Do most managers in your organisation think there is a business case for complying with the Trade Practices Act? That is, how large is the gain to the organisation from compliance with the Trade Practices Act?</i>	1-6: "No gain" to "very large" ¹
Absence of problems with the ACCC	4.06 (1.53)
A better image	3.94 (1.44)
A higher level of organisational learning as we respond to different kinds of mistakes in the organisations	3.40 (1.45)
A better way of handling consumer complaints	3.37 (1.50)
Better tools for monitoring our organisation	3.22 (1.47)
A better knowledge of our organisation	3.20 (1.44)
A higher level of product development and therefore a better product	3.09 (1.52)
More up-to-date investments in research and new technology	2.92 (1.47)

¹ Respondents were asked to rate the gains of compliance on a scale from "no gain" to "very large" gain rather than on a monetary scale because, on the basis of our qualitative interviews and previous research on compliance, we believe that it would not have been meaningful to ask respondents to put a dollar value on each of the costs and gains of compliance. It is hard enough to put a dollar value on something like the costs of a lost opportunity or time spent on paperwork, let alone expecting our respondents to put a dollar value on a "higher level of organisational learning." Our nonmonetized scale is also better suited than a monetized scale to measuring relative perceptions among organizations of different size and wealth.

Table A10

Measure of How Well-Resourced is the Respondent

Question: How “well-resourced”—either by contracting out by using in-house expertise—do you think your organisation is in the following respects? (n = 961, 968 and 980)	Mean Responses (Standard Deviation) 1–5 (“Very badly resourced” to “Very well resourced”) ²	Whole Measure
Research and development	3.20 (1.11)	Mean: 3.54
Legal knowledge	3.66 (0.96)	Cronbach’s
Economic knowledge	3.69 (0.86)	Alpha = 0.78
Technical knowledge relevant to compliance	3.60 (0.97)	n = 970
		Min.: 1
		Max: 5
		Std. dev.: 0.75

Table A11

Measures of Long-Term Management Approach and Market Position

Measures and Items Included in Each Measure	Mean Responses for Each Question (and Standard Deviation) (Scale from 1–5 “Strongly disagree” to “Strongly agree”)	Whole Measure
Measure of Long-Term Management Approach		
Our managers give a lot of priority to long term strategic planning (n = 972)	3.63 (0.92)	Mean: 3.14
Our managers spend most of their time on day-to-day problem solving and short term planning ³ (n=969)	3.24 (0.93)	Cronbach’s
Our management is more interested in being nimble than in long range plans ⁴ (n=999)	2.88 (0.922)	Alpha = 0.74
		n = 999
		Std. Dev.: 0.78
Market Position		
Our customers can easily switch to substitute products or services (n=964)	3.65 (1.2)	NA

² 3 = “Neither well nor badly resourced”

³ This item was reversed for the calculation of the whole measure (as shown in the third column). The unreversed mean and standard deviation are shown in the second column.

⁴ This item was reversed for the calculation of the whole measure (as shown in the third column). The unreversed mean and standard deviation are shown in the second column.

Table A12
Measure of Level of Criticism by Third Parties

Below you will find a number of different groups of people who may have criticised your organisation or others in your industry for their perceived failure to comply with the TPA. For each of these, please state whether they have expressed such a criticism within the past six years.

	Respondents Reporting Criticism % (n = 999)
The ACCC	25%
Customers	26%
Competitors	17%
Media	12%
Australian Securities and Investments Commission (ASIC)	12%
Consumer groups/NGOs	11%
Employees	10%
Lawyers/compliance professionals	10%
Politicians	9%
Suppliers	8%
Industry association	8%
Business partners	6%
Shareholders	5%
Relatives of management	2%
Informal business networks	2%

Table A13
 Measure of Implementation of Four Aspects of (Formal) Compliance Systems⁵

Four Aspects ⁶	Questions (Yes/No)	% Answering Yes (n = 958-982)
Complaints Handling Mean: 57 Std. dev.: 24 Min: 0 Max: 100	In my organisation there is a clearly defined system for handling complaints from customers/clients;	91
	In my organisation we keep records of complaints from customers, competitors and/or suppliers;	87
	In my organisation there is a clearly defined system for handling compliance failures identified by staff, competitors, suppliers or the ACCC;	53
	In my organisation we actively seek out consumer opinion about new advertising and/or new products;	40
	In my organisation we have a hotline for complaints about our compliance with the TPA.	13
Communication & Training Mean: 31 Std. dev.: 33 Min: 0 Max: 100	My organisation has a written compliance policy about trade practices compliance;	45
	In my organisation employees are now and then sent to a brush up course on how to comply with the TPA;	38
	Live training sessions are a part of our training of employees in trade practices compliance;	34
	In our organisation we use a compliance manual in trade practices compliance;	31
	My organisation has a dedicated compliance function taking care of trade practices compliance;	30
	Induction for new employees includes substantial training in trade practices compliance;	28
	At least half our employees have attended an employee seminar about the TPA during the last 5 years;	21
	In my organisation we use a computer based training program in trade practices compliance.	17

⁵ The questionnaire asked respondents to provide yes or no answers to a series of twenty-one very specific questions about whether their organization had implemented various procedures and actions expected to be part of a good (formal) compliance system. See CHRISTINE PARKER, THE OPEN CORPORATION: EFFECTIVE SELF-REGULATION AND DEMOCRACY 197-244 (2002).

⁶ Yes = 1; No = 0, but the items in each factor have been added together into an index, which has then been transformed into a measure going from 0-100.

Management	My organisation has written policies to	
Accountability & Whistleblowing	encourage and protect internal whistleblowers;	43
Mean: 30	In the last 5 years an external consultant has	
Std. dev.: 30	reviewed our compliance system;	35
Min: 0	In my organisation managers are asked to	
Max: 100	report regularly on compliance;	26
	In my organisation we have systematic audits by	
	external professionals to check for trade	17
	practices breaches.	
Compliance	Trade practices compliance performance indicators	
Performance	are included in the corporate plan;	20
Measurement & Discipline	Compliance performance indicators relevant for	
Mean: 15	the TPA are among the individual performance	13
Std. dev.: 26	indicators for our employees;	
Min: 0	In my organisation in the last 5 years employees	
Max: 100	have been disciplined for breaching our trade	12
	practices compliance policy.	

Table A14

Measure of Compliance Management in Practice

Questions	Mean Responses for Each Question (Scale from 1–5 “Strongly disagree” to “Strongly agree”)	Whole Measure
“Thinking about the impact of the Trade Practices Act on your organisation at this point in time, please tell us on a scale from 1 to 5 to what extent you agree with each of the statements:”		
In my organisation compliance advice is rarely ignored by the board (If you don’t have a board, please skip this question) ⁷	4.21	Cronbach’s Alpha = 0.90
In our organisation the people responsible for compliance find it easy to get access to top management	4.10	Mean: 3.62
In my organisation compliance problems are quickly communicated to those who can act on them	3.99	n = 994
In my organisation compliance advice is rarely ignored by line managers ⁸	3.86	Min: 1.33
In my organisation systemic and recurring problems of non-compliance are always reported to those with sufficient authority to correct them	3.77	Max: 5.00
Compliance requirements of laws, regulations, codes and organisational standards are integrated into my organisation’s day to day operating procedures	3.69	Std. dev.: 0.63
Managers in our organisation know what aspects of compliance they are responsible for	3.61	
Compliance failures are always investigated to understand their cause	3.58	
In our organisation everyone knows where the buck stops for compliance	3.58	
In my organisation we review our compliance program on a regular basis	3.39	
My organisation allocates adequate resources to enable the implementation of the compliance policy	3.40	
My organisation is one of those organisations that try to have the best compliance of any organisation in the country ⁹	3.04	
My organisation invest a lot of time and money in compliance training	2.94	

⁷ In our questionnaire this item was asked in reverse to that shown here: “In my organisation compliance advice is often ignored by the board (If you don’t have a board, please skip this question).” The mean response has also been reversed to reflect the wording shown in table 4.

⁸ In our questionnaire this item was asked in reverse to that shown here: “In my organisation compliance advice is often ignored by line managers.” The mean response has also been reversed to reflect the wording shown in table 4.

⁹ In our questionnaire this item was asked in reverse to that shown here: “My organisation is not one of those organisations that try to have the best compliance of any organisation in the country.” The mean response has also been reversed to reflect the wording shown in table 4.

The deterrent effect of antitrust sanctions: Evidence from Switzerland

BY KAI HÜSCHEL RATH,* NINA LEHEYDA,**
AND PATRICK BESCHORNER***

With the effectiveness of the revision of the Swiss Cartel Act on April 1, 2004, the Competition Commission (the COMCO) gained considerable new powers, especially the power to sanction anticompetitive behavior by imposing substantial fines. Additionally, the revision

* Senior Researcher, ZEW Centre for European Economic Research, Department for Industrial Economics and International Management, Mannheim, Germany, and Assistant Professor for Industrial Organization and Competitive Strategy, WHU Otto Beisheim School of Management, Vallendar, Germany.

** Researcher, ZEW Centre for European Economic Research, Department for Industrial Economics and International Management, Mannheim, Germany.

*** Senior Researcher, ZEW Centre for European Economic Research, Department for Industrial Economics and International Management, Mannheim, Germany.

AUTHORS' NOTE: *The survey was conducted as part of a study on the evaluation of the Swiss Cartel Act for the Swiss State Secretariat for Economic Affairs. The complete study (in German) can be downloaded at <http://www.weko.admin.ch/dokumentation/00216/index.html?lang=de>. We are indebted to Barry Rodger (University of Strathclyde) for providing us with questionnaires he composed for a comparable study in the United Kingdom. Furthermore, we would like to thank Sven Michal, Samuel Rutz, Frank Stüssi, Spyros Arvanitis and Martin Wörter for helpful comments on drafts of the study, and Dace Lauberte for excellent research assistance. Last but not least, we would like to express our gratitude to our interview partners for their help—not only during the interviews themselves but also for invaluable comments on drafts of the study, which significantly improved the final output. The usual disclaimer applies.*

provided the COMCO with enhanced means of gathering evidence of competition law infringements by conducting dawn raids, thereby increasing the probability of detection and punishment for competition law infringements. Both steps together aimed at strengthening the deterrent effect of antitrust sanctions. Against this background, the article investigates to what extent the revision has reached its goal by conducting a survey among Swiss antitrust lawyers and firms. The results show that the revision certainly has strengthened the deterrent effect of antitrust sanctions in Switzerland. However, in some areas, greater specificity of the legal provisions is advisable in order to increase legal certainty and to avoid negative effects on social welfare by deterring procompetitive behavior.

I. INTRODUCTION

In December 2004, the Swiss Competition Commission (the COMCO) started an investigation of an alleged hard core cartel in the road surfacing market in the canton of Ticino. In the course of the investigation, it became apparent that virtually all road surfacing companies active in the region colluded on tenders to the respective state bodies and therefore caused price increases of at least thirty percent between 1999 and 2005. Interestingly, even after the investigation by the COMCO had begun, the respective companies did not terminate their competition law infringement. However, on March 31, 2005, they “suddenly” decided to do so and therefore opened the way for competition in the market for road surfacing in Ticino.¹

The date chosen for the termination of the cartel agreement was anything but accidental. With the effectiveness of the revision of the Swiss Cartel Act² (the Kartellgesetz or KG) on April 1, 2004, the COMCO gained considerable new powers, especially the power to sanction anticompetitive behavior by imposing substantial fines. While the prior KG allowed only the sanctioning of repeated infringe-

¹ See Walter Stoffel, *Gartenscheren und Hausdurchsuchungen. Was die Wettbewerbskommission in ihrer Praxis Prioritär Durchzusetzen Sucht*, in NEUE ZÜRCHER ZEITUNG 25 (2009).

² Federal Act on Cartels and other Restraints of Competition (Cartel Act), Oct. 6, 1995, SR 251 (Switz.), available at <http://www.admin.ch/ch/e/rs/251/index.html>.

ments, the new legislation now permits the imposition of significant sanctions for first offenders. As the revision of the KG included a one-year transition period, the new rules went into force on April 1, 2005—a good explanation for the “sudden” termination of the road surfacing cartel in Ticino at the very end of March 2005.

From an economic perspective, the road surfacing case is a prime example of the power and importance of imminent sanctions in competition policy—and its helplessness in their absence. Without a credible and significant threat of punishment, firms are unlikely to refrain from anticompetitive tactics as long as they are an essential part of their profit-maximizing business strategy. As a consequence, competition policy has to alter the underlying cost-benefit calculation sufficiently in order to avoid their implementation in the first place and thereby to ameliorate the functioning of markets.

Although the importance and value of the deterrent effect of antitrust sanctions is undisputed among antitrust experts, it is equally undisputed that the scope of the effect is very hard to measure in practice. As a consequence, an evaluation of the success of the revision of a cartel law is certainly a difficult undertaking. If the goal of competition policy is the prevention of competition law infringements (and therewith competition cases), it immediately follows that a direct output-oriented evaluation focusing on, e.g., the number and effects of decisions made by a competition authority in a specific period must be regarded as insufficient or even pointless. Consequently, alternative indicators must be used to analyze the success of the revision of the KG. For example, with a significant and credible increase in sanction possibilities, firms will have elevated incentives to invest in the avoidance of competition policy infringements, such as by increasing their use of competition law compliance programs. Given the significant change in the fining possibilities for the COMCO—from no fines for first offenders to fines of up to ten percent of the revenue in the relevant market in the preceding business year—a test-bed is created that promises to allow the identification of some key changes due to the revision.

Against this background, it is the aim of this article to assess changes in the deterrent effect of antitrust sanctions in Switzerland since the revision of the KG. Section II gives a brief overview of sur-

vey-based methods to measure the deterrent effect of antitrust enforcement, followed by a description of the preparation and implementation of the research strategy for the investigation of the role of deterrence in Swiss competition law. Subsequently, section III presents the main results of the survey carried out among Swiss antitrust lawyers and firms. The four different subsections show an increasing degree of specificity—from a description of general developments in Swiss competition policy through an evaluation of the extended sanction possibilities and the existence and design of competition law compliance programs to the perceived impact of competition law on business strategies. Finally, section IV summarizes the main findings of the article and derives important conclusions for both Swiss competition policy and further general studies on the deterrent effect of antitrust sanctions.

II. EVALUATING THE DETERRENT EFFECT OF SWISS COMPETITION LAW

Measuring the deterrent effect of competition law is particularly difficult because it is typically not known how a group of firms would have behaved in the absence of competition law. However, given the importance of deterrence for the implementation of an efficient competition policy, researchers have tried to collect pieces of evidence for the general existence and powerfulness of the deterrent effect of antitrust enforcement. In addition to theoretical studies on the roles of sanctions and deterrence,³ empirical studies concentrate on the measurable effects of competition policy,⁴ the implementation of optimal sanctions,⁵ or survey-based approaches to measure the deterrent effect. This section focuses on the survey-based approaches. Section II.A reviews the methodology and results of existing survey-based studies on the deterrent effect of antitrust enforcement, followed by a

³ See Wouter P.J. Wils, *The Optimal Enforcement of EC Antitrust Law* (2002).

⁴ See Jonathan Baker, *The Case for Antitrust Enforcement*, 17 *J. ECON. PERSP.* 27 (2003).

⁵ See Cento Veljanovski, *Cartel Fines in Europe: Law, Practice and Deterrence*, 30 *WORLD COMPETITION* 65 (2007).

description in section II.B of the approach chosen for the evaluation of the deterrent effect of Swiss competition law enforcement or—to be more specific—the evaluation of the *change* of the deterrent effect triggered by the introduction of significant sanctions for first offenders. Section II.C describes how the research strategy was implemented in the case of Swiss competition law.

A. An overview of survey-based methods to measure the deterrent effect

There have been several attempts by researchers to track down the deterrent effect of antitrust enforcement by conducting surveys. Based on the review of this literature by Gordon and Squires,⁶ Beckenstein and Gabel⁷ must be considered pioneers of this type of study. They conducted a survey of 859 members of the Antitrust Law Section of the American Bar Association and asked questions related to compliance programs, reasons for violations, factors that generate deterrence, or generally how deterrence can be improved. One key result of the survey was that private enforcement seems to play a larger role than public enforcement in creating a deterrent effect. In a comparable study for the European Union, Feinberg⁸ interviewed twenty-four Brussels-based lawyers and came to the conclusion that the two most important factors in increasing the deterrent effect were an increase in the use of private damages actions and the introduction of individual sanctions for competition law violations. Finally, Rodger⁹ investigated whether the reform of U.K. competition policy in the late 1990s—which introduced significant increases in the investigatory and fining powers of the competition authorities—led to increased compliance efforts by U.K. industry. He assessed the com-

⁶ Fiammetta Gordon & David Squires, *The Deterrent Effect of UK Competition Enforcement*, 156 DE ECONOMIST 411 (2008).

⁷ Alan Beckenstein & H. Landis Gabel, *Antitrust Compliance: Results of a Survey of Legal Opinion*, 51 ANTITRUST L.J. 459 (1982).

⁸ Robert Feinberg, *The Enforcement and Effects of European Competition Policy: Results of a Survey of Legal Opinion*, 23 J. COMMON MKT. STUD. 373 (1985).

⁹ Barry Rodger, *Competition Law Compliance Programs: A Study of Motivations and Practice*, 28 WORLD COMPETITION 349 (2005).

petition law compliance programs of three major U.K. companies and found limited evidence to support the theoretical argument that an increase in the expected sanctions for cartel breaches leads to an increase in compliance efforts.

Based on these early efforts to study the importance of the deterrent effect, significant advances were realized by a recent study by Deloitte¹⁰ on behalf of the Office of Fair Trading (OFT) in the United Kingdom. Interestingly, the key aim of the study was to measure the size of the indirect deterrent effects of competition policy in relation to its direct effects realized in the areas of cartels, mergers, and abuses of dominant positions. Thirty expert interviews were conducted between May and November 2006 among antitrust lawyers, economists, and firms. These efforts were complemented by two telephone surveys: the first survey addressing 234 antitrust lawyers and the second survey addressing 202 firms (with more than 200 employers) in the United Kingdom. As part of this extensive survey, the deterrent effect of, for example, merger control was measured as the number of merger plans that were abandoned or modified after consulting external lawyers but before the OFT was informed about the plans relative to the number of mergers in which a substantial lessening of competition was found during an OFT investigation. The results for the survey of the lawyers show for the period from 2000 to 2006 a ratio of five to one for merger control and cartel enforcement and a ratio of ten to one for abuses of dominant positions—in all cases reflecting the relationship of the deterrent effect and the direct effect. Gordon and Squires¹¹ interpret these estimates as rather conservative given the fact that the study focused only on merger plans that were abandoned or modified after consulting external lawyers. In practice, especially large companies might provide the respective consulting services in-house and were therefore not included in the study. This conjecture is confirmed by the complementary survey of firms, which finds that on average only one out of four merger plans is discussed with external lawyers.

¹⁰ DELOITTE, THE DETERRENT EFFECT OF COMPETITION ENFORCEMENT BY THE OFT (2007).

¹¹ Gordon & Squires, *supra* note 6, at 418.

B. Preparation of the research strategy

Firms as rational decision makers will not comply with competition rules as long as anticompetitive tactics remain a key part of a profit-maximizing business strategy. Consequently, there is no reason for firms—apart from moral reasons—to refrain from anticompetitive activities as long as the cost-benefit ratio is not sufficiently influenced by a relevant, cost-increasing intervention. Against this background, only the credible threat of significant sanctions or other interventions such as structural or behavioral remedies can achieve the desired changes in a firm's behavior.

The revision of the KG in 2004 basically aimed at strengthening the deterrent effect of antitrust interventions by providing the COMCO with new powers, especially to sanction infringements of competition law by imposing substantial fines. While the prior KG allowed only the sanctioning of repeated infringements, the new legislation now permits this for first offenders. Additionally, the revision provided the COMCO with enhanced means of gathering evidence of competition law infringements by conducting dawn raids, thereby increasing the probability of detection and punishment for competition law infringements.

Given the importance of the deterrent effect in general and the key aim of the revision of Swiss competition law in particular, it immediately becomes apparent that an evaluation of the success of the revision cannot be reduced to an assessment of various output indicators, such as the number of cases or the study of the welfare effects of selected case decisions.¹² Additionally, it has to be assessed to what extent the reform contributed to the desired extension of the deterrent effect on the firm's side and thus prevents competition law infringements. Given the substantial difficulties in constructing a counterfactual world that would allow the direct measurement of the

¹² It should be noted here that the second part of the project conducted for the State Secretariat for Economic Affairs focused on an investigation of the economic effects of decisions whether or not to intervene, as well as the consequences of these decisions for the affected parties and markets in particular cases. Following the structure of the KG, case studies were undertaken in the fields of cartel agreements, abuse of dominant position, vertical agreements, and horizontal mergers.

scope of the deterrent effect, a survey among competition experts was identified as the most promising empirical technique to indirectly track down the perceived changes in the deterrent effect due to the revision. While the technical implementation of the survey approach is described in section II.C, the remainder of this section is devoted to the derivation of the key hypotheses.

As a starting point of a survey-based investigation of the deterrent effect, it is potentially valuable to collect the perceived general changes in Swiss competition policy since the revision and combine them with an appraisal of whether the revision can be considered to be a key reason for the changes. Topics to be addressed in such a category are, for instance, the role of competition policy in the media, the knowledge of competition rules by the firms, the stated reasons for competition law infringements (i.e., “intention vs. ignorance”), or the effects of the revision on the demand for legal services. These and further indicators will be investigated in detail in section III.A.

Subsequent to the general assessment of the competition policy landscape, section III.B narrows the focal point to the impact of the new sanction possibilities. In this area, the opinions on the justification and concrete effects of the extended sanction possibilities are collected and cross-checked with the theoretical and practical insights described above. Moreover, the extent to which a further extension of the sanction possibilities is expected to be effective and socially desirable is also addressed.

An additional indicator worth investigating closer is the in-firm adoption and implementation of so-called competition law compliance programs (CLCPs). The main task of such programs is to prevent competition law infringements and their direct or indirect profit-reducing consequences such as fines or loss of reputation. From an economic point of view, the introduction as well as the improvement of CLCPs can be interpreted as an indicator of an improvement in the deterrent effect as—according to the assessment of management—the expected profit of the program (i.e., the prevention of investigations and sanctions) exceeds the expected costs. To what extent this effect was observable in Switzerland will be assessed in greater detail in section III.C.

Finally, studying the impact of competition law on business strategies is of great importance for two reasons. First, significant changes

in antitrust law should be followed by significant adjustments by firms. For example, new vertical restraint guidelines can be expected to lead to adjustments in existing contracts between manufacturers and retailers in order to comply with the new rules. Therefore, an evaluation of a legislative change has to address the question of the extent to which such adjustments have taken place following the revision. Second, the perceived significant adjustments by firms do not necessarily have to be welfare increasing. For example, if the new competition rules are too imprecise, there is a risk that firms are being restricted more than necessary in the implementation of their business strategies, causing welfare losses for society. As a consequence, the extent to which firms have refrained from implementing potentially procompetitive business strategies due to an increased uncertainty of competition rules and their enforcement must be addressed as well. The results of the survey with respect to both questions will be presented in section III.D.

C. Implementation of the research strategy

Given the key aim of investigating changes in the deterrent effect of antitrust sanctions in Switzerland, the survey was identified as the most suitable and promising empirical technique. Among the two basic options for undertaking such a survey—sending a questionnaire to a large number of recipients or conducting detailed interviews with a much smaller number of interview partners—the latter was identified as much more promising. Although it is obvious that such a necessarily small number of detailed interviews might cause representativeness issues,¹³ the advantages of the option were estimated as key for the overall success of the investigation. First and foremost, the possibility of explaining the complex and interdependent questions together with the opportunity to facilitate discussions during the interviews were considered to be very valuable, especially

¹³ Further potential disadvantages of the survey method discussed in the literature are the presence of response biases and interviewer biases. Although response bias occurs as soon as the interviewed person responds with what he thinks the interviewer wants to hear rather than just providing the facts, interviewer bias occurs as soon as the interviewer asks questions in a way that suggests a certain answer.

because it was expected that interaction would provide the ability to check the correctness and plausibility of facts and arguments brought forward by the interview partners. To give an example, while it is quite easy to tick a “Yes” box in a questionnaire that asks whether the firm has implemented a state of the art CLCP, it is much harder to mask the truth if detailed follow-up questions are asked. Furthermore, another key reason for the decision to conduct expert interviews rather than use a questionnaire-based approach was with the fact that the State Secretariat for Economic Affairs itself undertook questionnaire-based surveys among antitrust lawyers, firms, associations of small and medium-sized enterprises, and the COMCO staff. Interestingly, these surveys were conducted at least twice—shortly after the revised KG went into force in 2005 and in the beginning of 2008—in order to identify significant changes.¹⁴

Given this initial choice of the survey method, twenty detailed interviews were conducted between January and March 2008, mostly

¹⁴ With respect to antitrust lawyers, around seventy were invited to participate in the surveys and nearly half actually submitted their responses. The results show that there were no significant changes between the two surveys, and the answers basically confirm that the revision of the KG led to an increase in the deterrent effect of competition law. Business firms tend to have an increased fear of violating the revised competition laws and try to comply to a greater extent with the respective rules. This fear is driven to a large extent by the sanctioning possibilities as well as the new ability to collect evidence by conducting dawn raids. However, most lawyers also confirm that the administrative efforts of the COMCO increased significantly due to the revision of the KG. With respect to firms, around 100 larger companies were invited to participate in the survey and 22% in the first and 44% in the second survey submitted their responses. The results show that competitive pressures in the respective industries have increased on average in the years following the revision of the KG. Furthermore, more than 90% of the larger firms in Switzerland that participated in the first survey were aware of the motivation and basic content of the KG and its revision. However, this value dropped to 79% in the second survey. In both surveys, more than 90% of the larger companies agreed that intensive competition is of great interest for Switzerland and that the KG is contributing to the protection of these benefits. Interestingly, associations representing small and medium-sized enterprises turned out to be much more skeptical with respect to the benefits of the revised KG for Switzerland in general and for their respective industry in particular. See EVALUATIONSGRUPPE KARTELLGESETZ, UMFragen BEZÜGLICH DES EFFEKTES VON NEUEN KG-INSTRUMENTEN (2008).

in the form of private conversations at the premises of the interview partners. The talks lasted one to two hours. A couple of days before the meetings, a comprehensive interview guide was sent to the interview partners for preparation purposes. The questions were slightly adapted to the specifics of three groups of interview partners: antitrust lawyers, firms, and associations. In the remainder of the article, only the results of the surveys among antitrust lawyers and firms will be presented in greater detail.

The survey of Swiss antitrust lawyers is considered to be very relevant and important; since lawyers naturally consult a large number of clients from different industries with various competition law issues, they have a wide and yet differentiated view of both the general developments and the more specific problems. In order to ensure that the interviewed lawyers spent most of their working time on antitrust problems—and thus can be referred to as antitrust law experts—the list of lawyers to be primarily interviewed was created with the support of the Secretariat of the COMCO. These lawyers were contacted in a first round. The response rate in this initial round was already so high that no further rounds were necessary. In total, seven antitrust lawyers, all based in Zurich, were interviewed.

With respect to the representativeness of the statements, it should be noted that all interviewed lawyers were employed by larger law firms. Because large firms and conglomerates may be overrepresented in the client bases of larger law firms, the lawyers' statements may reflect for the most part the experiences and problems of this client group. As most small and medium-sized enterprises with a demand for legal advice typically do not consult large law firms, the specific problems of such firms might be underrepresented in the survey. However, in most of the interviews, the lawyers were fully aware of this potential bias and often tried to add their views on the specific problems of small and medium-sized enterprises.

In addition to the group of antitrust lawyers, the firms that are the direct target of antitrust law are a natural survey group. Because possible sanctions directly hit firms (and not managers), a key hypothesis to be tested is whether the increased sanction possibilities lead to an increase in the compliance activities of firms. Furthermore, interviewing firms that were involved in competition cases about their experi-

ences might be a good way to identify within-firm reactions to detected competition law infringements.

Based on these considerations, two groups of firms were contacted in various rounds: firms active in important economic sectors of Switzerland and firms that were involved in competition cases at the Competition Commission or a foreign competition authority in the past years. This choice produced good coverage of large enterprises and a rather suboptimal coverage of small and medium-sized enterprises. However, a large fraction of the small and medium-sized enterprises decided not to take part in the survey; they might not have been comfortable enough to be confronted with the spectrum of detailed questions.

Due to confidentiality reasons it is not possible to name either the interviewed firms or their industries. Given the relatively small size of Switzerland, disclosing the industry would—at least in some instances—make it possible to identify the firm. What can be said about the interviewed group of firms is that four industrial enterprises and six service enterprises took part in the survey. Most of these firms can be classified as internationally active large enterprises with roots in Switzerland. Seven of the ten interviewed firms had been involved in competition cases during the past years, most of them in competition cases of the COMCO. The types of cases are distributed across the whole antitrust spectrum and include abuse of market power, horizontal price fixing, and merger control. The interview partners on the firm side were mostly heads of the legal or regulatory affairs departments. In some cases, the interview partners belonged to the board of directors. All interview partners had already spent a long period of time in the firm and were therefore considered to be competent for the purpose of the study.

III. THE DETERRENT EFFECT OF ANTITRUST SANCTIONS IN SWITZERLAND—RESULTS OF A SURVEY OF ANTITRUST LAWYERS AND FIRMS

In this section, the key results of the survey carried out among Swiss competition lawyers and firms are presented. The four different subsections show an increasing degree of specificity—from a description of general developments in Swiss competition policy through an

evaluation of the impact of the extended sanction possibilities and the existence and design of competition law compliance programs to the impact of competition law on business strategies.

A. Recent developments in competition policy

In this section, some general recent developments in Swiss competition policy are described from the perspective of the interviewed lawyers and firms. A particular focus lies on perceived changes in the competition policy landscape since the last revision of the KG in April 2004.

1. THE LAWYERS' PERSPECTIVE From the lawyer's perspective, the significance of antitrust law in Switzerland has increased considerably during the past years. By now, antitrust law is an essential part of the business profile of larger law firms, partly because of its interactions with other legal business areas such as intellectual property rights or mergers and acquisitions. To some extent, the diffusion of antitrust knowledge from the lawyer's side to the client's side was eased by the partial lifting of an advertising ban that, for instance, now allows law firms to inform their clients about the latest developments in competition law via leaflets. Furthermore, the Secretariat of the COMCO has significantly improved its public relations skills since the last revision of the KG. This development is reflected in a greater interest of the media in the communication of competition policy news.

An important indicator for the increased impact of antitrust law is the workload in the law firms. In this respect, the interviewed lawyers agree that the latest revision has led to a significant and nontransitory increase in demand for legal advice both on a "number of clients" as well as a "revenue per client" basis. In particular, the new sanction possibilities together with the new instrument of dawn raids to gather information from suspects led to an increase in demand for CLCPs and behavioral guides for dawn raids, respectively. However, smaller but still significant demand increases had already been experienced following the first revision of the Cartel Act in 1996 as well as around the year 2000. Additionally, especially during the transition period in 2004–05, a substantial—yet transitory—demand increase was observed with respect to the review of existing contracts.

With respect to the structure of the observed demand increase following the revision, most lawyers differentiate between several demand groups. For example, foreign firms that are also active in Switzerland typically handle competition law issues very professionally. The revised Swiss specifications were integrated into the existing compliance programs so that the effect of the revision on these firms has been very small. The situation is similar for internationally operating large Swiss enterprises as well as for potentially dominant firms with a sales focus on Switzerland. For all these firms, the relevance of competition law in the respective foreign markets was realized and implemented long before the latest revision of the KG. An increase in the demand for legal services can be observed only in cases of particular competition law infringements.

A further demand group is smaller listed Swiss firms that are active only to some extent in foreign countries. Among these companies, the revision in general as well as media news about cartel detections or dawn raids in particular has led to a considerable increase in demand for legal services. The situation is similar for larger family-owned Swiss firms.

The lawyers named two further demand groups, smaller firms focusing on the domestic market and small and medium-sized firms focusing on regional and local markets. As most of the interviewed lawyers do not have clients that belong to either of these two groups, the effect on the demand for legal services is negligible here. However, some lawyers expressed their belief that competition law insights are much less widespread among these demand groups. However, on some occasions, associations of small and medium-sized enterprises consulted lawyers on competition law questions and then passed the information on to their member companies.

A further indicator of the increased impact of competition law lies in an assessment of the competition policy knowledge of the clients. In this respect, most lawyers agree that clients have on average shown a deepened knowledge of antitrust law, and the revision of the KG is seen as a major driver for this development. The new sanction possibilities, the anticipated process costs (such as lawyers' fees and tied management resources), and the negative reputation effects arising

from competition law infringements were named as the main reasons for the increased interest and understanding of competition law.

Despite the identified considerable improvements in firms' understanding of competition law, some lawyers report that there are still uncertainties about the relevance of competition law as well as the consequences of infringements. For example, although most firms know that price fixing is prohibited, varieties of price fixing with equally negative consequences, such as agreements for price decreases or coordinated market exits of selected firms, are not always considered to be prohibited. Similar conclusions can be drawn for information exchanges between firms in which the main focus might be the observation of market share changes over time rather than collusive coordination, but which nevertheless might conflict with competition law. Furthermore, firms occasionally share the unfounded opinion that severe sanctions can be imposed only on hard core cartels.

With regard to the reasons for infringements of competition law, the lawyers' experiences diverge. Ignorance is assumed in most cases as the prime reason for an infringement. Such a finding suggests an insufficient penetration of competition rules among firms. However, some lawyers largely rule out ignorance as a key reason and argue that intent or at least gross negligence should be seen as a key reason. Particularly, those lawyers refer to situations in which agreements are signed without an examination of possible competition law infringements. Such a finding suggests that the CLCPs are not working smoothly or that the deterrent effect of antitrust sanctions is still suboptimal.

2. THE FIRMS' PERSPECTIVE From the firms' perspective, different indicators point out that competition policy in Switzerland has become more important in the past years. For example, the press coverage of competition policy news as well as the number of lawyers specializing in competition law has increased significantly since the last revision. However, the number of economic consulting firms is still limited, and thus conflicts of interest arise relatively frequently. The COMCO is perceived as more active and communicative, for example, with respect to the publication of press releases as well as its general presence in the news. Daily newspapers show an increased interest in articles on competition policy, especially with respect to hot topics such as the imposition of sanctions or dawn raids.

All interviewed firms see competition policy as an important part of economic policy. On the one hand, this opinion is founded on the key aim of competition policy to watch or restore the functioning of markets. On the other hand, competition policy is considered important with respect to the detection and sanctioning of hard core cartels, which are viewed as economically detrimental by almost all firms, especially due to their negative effects on innovation. However, a fraction of the interviewed firms is more skeptical of the desirability of sanctions outside the area of horizontal cartels, as the underlying concepts are much more general and thus create substantial legal uncertainty for the firms. In fact, the problem of legal uncertainty was identified as the key problem in Switzerland in almost all interviews.

With respect to the general influence of the latest revision, firms that are active mostly in foreign markets or are operating in regulation-intensive Swiss markets state that the revision had no or almost no relevance for them as compliance with various competition law provisions was already been on the agenda. As a consequence, it was straightforward to consider the changes of the revision in the existing management systems. However, in specific cases, the revision was stated to be the key reason for the implementation of competition law provisions into existing compliance programs. In one specific case, the implementation took place due to pressure from the capital markets rather than for the prevention of antitrust sanctions.

B. The impact of the extended sanction possibilities

The most fundamental change of the last revision of the KG is the possibility of extended sanctions. While the prior KG allowed only the sanctioning of repeated infringements, the new legislation permits the imposition of significant sanctions for first offenders. The following two subsections present the views of the lawyers and firms on the impact of the possibility of extended sanctions.

1. THE LAWYERS' PERSPECTIVE Most of the interviewed lawyers agree that the introduction of direct sanctions for first offenders was a consistent and correct step. Some lawyers even raised the question of why the old antitrust law was passed without such sanctions in the first place. Despite this consensus for the general desirability of direct

sanctions, the lawyers also agree that one of the main problems in this respect is a lack of legal certainty. Since the last revision, the perceived legal certainty has decreased in many areas of competition law, although an introduction of significant sanction possibilities demands the opposite development.

With respect to the use of the new sanctions by the COMCO, most lawyers argue that the few fines that have been imposed so far still suffer from a credibility problem as it remains unclear whether the fines will really become effective and have eventually to be paid by the firms.¹⁵ This problem might be caused partly by the lack of clearly defined proceedings for the imposition of sanctions, which makes it hard for firms to fully understand the consequences of competition law infringements.

Speaking of the general size of fines, some lawyers questioned whether the recently observed very high fines within the European Union—which were not limited to cases of severe violations such as hard core cartels, but were also imposed for cases of abuse of market power—make much economic sense. Most lawyers argue that Switzerland should observe this trend with some skepticism, especially given the potential deterrence of procompetitive business strategies.

The desirability of the introduction of prison sentences for competition law infringements is seen controversially by the interviewed lawyers. Only some lawyers expect that the introduction of prison sentences will lead to a further substantial increase in the awareness of competition law. However, almost all lawyers agree that prison sentences should be considered only for competition law infringements that are clearly definable and particularly harmful for

¹⁵ A practical example can be seen in a recent *Swisscom* case. Although the COMCO imposed a fine of 333 million francs (around US \$329 million) for abusing a dominant position, Swisscom was advised by its lawyers to refrain from making provisions for the sanction. This advice can be interpreted as a clear signal of the lawyers' belief that the fine is unlikely to become effective (as they would otherwise be forced by law to recommend provisions). See Competition Commission, *COMCO Imposes a Fine of 333 Million Francs on Swisscom Mobile* (Feb. 16, 2007), available at <http://www.news.admin.ch/message/index.html?lang=en&msg-id=10863>.

society. Generally, these characteristics apply to severe horizontal price fixing cases only. In all other fields—especially in the field of abuse of market power—competition rules are considered too imprecise to make such drastic interventions reasonable. In particular, it is feared that such “overenforcement” would cause significant negative effects on the innovative power of firms active in Switzerland. Additionally, several lawyers point out that prison sentences are very serious interventions in the life of individuals, especially because they are often followed by severe social problems after the release from prison. It therefore appears debatable whether prison sentences for competition law infringements are really an appropriate option within the Swiss legal system and Swiss law culture.

A potentially sufficient threat for the employees to refrain from any engagement in competition law infringements can be seen in a commitment by the employers to discharge the respective individuals in case of proven infringements. In most firms, a violation of competition law is not currently considered to be a sufficient reason for immediate dismissal of the employee. Furthermore, it has to be kept in mind that the cumulative sanction for a firm involved in a competition law infringement is most likely significantly higher than the actual fine once process costs or reputation losses enter the calculation. A further factor which might play a role in the future is private antitrust enforcement.

2. THE FIRMS' PERSPECTIVE From the firms' perspective, the new sanction possibilities have increased the awareness of competition law in Switzerland. This observation especially applies to firms that were active mainly in the domestic market and did not have the pressure to comply with foreign competition laws. The introduction of increased sanctions is generally considered to be a necessary step to achieving the desired acceptance of the law. Some firms raise the question why the previous law was enacted without any significant sanction possibilities.

However, although most firms admit the necessity of significant sanctions for antitrust policy, many also pointed out that such steps should be taken only in cases in which a sufficient amount of legal certainty has previously existed or should have existed. This legal sit-

uation exists with respect to hard core cartels but not with respect to most other areas of antitrust. In cases of abuses of market power, for instance, it is extremely difficult and sometimes even impossible to clearly define the border between procompetitive price cutting and anticompetitive predatory price cutting. As a consequence, the legal certainty is not present to a degree that would justify the imposition of large fines.

With regard to the fine level, some firms argued in particular that the fine imposed on Swisscom was “astonishingly high” or “too high.” In view of recent decisions in the European Union, the observable “fine inflation” is seen rather skeptically, both with regard to horizontal agreements as well as to other forms of anticompetitive behavior. Some firms, however, also stated that the fine against Swisscom is not yet legally binding and is even losing part of its deterrent effect due to the long duration of the proceedings as well as the likelihood that political pressure and influence might cause a significant reduction in the fine. In order to improve contemporary Swiss competition law, many companies argue that it would be important to make the expected size of sanctions more predictable by defining a reliable set of criteria.

With respect to possible personal sanctions of managers proven responsible for competition law infringements, some firms argue that clear identification of the responsible individuals is often challenging. On the one hand, in the event of, for instance, a hard core cartel, it could be argued that the top management is responsible because it has exerted substantial performance pressures on business units, and employees have tried to reduce that pressure by entering into agreements with competitors. On the other hand, the in-house legal service department or the chief compliance officer could be regarded as responsible given that the compliance system obviously was unable to deter or at least detect the competition law infringement. Furthermore, few would disagree that the employees who actually participated in the cartel agreement must be held responsible. In this respect, a recent political initiative called “Motion Schweiger”—which was initiated and is supported by several large Swiss firms—argues that the employees who actively promoted the agreement should primarily be held personally responsible. The firm, however, should have the opportunity to sig-

nificantly reduce the corporate fine by proving the implementation of a state of the art CLCP.

The introduction of a prison sentence as an additional sanction is seen to be controversial by the interviewed firms. Some firms argue that possible prison sentences would have an additional effect on managers, although it remains unclear whether the welfare effect would have be positive or negative. Other interviewed firms consider such punishments as practically ineffective and identify numerous constitutional problems that foreclose their implementation in Switzerland. Some question whether competition law infringements are really so serious as to justify such drastic measures. In this context, it is often noted that cooperation without an effective opposition plays a key role in the Swiss consensus system, and the introduction of prison sentences for competition law infringements could have a negative general influence on Swiss society. Furthermore, some firms argue that prison sentences are basically unnecessary since the responsible managers can be confronted with civil law suits and would most likely also lose their jobs.

With respect to the contribution of the different sanction types to the overall deterrent effect, the opinions of the interviewed firms diverge. For some firms, the expected monetary fine is assumed to have the greatest effect; others refer to the cost of the proceedings—internal as well as external legal and possibly economic advice—as the most important factor. Reputation effects are also considered to be relevant; however, firms do not agree on the duration of such an effect. Some firms share the opinion that negative reputation effects could dissipate relatively quickly and would lead to only temporary problems in areas such as the recruitment of new employees, but others argue that repeated violations of competition law must be expected to have a significant and long-lasting negative effect on a firm's reputation. In this context, the improved public relations activities of the COMCO are seen as helpful because high media presence of antitrust cases increases the negative reputation effect and thus raises the incentive to prevent antitrust infringements.

In addition to the various sanction components discussed so far, one company remarked that although possible sanctions as well as reputation damage have indeed increased the awareness of competi-

tion law within the firm, a further key factor was the increasing number of threats by customers and suppliers to report alleged abuses of market power to the COMCO. In order to be able to assess the credibility of such threats—for example during contract negotiations—the firm was forced to expand its knowledge of competition law.

C. The existence and the design of competition law compliance programs

The main task of CLCPs is to prevent competition law infringements and their direct or indirect profit-reducing consequences such as fine payments or reputation losses. From an economic point of view, the introduction as well as the improvement of such CLCPs can be interpreted as an indicator of the improvement in the deterrent effect created by antitrust enforcement in a particular jurisdiction as—according to the assessment of the management—the expected profit of the programs (i.e., the prevention of investigations and fines) exceeds the expected costs.

1. THE LAWYERS' PERSPECTIVE From the lawyers' perspective, although clients have shown an increased interest in CLCPs since the last revision, it still turns out to be difficult in some cases to convince firms that CLCPs are a profitable investment. A key problem is often the fact that the expected payoff is usually hypothetical and ideally remains hypothetical. This characteristic can also explain the observation that the demand for CLCPs typically increases immediately after the announcement of sanctions or dawn raids by the COMCO. Furthermore, quite regularly, CLCPs are implemented or improved either after a firm is found guilty of a competition law infringement (since such an action can possibly lead to a significant fine reduction) or when antitrust problems have been identified internally. Some lawyers additionally argue that the firm-side incentives to invest in CLCPs could be increased further by announcing substantial fine reductions in cases of competition law infringements in cases in which a state of the art CLCP was implemented.

The kind of legal advice demanded by firms with respect to CLCPs is highly dependent on the industry as well as the size of the firm. Although smaller firms almost inevitably depend on external legal advice, larger firms often have their own legal service depart-

ment that can be approached for competition law questions. In such an environment, external lawyers often just act as contact persons for possible dawn raids (or the related training exercises) as well as for audits of the firm's CLCP. Recently, however, CLCPs have increasingly been demanded by medium-sized firms as well as by associations that will pass on the insights to their member companies.

The range of CLCP activities for lawyers is broad. In many cases, an audit of the antitrust exposure of the client is carried out first, partly by simulated dawn raids. The identified problems then determine the further steps. The actual design of the CLCP varies from the preparation of manuals or guidelines to the creation of training sessions and electronic learning programs, which typically are adjusted to the respective industry or market, the respective target group (such as top management, middle management, or sales teams) as well as the prevailing firm culture. With respect to the design of electronic learning programs, the lawyers note that it is often difficult to transform programs from European Union antitrust law to Swiss antitrust law because Swiss antitrust law often offers less guidance. On the one hand, this problem is caused by the fact that Swiss competition law rarely uses *per se* prohibitions and the relevant guidelines are open to different interpretations. On the other hand, due to the relatively short tradition of Swiss competition law, no large case practice exists to guide recommendations for firms.

One of the main difficulties with CLCPs from the lawyers' point of view is the failure to include the top management in their creation, implementation, and execution. Especially key to successful implementation is the communication of a zero tolerance policy by top management and the delegation of the implementation and operation of the program to the department manager or chief compliance officer. Another difficulty identified by the lawyers is that firms frequently fail to regularly update and audit the existing programs. Usually, audits of existing programs are conducted either during transitional phases that include changes in the top management or after dawn raids have taken place. Furthermore, it turns out to be important for the successful implementation of a CLCP to focus on those individuals who might be confronted with offers by other firms to join a cartel. In this respect, some lawyers argue that competition law violations (especially cartel agreements)

tend to arise not at the level of the top management but at the level of the salesmen who are put under pressure to reach specific performance targets. This pressure makes cartel agreements, for example, attractive and therefore creates an obligation to train the relevant employees.

With respect to the costs of CLCPs, the lawyers estimated that the opportunity costs of working time of the top management and legal service departments devoted to CLCPs represent the largest cost factor.

2. THE FIRMS' PERSPECTIVE All interviewed firms indicated that they have a CLCP. However, the interviews revealed considerable differences with respect to the content, the quality, and the degree of the implementation of such programs. Some firms provided proof that CLCPs exist not only in theory or in the form of glossy brochures but are indeed implemented according to the best practice.¹⁶ However, other firms indicated that although a CLCP exists, the necessary implementation is not yet completed. In some cases, the introduction of CLCPs started only recently and the revision can be seen as the cause for this development, especially as reports about sanctions and dawn raids increased in-house awareness of competition law. Furthermore, firms that had already been involved in one or more investigations by the COMCO describe the procedures as so long and resource-intensive that it is not the possible monetary sanction that has the largest impact on the overall deterrent effect but the burden created by the imminent investigation.

Considering the individual stages of the implementation of a best practice CLCP in more detail, the survey revealed that a compliance

¹⁶ In order to allow an assessment of the current compliance activities of the interviewed firms, a "best practice" for such programs had to be defined. For the purpose of the survey, the KPMG approach for an effective CLCP was found to be a suitable benchmark. The approach acknowledges that the inclusion of top management is a key success factor in the initiation and implementation process for a CLCP. In detail, the implementation process has to be carried out in the following seven stages: development of a compliance strategy; composition of documentation; selection and training of employees; development of a compliance organization; definition of clear responsibilities; provision of incentives and sanctions; and, finally, the creation of a control system. See Stephan Grüninger, *Corporate Governance & Responsibility*, KPMG Presentation, 2nd Constance Academy of Business Ethics (2005).

strategy—with different degrees of differentiation—was present in all interviewed firms. The main goals of compliance activities are in most cases referred to as meeting the statutory regulations as well as preventing investigations and sanctions. Moreover, most of the firms emphasize that the initiative and the responsibility for the CLCPs are in the hands of the top management, and the legal service departments are typically responsible only for implementation. Furthermore, many firms also argue that compliance is a topic which is relevant for each employee. In one case, the firm explicitly emphasized that it is crucial to understand compliance not as a cost factor but as an instrument with a direct impact on shareholder value and thus also as an important firm asset.

The composition of documentation in all interviewed firms consists of leaflets, guidelines, or manuals. However, the integration into an existing code of conduct has not yet taken place in every interviewed firm. It was regularly stressed that the composition of documentation represents only the beginning of the implementation of a management system and not the end of the activity. Regular education of employees in competition law matters is considered to be an obligation of top management.

With respect to the selection and training of employees the firms differ considerably in their statements. While some firms provide training only for the top management and the upper-level executives, others focus on large portions of middle management as well. Others focus their training particularly on those employees who could be exposed to issues relevant to antitrust law. Generally, industry-specific particularities—and therefore the potential exposure to competition law infringements—explain a large part of the identified differences. With respect to the scope of employee training, group-wide trainings, the provision of an antitrust compliance site on the intranet, a Web-based enquiry about the main risks, and the creation and running of electronic learning programs are frequently applied tools. In all cases, the training tools did not use standard programs but individually tailored programs that take account of the industry as well as the market position of the respective firms.

With respect to the implementation of the training of employees, some interviewed firms reported several challenges, such as the trans-

lation of the documents and programs into numerous languages, adjustments of the content to the respective antitrust laws, resources for the preparation of the training sessions, and the significant fluctuation of employees abroad (which demands short training repetition cycles). Furthermore, some firms report that it is sometimes difficult to cover the whole spectrum of antitrust law on the one hand and to bring forward clear case examples that demonstrate the relevance of the antitrust law for specific business transactions on the other.

With regard to electronic learning programs, firms reported significant difficulties in providing the definition of clear rules and recommendations given the lack of case law in Switzerland. This is especially true in the area of vertical agreements. Furthermore, some firms stated that external lawyers who were asked to construct the tools had interpreted antitrust law too restrictively, and a direct implementation of the recommendations would have placed excessive limitations on the firms' business strategies. Generally, however, electronic learning programs are considered to be helpful instruments by most of the firms.

The activities within the scope of the development of a compliance organization described by the interviewed firms cover the creation of compliance teams, the appointment of employees responsible for compliance in all subsidiaries and country offices, the introduction of an audit committee, and in part a benchmarking of the compliance system. Moreover, in most cases an internal consultation office was established to which employees can turn for legal advice. One of the interviewed firms reported in detail about the integration of compliance procedures into the entire design process for new products.

The need for a definition of clear responsibilities is met by most of the interviewed firms by placing the ultimate responsibility with top management. The heads of the legal service departments or the chief compliance officers are then entrusted with the implementation, operation, and control of the management systems. In international firms, the compliance officers in the various country offices are in charge of the implementation and operation in the relevant countries and regularly report to the group or chief compliance officer.

The provision of incentives and sanctions within CLCPs is treated differently by the interviewed firms. In many cases, employees can

report alleged misbehavior anonymously. In some cases, the management of the firms stated clearly that intentional violations or gross negligence of competition law would result in the immediate dismissal of the responsible employee(s). However, such a clear statement is still the exception rather than the rule. One of the main problems with an immediate dismissal is the fact that the firm still depends on the cooperation of the employee during the trial and thus, in many cases, cannot immediately dismiss the employee.

One new instrument of internal sanctioning discussed within several interviewed firms is the internal leniency program. The discussion about such programs is driven by the fact that firms invest substantial resources in preventing competition violations by their employees, but still have to pay large fines if one or a few employees nevertheless break the rules. Internal leniency programs can be understood as an attempt to motivate employees to report their misbehavior before the company faces huge fines as a consequence of the detection of the misbehavior by the competition authority. The prototype of an internal leniency program presented by one interviewed firm contains of two phases: In phase one, if the competition authority has not yet detected the misbehavior, a confessing employee will be sanctioned but not dismissed. In phase two, a competition authority has already opened an investigation. In such cases the employee is dismissed; however, he can still positively influence the circumstances of his departure by a decision to cooperate during the trial. Although the main advantages of internal leniency programs—avoiding misbehavior and preventing or reducing sanctions—are apparent, critical commentators fear that such programs may cause negative effects on firm culture. At the time of the interviews, none of the interviewed firms had introduced an internal leniency program. However, one of the interviewed firms specified that acting in compliance with competition law is a requirement for a participation in the internal share-option program.

Finally, with respect to the creation of a control system, only some of the firms state that they have implemented a regular auditing mechanism. Among those firms, some carry out legal audits internally, and some use external lawyers. Some firms conduct both audit types. With respect to internal audits, firms reported that the exchange of ideas at conferences and other information events is of great importance for

staying up to date and implementing the best practice CLCP. With respect to external audits, some firms reported that the new insights were rather limited, as most of the areas that were identified as problematic had already been identified by internal audits.

With respect to the overall costs of introducing and running a CLCP, most firms named the opportunity costs of working time invested in compliance as the largest fraction. Direct expenditures, such as the salaries of the persons working in compliance or the costs of the design of training materials, play only a minor role. None of the interviewed firms was able to quantify the overall costs of its CLCP.

D. The impact of competition law on business strategies

Studying the impact of competition law on business strategies is of great importance for two reasons in particular. First, significant changes in antitrust law should be followed by significant adjustments by firms. For example, new vertical restraint guidelines can be expected to lead to adjustments in existing contracts between manufacturers and retailers in order to comply with the new rules. Therefore, an evaluation of a legislative change has to assess the question to what extent such adjustments have taken place following the revision. Second, the significant adjustments implemented by firms are not necessarily welfare increasing. For example, if the new competition rules are too imprecise, firms restrict their competitive activities more than necessary causing welfare losses for society. As a consequence, the question has to be asked to what extent firms have refrained from implementing potentially procompetitive business strategies due to increased uncertainty in the competition rules.

1. THE LAWYERS' PERSPECTIVE As confirmed by all interviewed lawyers, competition law certainly has an impact on business strategies. The intended effect of competition law and policy is the prevention of anticompetitive behavior. Generally, business strategies—across all industries—are affected by competition law in the drafting of contracts. Especially during the transition period, lawyers were frequently involved to assess the conformity of existing contracts with the revised competition law.

With respect to the general consideration of antitrust law during the development of business strategies, most interviewed lawyers rec-

commend that their clients first present and plan the implementation of the business idea and afterwards—but before the actual implementation—undertake the necessary adjustments to comply with competition law. Generally, however, legal advice is impeded by the decreased legal certainty of the revision. Quite frequently the COMCO is confronted with types of cases that have not been on the competition law agenda before. Although in such cases, referring to European Union competition law can guide legal advice, there is always a certain probability that the COMCO will deviate from European Union practice in its decision. In this respect, the lawyers especially criticize the lack of leading cases in Switzerland, which makes the provision of legal advice extremely difficult.

Additionally, the COMCO's recently published guidelines were not extremely helpful; the guidelines were vague and increased uncertainty rather than decreasing it. A particular problem is that the COMCO has not adopted the European Union guidelines word for word and therefore has opened the floodgates to different interpretations, causing a decrease in the legal certainty for firms and an increase in the risk of giving legal advice. Uncertainty is especially high in the difficult area of vertical agreements. Significant problems of legal certainty also exist in the area of the abuse of a dominant position, in which it is often difficult to examine contractual terms before the launch of a new product.

As outlined above, substantial welfare losses can be caused by competition law if vague rules (i.e., legal uncertainty) are combined with high imminent sanctions and firms decide not to implement "borderline," but in fact procompetitive, business strategies. Some of the interviewed lawyers have identified such situations in conversations with clients. For example, in the field of vertical agreements, the lawyers pointed out that it is becoming more and more difficult for some manufacturers to exclude underperforming retailers from their sales networks. Manufacturers fear that the excluded firms would file a complaint with the COMCO that might be followed by a long and resource-intensive investigation. For this reason, some manufacturers have abstained from the termination of such contracts or have at least postponed taking the necessary steps to do so. From an economic perspective, such a development is suboptimal as

existing structures are cemented and possible efficiency increases remain unrealized.

Moreover, some lawyers report that firms have deferred or abandoned innovative strategies because they were unable to determine to what extent the plans might conflict with competition law. This applies particularly when cooperation with competitors is necessary for the implementation of the business strategy or concept. Furthermore, in the field of merger control, it is likely that antitrust enforcement has deterred some mergers and impeded consolidation in the industry—with unclear implications for social welfare. Similar situations occur when a firm with a potentially dominant market position plans the launch of a new product that might harm competitors. In such situations, it is reasonable to assume that antitrust law prevents the introduction of these products—again with unclear implications for social welfare.

2. THE FIRMS' PERSPECTIVE Most of the interviewed firms reported that the implementation of business strategies is not massively impeded by competition law. In one case, for example, a firm stated that it had to end price recommendations due to the revised competition law. However, the necessary changes turned out to be rather unproblematic and had only a minor impact on the business.

Depending on the firm type and the industry, competition law has had a significant effect as planned products go through an internal control and consulting process to assure that competition law is not violated. As a consequence, it is likely that ideas clearly infringing competition law are sorted out internally during the planning phase; thus the product range in a world of antitrust law differs from that in a world without such a law. Nevertheless, the interviewed firms emphasize that they also monitor quite closely whether competition law causes a dangerous chilling effect on the implementation of innovative strategies. In this respect, a central problem is that particularly innovative strategies are often especially painful for competitors who might therefore decide to urge the COMCO to classify these strategies or products as anticompetitive.

Additionally, firms state that the problem of legal uncertainty is still virulent and has even increased since the revision. One example

identified by different firms is the problem of market definition, which turns out not to be transparent. It is often difficult to predict how the COMCO is going to delineate markets, and in some cases an overly restrictive market definition led to (unexpected) positions of market power. A further problematic area is cooperation with competitors in which creative potential remains unused because it is unclear to what extent such cooperation is tolerated by the COMCO. Other problematic fields include questions of the definition and admissibility of exclusivity, the admissibility of discounts, and questions of abuse of market power in secondary markets.

IV. SUMMARY AND CONCLUSIONS

With the effectiveness of the revision of the KG on April 1, 2004, the COMCO gained considerable new powers, especially the power to sanction anticompetitive behavior by imposing substantial fines. Additionally, the revision provided the COMCO with enhanced means of gathering evidence of competition law infringements by conducting dawn raids, thereby increasing the probability of detection and punishment for competition law infringements. Both steps together aimed at strengthening the deterrent effect of antitrust sanctions, because the incentive of firms to invest in the avoidance of competition law infringements can be expected to rise with the severity and likelihood of imminent sanctions.

Although the importance and value of the deterrent effect of antitrust sanctions is undisputed among antitrust experts, it is equally undisputed that the scope of the effect is very hard to measure in practice. As a consequence, an evaluation of the success of the revision of a cartel law is certainly a difficult undertaking. If the goal of competition policy is the prevention of competition law infringements (and competition cases), it immediately follows that a direct output-oriented evaluation focusing on, e.g., the number and effects of decisions undertaken by a competition authority in a specific period must be regarded as insufficient or even pointless. Consequently, alternative indicators must be used to analyze the success of the revision of the KG.

Against this background, the article provides one of the first attempts to study the changes in the deterrent effect of the revision of

the KG by conducting a survey among antitrust lawyers and firms. In particular, theoretical and practical insights on the role of sanctions and deterrence are applied to identify four key survey categories: recent developments in competition policy; the impact of the possibility of greater sanctions; the existence and design of competition law CLCPs; and the impact of competition law on business strategies. Based on these categories, the interviews of antitrust lawyers and firms identified pieces of evidence that indicate changes in the deterrent effect of antitrust sanctions as a reaction to the revision of the KG. An overview of these “perceived impacts of the KG revision” by antitrust lawyers and firms is provided in the table below.

Based on the detailed results of the survey shown in the table, it can be concluded that the latest reform of competition law has moved Switzerland closer to the implementation of an efficient competition policy regime. The COMCO’s new powers to sanction anticompetitive behavior by imposing substantial fines together with the enhanced power to gather evidence of competition law infringements by conducting dawn raids contribute substantially to the creation of the desired deterrent effect of antitrust policy.

However, in order to further increase or sharpen this effect, additional reforms of competition law and its institutions are necessary. For example, as the foray through the existing theoretical and practical literature has shown, sanctions need to be significant and credible in order to reach the desired deterrent effect. In both categories, the survey revealed significant problems. The few fines imposed by the COMCO so far face a severe credibility problem as they are not yet binding, and it is feared that political influence might at least in some cases lead to a significant reduction of the fines.¹⁷ Furthermore, the question whether the fines imposed so far come anywhere near the deterrence-optimal fine remains open.

An even more important problem is the revision-driven increase in legal uncertainty in some areas of Swiss antitrust law such as verti-

¹⁷ It is important to mention that in the two years following the survey (2008–10), the Swiss Competition Commission imposed fines in ten competition cases. As of August 2010, five of these ten decisions are legally binding. It can be expected that these recent developments will have a positive influence on the credibility of fines and mitigate in part the skepticism raised in the survey.

cal agreements, abuse of market power, and cooperation with competitors. Given the relatively short Swiss experience with competition law, there is no set of leading cases; substitutes such as guidelines, did not lead to a significant amelioration of the general situation. With respect to the desired deterrent effect, this situation must be improved in order to send clear signals to firms as to what they are allowed to do and what they have to expect in case of proven infringements of competition law. Otherwise, Switzerland is running a high risk of doing more harm than good by following the aim of enhancing the deterrent effect of antitrust sanctions. This key issue is summarized nicely by Jenny:

To have a deterrent effect, a system of antitrust law enforcement, needs to be predictable (to allow a calculation of the benefits and costs of the violation). Hence the degree of discretion of competition authorities or courts in sanctioning anticompetitive practices should be limited. Their decisions should be transparent and consistent over time and over analytically similar cases.¹⁸

¹⁸ Frédéric Jenny, *Private and Public Enforcement: Complements or Substitutes?*, Presentation at the 3rd LEAR Conference on the Economics of Competition Law (Rome, 2009).

Table

Survey Categories and the Perceived Impacts of the KG Revision

<i>Survey category</i>	<i>Perceived impacts of the KG revision by antitrust lawyers (L) and firms (F)</i>
RECENT DEVELOPMENTS IN COMPETITION POLICY	<ul style="list-style-type: none"> • Significance of antitrust law has increased (L, F) • Antitrust policy is seen as an important part of economic policy (L, F) • Antitrust law has become an essential area of legal consulting (L) • Economic consulting has not yet developed fully (F) • COMCO has improved public relations skills (L, F) • Greater interest of the media in competition policy news (L, F) • Increase in the number of Swiss antitrust lawyers (F) • Competition knowledge of clients has improved on average (L) • Reasons for infringements are partly ignorance, partly intent (L) • Increase in demand for legal services on a “number of clients” and “revenue per client” basis for antitrust lawyers (L) • Increase in demand is distributed unevenly between firm types and is largely driven by smaller listed or family-owned Swiss firms with national focus (L)
IMPACT OF EXTENDED SANCTION POSSIBILITIES	<ul style="list-style-type: none"> • Introduction of direct sanctions is seen as necessary and correct (L, F) • Imminent sanctions increased awareness of antitrust law (F) • Severe fines for infringements other than cartels are criticized (F) • Lack of legal certainty is the key challenge (L, F) • Imposed fines face a credibility problem (L, F) • Recent severe fines in the European Union raise the question of overdeterrence (L, F) • The desirability of personal sanctions in general and prison sentences in particular is seen controversially (L, F) • Contribution of the different costs of infringements (e.g., fine, costs of proceedings, reputation losses) to the deterrent effect is seen controversially (F)

Table (continued)

Survey Categories and the Perceived Impacts of the KG Revision

<i>Survey category</i>	<i>Perceived impacts of the KG revision by antitrust lawyers (L) and firms (F)</i>
EXISTENCE AND DESIGN OF COMPETITION LAW COMPLIANCE PROGRAMS (CLCPs)	<ul style="list-style-type: none"> • Firms have shown an increased interest in CLCPs (L) • It is still partly challenging to convince companies of the value of a CLCP (L) • Demand for CLCPs increases after fine announcements or dawn raids (L) • Demand for CLCPs is largely driven by the type and size of firm (L) • Implementation of CLCPs meets best practices in some firms, but some firms have only recently started the implementation process (F) • Opportunity cost of working time for compliance is major cost factor (L, F) • Firms partly demand fine reductions in case of law infringements by employees when an state of the art CLCP was implemented (F)
IMPACT OF COMPETITION LAW ON BUSINESS STRATEGIES	<ul style="list-style-type: none"> • Competition law has an impact on business strategies (L, F) • Firms have not fully anticipated the need to check products or strategies for antitrust law conformity before implementation (L) • Legal uncertainty is the main challenge of lawyers in advising firms, especially in the areas of vertical restraints and abuse of a dominant position (L) • Potentially procompetitive business strategies (especially cooperation with competitors) might have partly been deterred given the present legal uncertainty (L) • Antitrust law has a significant influence on the introduction of new products by (potentially) dominant firms (F) • Market definition is identified as a source of uncertainty (F)

*B*argaining in the shadow of the European settlement procedure for cartels

BY MAARTEN PIETER SCHINKEL*

I. INTRODUCTION

European Commission (the Commission) officials have made perfectly clear, since the release of the Commission's "settlement package" in the fall of 2007,¹ that the European settlement procedure for cartel cases would not involve any bargaining. "The Commission does not

* University of Amsterdam and Amsterdam Center for Law and Economics.

AUTHOR'S NOTE: *I received appreciated comments to an earlier version of this article from Rafique Bachour, Terry Calvani, Martijn Han, and Francesco Russo, yet I alone remain responsible for its content.*

¹ The settlement package was submitted for public consultation on October 26, 2007. It consisted of a draft Settlement Notice that outlined the procedure as the Commission envisioned it, and a proposal for a Regulation to amend Commission Regulation No. 773/2004 to make implementation of this procedure possible. The eventual two parts were published as Commission Notice on the Conduct of Settlement Procedures in View of the Adoption of Decisions Pursuant to Article 7 and Article 23 of Council Regulation (EC) No. 1/2003 in Cartel Cases, 2008 O.J. (C 167), 1–6 [hereinafter Notice], and Commission Regulation (EC) No. 622/2008 of 30 June 2008 Amending Regulation (EC) No. 773/2004 as Regards the Conduct of Settlement Procedures in Cartel Cases, 2008 O.J. (L 171) 3–5.

negotiate the appropriate sanction," officials insisted in conferences—a line also included in the published Notice.² Cartel members can get a ten percent reduction of the ultimate fine in exchange for acknowledging their involvement and cooperation in the swift conclusion of their case. That is a take-it-or-leave-it offer. Use of the term plea bargaining for the procedure would be wholly inappropriate, as would be most comparisons to U.S. antitrust law enforcement.³

The European Commission's denial that negotiating consequences must precede a settlement is remarkable. After all, settling is all about parties finding common ground, which requires talking, giving, and taking. Is the European Commission naïve? I think not. Allegedly, the drafters of the Notice were concerned that it would be socially unacceptable in Europe to plea bargain with cartels. Yet they must also have realized that there are at least three other dimensions open for bargaining in cartel cases. One is the determination of the fine base to which the ten percent reduction is applied. A second is the percentages of additional fine reductions that are awarded to subsequent leniency applicants. A third is the eventual phrasing that the Commission uses in its public communications about the case.

In fact, the Commission's consistent denial of any negotiation space may well be part of its bargaining strategy. It shut the door on fine-discount discussions, channeling talks to the other bargaining points. The Commission may prefer to negotiate those points because they present more opportunities to reach, much less publicly, mutual agreements and offer parties what they want in return for giving up resistance. After all, on the fine base, leniency information, and the Commission's public presentation of the case, outside observers can never really know what could have been had a full procedure been followed—and so what the Commission gave up for settling. This has better public relations effects and does not create binding precedents.

² See Notice, *supra* note 1, ¶ 2. See also, e.g., Kirtikumar Mehta & Maria Luisa Tierno Centella, *EU Settlement Procedure: Public Enforcement Perspective*, in EUROPEAN COMPETITION LAW ANNUAL 2008: ANTITRUST SETTLEMENTS UNDER EC COMPETITION LAW 391–421 (Claus-Dieter Ehlermann & Mel Marquis eds., 2010).

³ Andreas Stephan shows, however, that such a comparison can be insightful. See Andreas Stephan, *The Direct Settlement of EC Cartel Cases*, 58 INT'L & COMP. L.Q. 627–54 (2009).

However, the Commission may unintentionally have put itself in a weak bargaining position by choosing to disable the only hard bargaining point. We currently have no reason to think that the Commission is not a good negotiator, but there are dangers. Cartel members know that the fine base, leniency discounts, and phrasing of the texts are soft targets, which leaves the Commission with less bargaining power than it could have had under, for example, negotiable individual percentage fine reductions that are made public. This may jeopardize overall deterrence—one of the stated objectives of the settlement procedure.⁴

In addition, by accepting hybrid settlements—settlements that are reached with some but not all cartel members in the same cartel case—the Commission gives up further bargaining power. Settling cartel members will want the full formal decision on those companies that exited the settlement procedure to be less revealing than a standard decision covering all parties would have been. Otherwise, they probably will demand a lower fine to compensate for any damage from disclosure. These effects may undermine the procedure or—if hybrid settlements are nevertheless carried through for reasons of efficiency of enforcement—deterrence. The first settlements published so far, in *DRAM Producers*⁵ and *Animal Feed Phosphates*,⁶ indicate that some of the effects contemplated here may be at work.⁷

⁴ See Notice, *supra* note 1, ¶ 1.

⁵ See Press Release, European Commission, Antitrust: Commission Fines DRAM Producers €331 Million for Price Cartel; Reaches First Settlement in a Cartel Case (May 19, 2010), available at <http://europa.eu/rapid/pressReleasesAction.do?reference=IP/10/586>. No public version of the settlement decision is available.

⁶ See Press Release, European Commission, Antitrust: European Commission Fines Animal Feed Phosphates Producers €175,647,000 for Price-Fixing and Market-Sharing in First “Hybrid” Cartel Settlement (July 20, 2010), available at <http://europa.eu/rapid/pressReleasesAction.do?reference=IP/10/985&format=HTML&aged=1&language=EN&guiLanguage=en>. No public version of the settlement decision is available.

⁷ There are rumors of several further settlements in the pipeline, including a third settlement that is about to be reached, but no public information is available. The same, of course, is true about settlement talks that were unsuccessful and broken off. The entire process is very sensitive and therefore strictly confidential.

In this article, I look at the European settlement procedure for cartel cases from a strategic negotiation point of view. I will loosely apply some game theoretical concepts to outline the contours of two consecutive sequential-move subgames in the procedure. Formal analysis I leave for future research.⁸ This suffices for my thesis that there is plenty of room for bargaining in the shadow of the Commission's settlement procedure for cartels, and that detrimental outcomes are possible. I conclude that the settlement package could benefit from a credible commitment by the Commission to being a tough negotiator, if not by enabling individual percentage fine reductions after all, then possibly by embedding a binding independent review of all settlement proposals in the procedure.

II. THE EUROPEAN SETTLEMENT PROCEDURE FOR CARTEL CASES

Consider the stage at which the European settlement procedure for cartels becomes relevant. In a certain market there have been agreements among several producers to restrict competition in ways that would likely qualify as breaches of Article 101(1) of the Treaty on the Functioning of the European Union. Suppose that the European Commission's DG Competition has gotten wind of this, and a case team has started investigations. These are the players. State of play: The Commission has collected evidence and begins to feel confident that it can build a case. The companies note that they have attracted the attention of the authorities and start to realize they may have gotten themselves into a precarious situation.

In various presentations of the (draft) settlement procedure, officials of the Commission have summarized its practical implementation in eleven steps⁹:

⁸ See Kristen Edwards & Jorge Padilla, *Antitrust Settlements in the EU: Private Incentives and Enforcement Policy*, in EUROPEAN COMPETITION LAW ANNUAL 2008, *supra* note 2, at 661, and Lorenzo Coppi & Robert Levinson, *The Interaction between Settlements and Private Litigation—An Economic Perspective*, in EUROPEAN COMPETITION LAW ANNUAL 2008, *supra* note 2, at 687 for some first attempts to do a formal analysis.

⁹ The following is based on a presentation by Ewoud Sakkers at the annual Elsevier conference Developments in Competition Law 2008, October

1. Commission gauges suitability and interest for settlement.
2. Commission initiates settlement procedure.
3. Commission sends invitation letter to the parties—with time line.
4. Parties declare willingness to cooperate by letter.
5. Bilateral talks—with access to file.
6. Joint conclusions regarding infringement and fine ranges.
7. Parties submit formal requests to settle—specified conditions.
8. Commission drafts the Statement of Objections—honoring conditions.
9. Parties confirm phrasing of the Statement of Objections.
10. Commission consults advisory committee.
11. Commission publishes streamlined formal decision—awards ten percent discount.

Completing all steps successfully results in a full settlement. Alternatively, parties can decide not to enter into the procedure at all. And third, at any stage in an ongoing settlement procedure either the Commission or any or all of the alleged cartel members can break off the settlement talks. Companies can unilaterally exit up until between steps 8 and 9, if they conclude that the Commission has formulated the Statement of Objections with too little regard for their settlement submission.¹⁰ The Commission retains the right not to settle and can default to normal case handling at any step in the procedure, until it has taken the final step 11.¹¹ It may also settle with some but not all companies in one cartel case.

For the purpose of analyzing strategies, it is useful to group these eleven steps into three phases. Steps 1–4 make up a “courting phase” in which players explore whether there is a mutual interest in settling. This phase is a signaling game. Steps 5–7, the “talking phase,” make

9, 2008, in the Kurhaus in Scheveningen. See *ONTWIKKELINGEN IN MEDEDINGINGSRECHT 2008* (I.W. Verloren van Themaat ed., 2009); see also Mehta & Tierno Centella, *supra* note 2 (distinguishing slightly fewer, but similar, steps).

¹⁰ See Notice, *supra* note 1, ¶¶ 26–27.

¹¹ See *id.* ¶ 29.

up a consecutive bargaining game. Lastly, decisions in these two games materialize in the “payoffs phase,” steps 8–11.

III. INFORMATION: PRIVATE, COMMON, AND PUBLIC

While the structure of the settlement procedure is common knowledge, decision making at every step is characterized by asymmetric information. That is, the Commission and the alleged cartel members are formal opponents, and each has private information about its own side of the dispute. The companies will generally know better than the Commission—and possibly also better than the other cartel members—what they did, what evidence may remain of it, what turnover may have been affected and how committed they are to fighting off the allegations. The Commission, on the other hand, is in a better position to decide how strong a case it believes it has and where there may be weak spots that could be successfully appealed in the Court of Justice of the European Union.

Of course, informal talks and formal disclosures take place all along the way. Parties will take legal advice about the possible consequences of their actions. They also will be shown parts of the Commission’s case file. Information will flow, but due to the high stakes involved, all sides will try to keep strategic information from the others—if only information about the value of the information each believes it possesses about the positions of the others. For example, it often would not be the first priority to correct erroneous views that opponents may appear to hold that are favorable to one’s own position. In addition, a party might choose not to believe proffered information. After all, there are strong incentives not to be truthful.

All parties involved in the process therefore are continuously probing the relative strength of their position. In settlement talks, the Commission and individual cartel members will gradually have to reveal part of their private information in bilateral meetings. When the Commission believes the case is suitable for settlement, it may be willing to convince the cartel members to cooperate, illustrating some of the gains and thereby revealing information. Formal statements are expected at various defined steps in the process, and the eventual fine range has to be formally approved. Yet, by then the parties likely will have had opportunities to sound out their opponents in informal talks in which

all parties probably will be able to gain knowledge. Decisions to exit the procedure will be affected by the cleverness—real and suspected—of negotiators on all sides to take advantage of these possibilities.

In addition to increased sharing of private information between the parties directly involved, some information gets into the public domain. While most of the bilateral talks will go on behind closed doors, at certain later stages messages will go out as well. Complainants, victims, competitors, and other competition authorities will want to monitor closely what is revealed about the cartel proceedings. In a standard procedure, the Commission must provide extensive proof of the cartel infringement in a detailed formal decision. It also will want to gain public support for its case by publishing condemning press statements. As a result, the published European formal cartel decisions have in the past been a great source of learning—despite having been censored for confidential business information.

Crucially, from what the Commission has said so far, it appears that there will be much less disclosure of public information about the case in a settlement than there would have been had an ordinary formal decision been reached.¹² In a settlement, public disclosure is neither necessary for the Commission nor desired by the cartel members. In fact, control over what information gets into the public domain will be one of the reasons why companies want to settle in the first place. Also, because the companies directly involved are unlikely to appeal their settlements, it is much less likely that there will be a full judicial review by the Court of Justice.¹³ Hence, the European settlement procedure comes at the expense of public learning from cartel case law.

IV. PAYOFFS

With the existence of the Commission's settlement procedure, there are three possible procedural outcomes of a European cartel case: (1) the Commission or cartel members decide not to enter into a

¹² Bach speaks in this respect of a "skeleton decision." See Albrecht Bach, *Negotiated Antitrust Settlements: Some Perspectives from the Point of View of (Potential) Plaintiffs*, in EUROPEAN COMPETITION LAW ANNUAL 2008, *supra* note 2, at 251–60.

¹³ Third parties may appeal a settlement decision, but in doing so will suffer from the relative lack of information that is published about the case.

settlement procedure, so that the standard procedure is followed and a full decision is made; (2) a complete settlement procedure is followed and a “streamlined decision” is reached; or (3) a settlement procedure is entered into, but one or more (possibly all) parties decide to break off their involvement before it is completed.

How to specify payoffs of these three different outcomes? Obviously, it is not possible to quantify monetary payoffs in general, but as a benchmark, let's characterize the standard procedure as a long and costly process for all parties involved, with a high probability of appeals, high fines, the release of much information about the infringement into the public domain, significant reputation damage to the companies, and a good chance of follow-on antitrust damages actions by victims of the cartel.

In comparison, a full settlement agreement means shorter and more efficient procedures, closure, a small probability of appeals, a lower fine, controlled reputation damage to the companies, and a reduced ability for private claimants to mount follow-on cases based on evidence contained in Commission decisions. For the latter two effects, the various possibilities for the parties to influence the way in which the infringement decision will be communicated is of great importance.¹⁴

Several recent commentators have argued convincingly that settlements will make follow-on antitrust damages actions more difficult.¹⁵ It may appear that acknowledgment of the facts in a public settlement increases the exposure of cartel members to damages litigation. However, a slimmer case file, an agreed Statement of Objections, and a short and superficial formal decision will make it more difficult for potential plaintiffs to substantiate claims for cartel damages suffered. This is likely, in fact, to be the prime attraction of the procedure for settling cartel members.

As a third possibility, one or more parties may decide to exit a settlement procedure while it is underway. Obviously, if the Commission is the exiting party, the settlement discussions are aborted and the procedure defaults to standard. If one or more companies decide no

¹⁴ See Notice, *supra* note 1, ¶¶ 17, 22, & § 2.4.

¹⁵ See Bach, *supra* note 12; Coppi & Levinson, *supra* note 8.

longer to cooperate in a settlement, the Commission can decide to adopt a hybrid settlement. The Commission initially pledged that it would be very reluctant to agree to such hybrid settlements, but already has agreed to one, in *Animal Feed Phosphates*,¹⁶ its second and latest settlement decision to date.

It is not clear for all cases what the consequences of having entered into a settlement procedure may be for companies that decide to discontinue negotiations during the process. Generally, information will have been shared and both parties will know more about each other's position than they probably would have known had a full standard procedure been followed. The extent to which this may affect the ultimate outcome of a case will depend on the mutual assessments made during the settlement procedure of how committed the other parties are (and remain) to reaching an agreement. Trust in this commitment will determine the kind and amount of information that parties believe can safely be shared in the process.

At one extreme, the Commission may turn out to be an unreliable partner and largely ignore the parties' conditions for settlement once it knows it is in a strong position. At the other, companies may be advised by their legal counsel to pretend, when asked, to have an interest in settling, just to test the Commission's case and later opt out. To what extent entering into a settlement procedure is actually free of engagement will be crucial to determining optimal strategies. Presently, there seems to be a net gain in always at least initially being willing to talk. What the optimal process strategy will be remains to be seen, for it requires more experience with the way in which the Commission will treat the various settlement options.

If a company initially pretends to want to cooperate in a settlement, but then intentionally frustrates the process, the Commission may issue a harsher punishment in a full procedure. The relevant passages in the Notice probably are not meant to be read this way, but in at least two places in the settlement procedure, it may be inferred that lack of cooperation can count as an aggravating circumstance.¹⁷ It seems proper that there should be some consequences for abusing the

¹⁶ See Press Release, European Commission, *supra* note 6.

¹⁷ See Notice, *supra* note 1, ¶¶ 5, 7.

settlement procedure, although it will be difficult to prove intent. In order to be both a strong and a reliable negotiating partner, the Commission should be explicit about how it will retaliate if a settlement procedure is entered into under false pretenses.

V. THE COURTING PHASE IS A SIGNALING GAME

Obviously, the companies and the Commission would want to enter into a settlement procedure if they all expected to gain from doing so rather than from following the standard procedure. The Commission must believe that it has a sufficiently well documented case to impress upon the alleged cartel members that they can expect penalties—but maybe not, without further investigation, enough to push on with a standard procedure. At the same time, cartel members must realize that resisting the Commission will be more costly than cooperating. In such circumstances, if the handling of the case is a cooperative effort of all parties involved, this can significantly shorten the standard administrative and appellate proceedings, as well as ease punishment in various ways.

Formally, the Commission makes the first move in deciding whether or not to start talks. If so, it assesses whether the alleged cartel members are interested in participating. All of these assessments are informal at first—only in steps 3 and 4 is the willingness to settle made formal. Therefore, in practice, it may not be so clear-cut who first expressed an interest in settling.

In essence, the courting phase is a signaling game. Showing an interest in settling is a signal to the other party about the private assessment of the strength of one's own position in the case relative to that of one's opponent. The Commission would most want to engage companies for a settlement against which it believes its case would require a large enforcement effort to carry through a full procedure—for example, cartel members that decided not to apply for leniency. At the same time, companies will want to fight a case that they expect to be able to win. So those alleged cartel members who are willing to settle are more likely to be the ones against whom the Commission would most want to find a full formal infringement.

It is essential, therefore, not to appear too eager to settle in the courting phase, as this may lead the other party to believe it pays to fight. If

information is sufficiently asymmetric, for example in novel or complex markets, this tension may make it impossible to reach a settlement, even if that would be best for all parties involved. If entering into settlement discussions is effectively free of engagement, such that companies will often opportunistically pretend to have an interest in settling, the decision to enter the procedure may lose its value as an informative signal.

Whether always-pretend-to-want-to-settle is an optimal strategy depends on how the Commission comes to treat companies that exit. However, more subtly—and depending on how information exchanges work out in practice—the precise point of exiting the settlement procedure may become informative. How and where this happens depends on when, in practice, steps have definitive consequences—probably not before taking step 6. This in turn is a function of the bargaining skills of the negotiators involved, their ability to worm information out of the opponent(s) in the process, and the sanctions for having acted on false pretenses.

VI. THE TALKING PHASE IS A BARGAINING GAME

The talking phase consists of a series of steps in which the Commission little by little exposes the strength of its case and the nature and gravity of the possible penalties that it might seek. At the same time, the alleged cartel members will give insight into their readiness to challenge the Commission's findings, as well as gauge whether they could succeed on appeal to the Court of Justice. All parties will naturally move cautiously, trying to prevent unnecessary exposure of their own reservation value, while assessing those of the others.

In essence, the talking phase is a set of simultaneously played bilateral bargaining games. Formally, the Commission controls the sequence and pace of the meetings, yet it may be open to giving parties time if it helps to assure cooperation. Once a settlement procedure has sincerely been entered into, all parties potentially gain from a swift completion, saving on process costs and securing a mutually agreeable outcome.¹⁸ That is, the negotiations are a positive-sum game. Such games are not strictly competitive. There is room for cooperation, the use of which is an aim of the settlement procedure.

¹⁸ See *id.* ¶ 15.

Formally, a European cartel settlement is all and only about whether the ultimate fine for cooperating companies is reduced by ten percent. The question arises, however, reduced by ten percent of what? After all, according to the European Commission's 2006 Fining Guidelines, the Commission has a wide margin of discretion in determining the size of the fine.¹⁹

The fine—before leniency and settlement reductions—is set following a two-step method.²⁰ In the first step, the basic amount of the fine is determined. It is based on the value of the affected sales made by the company during the last full business year of participating in the infringement, multiplied by the number of years that the infringement lasted.²¹ Neither is obviously determined. The calculation of affected sales relies on bookkeeping rules and an estimated contamination, for example. Cartel duration in practice is often determined by the first date for which the Commission can firmly prove existence of the cartel, typically the date of a meeting held or minutes discovered.²²

A proportion of up to thirty percent of this estimate of the total value of affected sales is taken as the basic amount of the fine. A company can face an additional fifteen to twenty-five percent of the value of sales added to the basis amount as an "entrance fee" imposed for joining a hard core cartel.²³ The effective percentages that the Commission can apply depend on a number of factors, including the nature of the infringement, its scope in terms of market share and geographic area, and its effectiveness in restraining trade.²⁴

¹⁹ European Commission, Guidelines on the Method of Setting Fines Imposed Pursuant to Article 23(2) of Regulation No. 1/2003, 2006 O.J. (C 210) 1–5, available at <http://ec.europa.eu/competition/antitrust/legislation/fines.html> [hereinafter Guidelines].

²⁰ For a more extensive discussion, see I. Bos & M.P. Schinkel, *On the Scope for the European Commission's 2006 Fining Guidelines under the Legal Maximum Fine*, 2 J. COMPETITION L. & ECON. 673–82 (2006).

²¹ See Guidelines, *supra* note 19, ¶ 13.

²² Andreas Stephan emphasizes that cartel duration is a likely flexible parameter in settlement negotiations. See Stephan, *supra* note 3, at 653.

²³ See Guidelines, *supra* note 19, ¶ 25.

²⁴ *Id.* ¶¶ 22, 25.

In the second step, the basic amount is adjusted on the basis of aggravating and mitigating circumstances. Aggravating circumstances can increase the fine to up to twice the basic amount and can include situations in which an undertaking was active as a ringleader, is a recidivist, or coerced others into the anticompetitive agreement.²⁵ Mitigating circumstances may be a reason to lower the fine from the basic amount. Some factors that may count toward reducing the fine are evidence of instantaneous termination upon the Commission's intervention or of limited involvement.²⁶

Combined, these factors form a multiplier that captures the Commission's discretionary authority in setting the fine base. Its value may either increase or decrease the ultimate fine base from the basic amount, as its value can range from close to zero—low end of the thirty percent scale and many mitigating circumstances—to several times the value of sales for an infringement that lasted several years—high end of thirty percent scale, effective cartel, serious aggravating and no mitigating circumstances. For an infringement that lasted for a number of years, the fine base can easily amount to many times the value of the last year's affected sales.

Although the ten percent fine reduction may be nonnegotiable, the fine range to which the ten percent reduction is applied certainly is a function of the Commission's assessment of the case, which in turn depends on the information the Commission has and how it chooses to interpret that information. On all parameters, the settlement procedure allows for finding middle ground. Hence, the fine ultimately levied, which is the product of the various values set by the Commission, is open to negotiation.

In addition, the Commission has discretion in the reductions in fines it wants to give to leniency applicants that were not the first to alert the Commission to the existence of the cartel, but added information that the Commission deemed valuable.²⁷ To qualify for fine

²⁵ *Id.* ¶ 28.

²⁶ *Id.* ¶ 29. These circumstances are applied outside the scope of, and prior to, the Leniency Notice. *See* European Commission, Commission Notice on Immunity from Fines and Reduction of Fines in Cartel Cases, 2006 O.J. (C 298) [hereinafter Leniency Notice]. *See also* Guidelines, *supra* note 19, § 4.

²⁷ *See* Leniency Notice, *supra* note 26, at 17–22, in particular section III.

reductions of between twenty and fifty percent, an undertaking must provide the Commission with evidence that adds “significant value with respect to the evidence already in the Commission’s possession.”²⁸ Again, the margin for interpretation is wide, and accountability is low. Certainly from streamlined decisions it will be difficult for outsiders to tell what the true added value of each cartel member’s information has been.²⁹

To put this in context, note that the exact level of the fine probably is not the Commission’s primary concern. The fine revenues benefit the Member States, and the sizes of the fines therefore affect the Commission only indirectly—through political processes that are probably more sensitive to a reputation for good decision making. The European Commission instead seems concerned first and foremost about its reputation as a strict enforcer. In recent years, high fines have been used to build this reputation. Former Competition Commissioner Kroes, for example, tended to use strongly worded press releases on cartel findings and fines, in part to influence how the public views collusion.

Therefore, if enforcement costs were not a factor and a case was strong enough, the Commission would obtain the most credit from outside stakeholders—complainants, victims, Member State governments, and the public—for a full finding of infringement of a demonstrably damaging cartel. This would be most satisfying for parties adversely affected and best for the reputation of the Commission as a tough enforcer.

However, that type of negative publicity typically is also very damaging to the reputations of the companies involved. They prefer as little hostile coverage of the infringement as possible. Engaging in a settlement can help to achieve this, because it gives the companies some influence over the phrasing of the Commission’s external communication about the case. Cartel members will value this. After all,

²⁸ See *id.* ¶ 24.

²⁹ Incidentally, in both *DRAM Producers* and *Animal Feed Phosphates*, investigations had started with leniency applications long before the settlement procedure came into effect. In both cases, the first leniency applicant received full immunity, and the majority of the other cartel members benefited from reductions under the Leniency Notice.

there is quite a difference between being portrayed as a dishonest, hard core cartel ring leader and being portrayed instead as a remorseful parent company of a remote and small offshoot, a representative of which happened to have sat in a meeting in which someone raised the possibility of market segmentation, a problem that luckily was just cleared up with the kind help of the Commission. On the dimension of reputation, therefore, negotiations are competitive.

In the best of all worlds, the Commission could save on enforcement costs per case and use these efficiencies to deal swiftly with many more cases using the settlement procedure, without having to jeopardize its reputation as a tough enforcer. It could strengthen its reputation by handling more cartels with the same budget. The problem is, however, as discussed, that there is asymmetric information between third parties—who impose the reputation constraint—on the one hand, and the Commission and the cartel members on the other. Certainly once a streamlined decision has been reached, it will be impossible for Commission-watchers to know whether the result was really the best that could have been obtained. Both the Commission and the cartel members have an *ex post* incentive to say that it was, and so outside observers have reason not to believe them.

In the first settlement decision, in May 2009, in *DRAM Producers*, the Commission indeed revealed very little information.³⁰ There is only a press release about the case, which is more about the settlement procedure's being used for the first time than about the facts of the case. The press release contains only one paragraph on the workings of the cartel:

The overall cartel was in operation between 1 July 1998 and 15 June 2002. It involved a network of contacts and sharing of secret information, mostly on a bilateral basis, through which they coordinated the price levels and quotations for DRAMs (Dynamic Random Access Memory), sold to major PC or server original equipment manufacturers (OEMs) in the [European Economic Area].³¹

The fines for the ten memory chip producers were tabled, each with the cumulative reductions under the leniency and the settlement notices.

³⁰ See Press Release, European Commission, *supra* note 5.

³¹ *Id.* at 2.

Interestingly enough, the press release contains no call for cartel victims to seek reparation of their damages, which had become standard for the Commission to include in its memos in recent years. Presumably, a more detailed, nonconfidential formal decision eventually will be published—possibly years from now—but it remains to be seen how much information it will contain. As said, a streamlined decision will in all likelihood be much more concise than a standard formal decision used to be.

VII. WHO HAS BARGAINING POWER?

The Commission may appear to be in a strong bargaining position in its self-designed settlement procedure. It formally decides whether, and at what pace, settlement talks will occur, if at all. It has the ability to levy high fines, expose the cartel, and facilitate private follow-on damages claims. Through its investigative powers, and certainly when it has received leniency applications, the Commission can further collect the information necessary to punish harshly. The Commission's persistent claim that it only offers ten percent fine reduction for settling, take-it-or-leave-it, indeed appears tough at first sight.

Motivated by maintaining reputation, however, the Commission may have chosen to take a stance on the percentage discount in order to focus negotiations on the other bargaining points identified above. After all, at the fine discount dimension, which is open for all to see, the Commission probably would run the biggest risk of a reputation hit. It surely looks a lot better in the press to have applied a small ten percent reduction to members of a cooperation—a cartel alright, but one that was given only a small fine, so presumably it was relatively harmless—than to be seen having handed out fifty or sixty percent discounts to companies found to have been engaged in very deliberate and detailed hard core price fixing that were initially slammed with a record fine. In addition, the Commission can retain flexibility by avoiding a settlement with precedential value.

It is questionable, however, whether this bargaining strategy is optimal public policy. There is currently no reason to doubt the good intentions of the Commission to be a tough enforcer for the public case. Yet, on the much softer points of the fine base, leniency discounts, and public phrasing of the case, the Commission seems to have less bargaining

power than over the discount percentages. The settlement procedure thus burdens Commission officials with the risk of being gamed. To see how this might happen, consider the following hypothetical situation.

Suppose that the Commission has before it a cartel case that it prefers to settle. Suppose that third parties know X about the cartel, so that X is the minimum amount of “harshness” that the Commission has to adopt in the wording of its decision without losing reputation. The companies involved know this. Suppose the companies would be willing to settle for X harshness, but want something more than a ten percent fine reduction in return. This is where the flexible fine base comes in. The ten percent is fixed, but the ultimate fine is negotiable. As long as a reasonably short duration and low value of sales is established and agreeable aggravating and mitigating factors are set—more or less matching X —a deal is possible.

How low the fine must go depends on the bargaining power held by the cartel members. Because it ultimately cannot be known how much the Commission really gave away on the negotiated points in return for securing a settlement, the Commission is likely to be forced to give away too much. After all, part of it is for free, in terms of reputation loss. Indeed, in the context of follow-on private damages suits, Bach identifies the level of information in an infringement decision as “a cheap bargaining chip,” the price of which would be paid by potential plaintiffs.³² He warns that “[w]e . . . cannot expect that the Commission, once the path to settlement is paved, will care sufficiently for transparency of the settlement process and its outcome. Quite the contrary, it has every incentive to use this bargaining chip and to obtain further concessions in return.”³³

Although protecting its reputation as a tough enforcer constrains the Commission, that constraint is less tight along the open bargaining dimensions than it would be on explicit percentage fine discounts.

Since the second settlement decision, *Animal Feed Phosphates*,³⁴ adopted in July 2010, hybrid settlements are a real option. This gives

³² Bach, *supra* note 12, at 255.

³³ *Id.*

³⁴ See Press Release, European Commission, *supra* note 6.

additional bargaining power to cartel members. In *Animal Feed Phosphates*, six companies were found to have fixed prices and shared markets for a chemical compound used in feed for animals.³⁵ The case originated in a leniency application in 2003, for which reductions of the fine were given to all but one of the companies. The Commission had started negotiations with all alleged cartel members. However, one of them, Timab Industries, aborted the settlement procedure, according to the Commission's press release, "after the Commission had informed the parties of the fine ranges,"³⁶ that is, relatively far into the process, just before or after step 6.

A hybrid settlement forces the Commission to produce two kinds of formal decisions: streamlined decisions for the settling companies and standard full decisions for the nonsettling companies. In its press release about *Animal Feed Phosphates*, the Commission announced this "first settlement of a cartel case in a hybrid scenario"³⁷ as a landmark case. The Commission does not reveal its feelings toward the company that walked out of the negotiations. Yet the option of partial settlements creates a number of problems. The formal decision for Timab has not yet been published, but presumably—and it is so described in the press release—there will be a nonconfidential full version. This must mean that the Commission was not able to save nearly as much on enforcement costs with the settlement procedure as it had hoped to. It will also still face appeals proceedings, as from Timab.³⁸

Clearly, well into a settlement procedure, the threat to destroy most of its efficiencies by necessitating a full decision after all gives each individual cartel member considerable bargaining power over the Commission. As long as all cartel members are still negotiating, each of them can use its individual power to force a hybrid settlement, which implies a discrete downward jump in benefits for the

³⁵ *Id.*

³⁶ *Id.* at 2.

³⁷ *Id.*

³⁸ The saving on infringement costs possible in "partial settlements" leading to hybrids also was questioned in the discussion in panel III at the 13th Annual European Union Competition Law and Policy Workshop in Florence in 2008. See EUROPEAN COMPETITION LAW ANNUAL 2008, *supra* note 2.

Commission. Added to this, the negotiations are bilateral, so that former cartel members do not know exactly with whom and how many other companies the Commission has advanced—and they need not trust what they are being told about this. The threat to jump ship is useful in bargaining the fine base down and the leniency discounts up, while making the Commission soften the tone in the phrasing of the case.

Once one or more cartel members have exited the settlement procedure and the Commission has decided to work for a hybrid settlement, the settling cartel members likely will want a larger fine reduction, or they may threaten to walk out of the settlement talks as well. This may put downward pressure on the fine base and upward pressure on the fine reductions for subsequent leniency applications. At the moment, we cannot know whether it will have this effect, of course. But it may turn out, after enough hybrid cases have been concluded, that settling cartel members received significantly lower fines—relative to affected commerce—in hybrid decisions than in complete settlements.³⁹ Surely this is an interesting hypothesis to test in a few years, when more data is available.

It is also important to note that in a hybrid settlement, the remaining settling cartel members may not be able to benefit from reputation damage control to the extent that they had initially bargained for. After all, many of the gory details of the cartel's modus operandi will be included in the full decision that the nonsettler(s) will receive. Publicly denouncing the stray cartel member is one form of punishment for companies that frustrate a full settlement. However, the settling cartel members will want the full formal decisions on those companies that aborted the settlement procedure to be less revealing, at least about their role, than a standard decision for all would otherwise have been. That may, however, be difficult, or even impossible to do, so there will be externalities that the Commission may be pressured to compensate for in the form of a lower ultimate fine.

³⁹ Remarkably, in *Animal Feed Phosphates*, two companies applied for further fine discounts for inability to pay, which is possible under the 2006 Fining Guidelines. See Guidelines, *supra* note 19, ¶ 35. The application of one unnamed company was accepted, and the company was given a seventy percent fine discount.

If the Commission is expected to phrase full formal decisions more carefully for nonsettlers in order to keep the settling cartel members on board, another problem may arise. If it is possible to enter into settlement discussions, break them off prematurely, and still receive a mild decision, entering into a settlement procedure is less engaging. As a result, it will more often be done opportunistically. Companies could free ride on the settlement of other cartel members, as long as enough participants remain to keep the Commission interested in settling. Depending on the strength of the case, theoretically only one cartel member could settle, softening the full formal decisions given to the others in order to prevent reputation damage to the settling member. If the Commission is too eager to settle, therefore, there will be a serious threat of weakened deterrence.

VIII. CONCLUDING REMARKS

In adopting its settlement procedure for cartels, the European Commission seems to have put itself in a more complex bargaining position than it is willing to publicly appreciate. Self-restricted to a fixed fine reduction, the Commission's bargaining power is weaker than it could have been. Apart from reducing public learning from cartel case law, the settlement procedure also potentially works against the Commission's program of many years to stimulate the overall deterrence of cartels in Europe.

Whether or not collusive behavior is deterred depends in essence on the set of penalties that companies can expect for becoming involved in a cartel that is detected. Apart from the probability of detection, this is a function of the seriousness of the consequences of getting caught: public fines, reputation effects, and private damages litigation. If the unintended consequences of the settlement procedure were to limit these consequences too much, companies with bad intentions may exercise less restraint in talking to the competition.

It is essential, therefore, that the Commission credibly commit to being a tough negotiator in cartel settlements. Although in its first settled cases the Commission may have been keen to show that its settlement procedure can work, the Commission should not use its settlement instruments lightly. It absolutely should avoid getting a

reputation of being eager to settle, as that would give cartel members the upper hand in the negotiations. A direct way to help achieve this is by training, negotiation courses, and thinking through optimal bargaining strategies. The latter may lead to the conclusion that individually negotiable percentage fine reductions may be valuable bargaining points after all.

The Commission also may want to consider improving its bargaining position by embedding a binding independent critical review as a standard step in the settlement process—for example, as a further specification of step 10. A board of senior officials of competition authorities in various jurisdictions and academics could, strictly confidentially and on the basis of the entire case file, peer-review a settlement and possibly add its own research. If the board does not approve the settlement, the normal procedure would be followed. If negotiation partners know that any agreement that they may reach will be subject to review, the Commission's negotiators will be more likely to keep their foot down on the appropriate sanctions—more so than just stating they will, as done in paragraph 2 of the Notice, however well intended.

*D*oes prison work for cartelists?—
The view from behind bars

AN INTERVIEW OF BRYAN ALLISON*
BY MICHAEL O'KANE**

On May 2, 2007, the United States Department of Justice (DOJ) arrested eight foreign executives in Houston, Texas, in relation to alleged cartel conduct in the market for supply of flexible marine hoses. On December 3, 2007, the DOJ filed a one-count felony charge that from early 1999 to May 2007, the defendants participated in a conspiracy, the primary purpose of which was to suppress and eliminate competition by rigging bids, fixing prices and allocating market shares for sales of marine hoses¹ in the United States.² In furtherance of the conspiracy, it was alleged that the defendants attended meetings and engaged in discussions with executives from other marine hose manufacturers. On conviction for a violation of section 1 of the Sherman Act of 1890,³ each of the defendants could have faced a max-

* B.A., Kent University 1976.

** Head of Business Crime Practice, Peters & Peters, Member of the Law Society of England & Wales, LLB (Hons) Manchester Metropolitan University 1992.

¹ Marine hose is a flexible rubber hose used to transfer oil between tankers and storage facilities and/or buoys.

² Criminal Information at 1, United States v. Allison, No. H 07-487 (S.D. Tex. July 3, 2008).

³ 15 U.S.C. § 1 (2010).

imum of ten years imprisonment.⁴ Meanwhile, in the United Kingdom, the Office of Fair Trading (OFT) launched a simultaneous criminal investigation into suspected cartel conduct in relation to that country's market for marine hoses.⁵

The U.K. executives, Bryan Allison, David Brammer, and Peter Whittle, admitted guilt in the United States and agreed to jail sentences under a plea bargain. However, the DOJ allowed them to return to the United Kingdom on condition that they plead guilty to the U.K. cartel offense and that they return to the United States if their U.K. sentences were shorter than those agreed to under the plea agreement.⁶ The deal was unprecedented in international criminal law enforcement and was achieved through the defendants' full cooperation with the U.S. and U.K. authorities.⁷

They were returned to the United Kingdom in handcuffs by the U.S. Marshals Service on December 17, 2007. Upon their arrival at Heathrow, they were arrested and charged with the U.K. cartel offense. On Wednesday, June 11, 2008, the three executives were sentenced to serve terms of imprisonment of between thirty months and three years for their roles in organizing the cartel. Bryan Allison received a term of three years' imprisonment, subsequently reduced on appeal to the two years set out in his plea agreement. Through this agreement, not only was the OFT able to initiate the first criminal prosecution under the Enterprise Act 2002 in the United Kingdom, but the DOJ also obtained guilty pleas and agreed sentences that will carry a powerful deterrent message in the United Kingdom, the United States, and elsewhere.

⁴ In 2004, the statute was amended to increase the maximum term of incarceration from three to ten years imprisonment. *See* 15 U.S.C. § 1 (2010).

⁵ Investigations that focused only on corporations and did not involve individuals were also launched in Australia, Korea, and Japan.

⁶ Plea Agreement at 14, *United States v. Allison*, No. H 07-487 (2007).

⁷ Press Release, U.S. Dep't of Justice, Three United Kingdom Nationals Plead Guilty to Participating in Bid-Rigging Conspiracy in the Marine Hose Industry (Dec. 12, 2007), *available at* http://www.justice.gov/atr/public/press_releases/2007/228561.htm; Press Release, U.K. Office of Fair Trading, Three Imprisoned in First OFT Criminal Prosecution for Bid Rigging (June 11, 2008), *available at* <http://www.offt.gov.uk/news-and-updates/press/2008/72-08>.

In this interview with Michael O’Kane, the lawyer who brokered the agreement in the *Marine Hose* case, Bryan Allison⁸ shares his experience of the proceedings against him as well as his views on the role of criminal process in deterring international cartels.

Bryan, can you begin by describing what happened at the moment of your arrest in the hotel room in Houston?

It was five in the morning, on May 2, 2007, and I was up doing some work when the phone went. It was reception and they said the police were here to see me. I thought that’s a bit odd and, because I had had an accident in the car the previous day, I thought it must be that. My mind was thinking, why is the road traffic officer coming to speak to me at five o’clock in the morning? Anyway there was a knock on my door, and I opened it.

So it never occurred to you it was anything to do with the cartel?

Never. Six men came in, five with guns and Craig Lee, the DOJ trial attorney. [Lee is a staff attorney within the National Criminal Enforcement Section of the Antitrust Division of the U.S. Department of Justice. The police were special agents of the Inspector General’s Office of the U.S. Department of Defense.] I was instantly handcuffed and made to sit down in a chair. I was bewildered, thinking what the hell is going on here. Craig Lee started talking. He said I was in a meeting yesterday and then showed photographs of me at the meeting. As soon as I saw these photographs I thought that the game was up. There was not much point in pretending that I haven’t done anything. He then asked me a few questions which I tried to answer as best I could and he told me that other people were being arrested at the same time.

Even then the enormity of what I’d done hadn’t quite dawned on me. The questioning went on for about three hours in my hotel room, backwards and forwards. I was allowed to get dressed before we descended the stairs with me in handcuffs and marched through the lobby, very politely, and stuck in the back of a police car. Downtown

⁸ Bryan Allison, aged fifty-two at the time, was the managing director of a U.K.-based manufacturing company, specializing in the manufacture of marine hose. He had worked for the company since 1977 and had been managing director since 2001.

Houston, I was put in a holding cell where I saw DB, two of the French guys, and PW. [Allison and the others were incarcerated within the federal detention center in Houston, Texas.] I thought “ah” and then oddly enough there was almost a sense of relief that “Oh, I’m not in this on my own at least. There is someone else here to share the pleasure and the pain.” We were made to wear shackles around our ankles and one of the other guys whispered to me, “This is so extreme.”

We were in the holding cell probably for four or five hours in total and were then taken up to the courtroom eventually. It was on the same day but quite late in the afternoon. By this time the French guys had got lawyers and one of the Italians had got a lawyer. It was a bizarre process. We were all lined up in front of the Judge. She was very concerned because we were all foreigners, and some of us couldn’t speak English very well. She had to bring in interpreters. The French and Italian guys who had got lawyers made an application for bail and were out that afternoon. While of course we didn’t have lawyers so we got marched back to the cell.

How long were you in custody before you got bail?

We were in for two and a half days in actual fact. We were granted bail on the Friday having been arrested on the Wednesday, but we couldn’t get released straightaway. The processing had to take place, including wearing a tagging device on our ankles [which enabled the U.S. Marshal’s Service to know their whereabouts at all times.] In the end if we hadn’t been released by seven o’clock on that Friday evening, we would have been in the detention center all weekend. We got let out at six fifty p.m., so things got a little tight and we actually had our tags put on in the street opposite the detention center. I remember the probation officer saying to me, “Do you mind us doing it in the street?” I said, “No, not at all, just do it.”

It was an enormous relief, having got into the outside world again. We went back to the hotel where we had been arrested and collected our things and went back to the house where we were going to stay.

Then we had to report to a probation-type office once a month as well as having our tags checked both at home and in the office. [Alli-

son next refers to a plea bargain that would bring closure to the uncertainties that he and the others confronted.] The really difficult part of the process was just sitting there waiting to see what was going to happen with the deal being negotiated between the DOJ and our lawyers. Going up to Washington on a couple of occasions to be debriefed by the DOJ and then by OFT. [On several occasions, attorneys and investigators from both the U.S. and U.K. authorities interviewed Allison and others in Washington about the cartel and their participation.]

Did it ever cross your mind that you were taking a huge risk by having collusive discussions in the United States?

At the time, no. We had one or two brief meetings before and the enormity of what I was doing did not dawn on me. The risk I was taking simply did not dawn on me. I think that was partly my naiveté and partly the fact that, in a sense, I was at arm's-length from the cartel. I was just going to meetings to shake a few hands. It was almost a social occasion where you just said hello to your rivals in the industry. I didn't give it any real thought, I didn't find out much about the meeting beforehand. Staggering stupidity with the benefit of hindsight.

To what extent, if at all, were you aware of the aggressive approach the United States took to cartels?

I wasn't aware that they were as aggressive as they actually were I knew the Sherman Act, but the last time I looked the sentence was five years. It was doubled only a few months before we were caught.⁹

I did not realize that it was a possible ten-year sentence. For our industry, the one place where we could all meet without arousing any suspicion was Houston because everybody would be at the [Oil & Technology Conference]. But then having come back home and talked to one or two others who were involved in the cartel prior to me, they said, "What on earth are you doing meeting in the United States, we never had meetings there." But again, the thing driving that meeting was the greed of some of the participants. If they hadn't been so

⁹ See *supra* note 4.

greedy and they had been prepared to take some of the hits that came with being in a cartel, they might not have taken such a huge risk. Because they were personally benefiting from the cartel, they took a risk that, with the benefit of hindsight, I am sure for them, and certainly for me, was madness, absolute madness.

Did you look at the American legislation beforehand? Were you aware that participating in a cartel was a criminal offense?

Yes, and that people could go to jail. But everyone had an aura of invincibility, and I remember talking about this, years prior, when I said, "We are a tiny outfit, we are not involved with consumers, who are we hurting? We are hurting all of the oil companies, well isn't that the biggest cartel in the world? Who cares about us? We are so far under the radar nobody will ever take any notice of us." That was how we looked at it, or I looked at it. "This is trivial stuff, who cares. Surely our fine guardians of justice have something much more important to look at than the marine hose industry, which is a world-wide market worth of about sixty or seventy million dollars a year, who would be interested?"

The OFT have had various campaigns to raise awareness about cartel enforcement and what companies should and shouldn't be doing. Before 2007, were you aware of the fact that it was a crime in the United Kingdom? Had these OFT campaigns crossed your radar?

I knew from the legislation coming in, in 2003, that it was a criminal offense in the United Kingdom and that an individual could go to jail. But again I hadn't thought anything would really happen. We had gone four years from 2003 to 2007 without any prosecution of anybody. Why would anybody, and the OFT seemed to be primarily concerned with consumer rather than trade or industry type issues, prosecute us? I was negligent, I suspect, but I didn't ever think anything would really happen. It was that aura of invincibility—why would anyone want any involvement in what we were doing?

How did you come to know that participating in a cartel was a crime in the United Kingdom?

I had read it in the papers, in the [Financial Times] and probably some of the other broadsheets, about it being an offense. I remember

talking at the time, saying, “We are going to have to think about whether we really want to carry on with this.” If someone had come to me and said, “Let’s pack this in, I think it is too risky,” I would have said, “Fine, not a problem.” But no one ever did, and because I was dealing with it very much at arm’s length, I just didn’t give it a thought. In view of the enormity of it, I should have actually taken a much bigger interest in it. Here I was in a sense risking my liberty without giving it a second thought, and I should have. If I had taken a bigger interest, maybe I might have understood what was going on better and got out of it.

I know now I would have pulled the plug straight away. Would I have then gone to a law firm and said, “This is what we have done, and I think we need some help”? I suspect I would have buried it under the carpet and hoped that nothing would ever come of it. But there again once you are in one of these things, it is virtually impossible to get out of. How do you leave something like a cartel?

When you think back to your participation in the cartel, were you more concerned about the possibility of being prosecuted as an individual or were you more concerned about the impact on the company?

An element of both. I think my primary concern was the company and the fact that I could get fired. There was certainly some personal concern but not to the level where I worried about it overly. I just didn’t give it anything like the thought I should have done, which is odd because normally I am very careful but here I was blasé almost, madness.

You mentioned the difficulty of leaving a cartel. What do you think of the OFT/DOJ view that it is actually very easy to do—you have to come in, make a clean break of it and potentially expose other cartel participants?¹⁰

Yes, and I can accept that. Taking a particular moral standpoint, but I rather think that “grassing people up” isn’t really the done

¹⁰ See U.S. Dep’t of Justice, Antitrust Div., Leniency Policy for Individuals (Aug. 10, 1994), available at <http://www.justice.gov/atr/public/guidelines/0092.pdf>; U.S. Dep’t of Justice, Antitrust Div., Corporate Leniency Policy (Aug. 10, 1993), available at <http://www.justice.gov/atr/public/guidelines/0091.htm>; U.K. Office of Fair Trading, Leniency and No-Action (Dec. 2008), available at http://www.offt.gov.uk/shared_offt/reports/comp_policy/oft803.pdf.

thing. Isn't that a little unethical? There is nothing could be more crazy than a convicted criminal talking about ethics, so I understand the conundrum I am in. However I really didn't feel that we could go around "grassing people up." I just didn't think that was on.

For the cartel to survive as long as it did there has to be a certain element of trust among all the participants that they all will subscribe to the same ethical standards you mentioned. Did you have that degree of confidence in everybody else?

I had a reasonable degree of confidence in the Europeans. I was always a little wary of the Japanese but remember all communications were filtered to me. I never had any direct access to any of these people really. I never spoke to them on the phone or met them. Everything I got was filtered through Peter Whittle who was the coordinator of the cartel. He would receive the tenders from companies and would then administer the cartel by ensuring that particular companies won the tender through a rigged bidding process. In addition he coordinated the creation of global price lists. Who would tell people what they largely wanted to hear and who was basically running the cartel for his own ends rather than the benefit of the members, I never got the full picture and I readily admit I didn't ask the right questions. I probably wasn't armed to ask the right questions, and I probably wouldn't have got told the truth if I did. I trusted others implicitly as my conduit to the cartel, and that was trust that was essentially misplaced. I only had to really trust one person in a sense. The consequences of doing that are well known.

The automatic immunity regime was introduced to destabilize cartels, to impair the trust among the cartel participants. What are your views on the fairness of the regime and its effectiveness as a deterrent?

The authorities have to get one of the participants to come in and tell them about a cartel. How else are they going to uncover cartels? If you want to protect people from cartels, I fully understand why that is done. But again, taking some sort of moral high ground, which is obviously tricky, it doesn't seem right that by dumping everybody else in the mud you can get away with it. Especially when, clearly in some of these incidents, the people that have gone to the authorities in the first place were by far the most culpable participants in this ille-

gal activity. If you take it to pure criminal law, if the leader of a gang of armed robbers reports all his colleagues and gets away with it, is that right? When he set about instigating the crime, working out what they were going to do? I suspect the public wouldn't think much of that. And yet in cartel activity it's accepted because it's the only way the authorities can break it. I am not happy with it, but I understand why the authorities do it. It's clear, it's a very effective tool.

Were you aware of the immunity regime in the United States or the United Kingdom, and that you could have escaped the prosecution had you disclosed the cartel to the authorities?

No, I don't think I was. It was almost like sneaking at school. It's not something one really does. Go shop your fellow conspirators; it's a bit below the belt. I think it is more likely to happen now, but at the time, well, we are English; we don't do that sort of thing.

Why do you think that it is more likely to happen now?

I think that people are much more frightened of the consequences. A jail term is a pretty chilling thought for anybody. In fairness, one has to say, I am much more conscious of it now than I was then.

But from time to time I would see reports and all that really happened was that the firms got fined, and maybe the guy involved got fired, and I assumed he got a nice little golden handshake to shut up and clear off. The threat of prison wasn't necessarily there. So I suspect my own knowledge of what's gone on has made me more conscious of the dangers of cartel activity.

Do you think that the effectiveness of the U.S. regime is due to plea bargain and that few cases go to a jury, which might be less receptive to the evidence given by one of the key cartel participants against others?

I think it goes against people's innate sense of fair play. Maybe that is just the western view of looking at things that we are all in this together, one for all and all for one. To do a deal behind everyone else's back does strike me as being a little out of order, even if that is how cartels work. But if the authorities and the law say that this act is illegal, and the only way to stop it is to do that, I can fully understand why the authorities take that route. But it's not like a normal case where you go to court in front of a jury, the prosecution and defense

argue their case, and twelve good men and women decide whether you are guilty or not. At least they have the opportunity to weigh the evidence. I was always of the view that if I had been caught in the United Kingdom I might have had a case in court. But whether I had or not was perhaps a little wishful thinking on my part. In the United States we were clearly bang to rights, and there was no point in arguing; any defense was to get away with the least we could. There wasn't any real alternative. I think if we had gone to court maybe a clever defense lawyer could have got us off by finding out some flaws in the case. But we saw in other cases defendants having to wait eighteen months for their day in court. That was a hell of a long time.

Do you think that in the absence of an immunity regime the cartel would ever have been detected?

The cartel actually was detected because they caught one of the participants in another cartel and, in order to get out of that one, one of the people that was due to be prosecuted gave up the marine hose cartel.¹¹ If we hadn't been caught would it have carried on? Yes, I think it probably would for a while.

Now that I understand what has gone on, the cartel was starting to fall apart, that's quite clear. The Japanese were getting very cold feet and wanted to find a way out of it. It's quite clear that at some stage there would have been a move to China and low cost production by one of the participants and that, I think, would ultimately have sounded the death knell of the cartel. So the short answer is, it would have carried on for a while but ultimately would have died.

Before you knew there was a possibility to agree a deal with the U.S. authorities, can you remember what you wanted your position to be given the potential penalties and your options at the time?

¹¹ This reference suggests that the immunity applicant sought "amnesty plus," under which a person or entity obtains a reduction in sanctions for its cartel conduct in return for bringing another cartel to the attention of the authorities. The applicant then obtains immunity for its conduct in this "new" cartel. See generally Thomas O. Barnett, former Assistant Att'y Gen., Antitrust Div., U.S. Dep't of Justice, Criminal Enforcement of Antitrust Laws: The U.S. Model, Address at Fordham Corp. Law Inst., New York (Sept. 14, 2006).

I remember very clearly the judge saying we could get up to ten years and my lawyer in the United States, Mike Ramsey,¹² saying that he thought I was very likely to get significantly less. His guess was that I would probably spend a year in jail and that was reasonably comforting although, like all lawyers, he put that in some quotation marks and caveats. On my own volition I started looking at what had happened in previous cases, seeing how long people had got, what the outcomes were and plea bargains published on the Internet. I was starting to get some grasp of what was going on.

I suppose one starts to relax a little bit that the first inklings you have of some terrible outcome probably won't come to pass and, by that stage, you are in a position to be able to talk to your family and reassure them that things weren't actually brilliant but at least we were out. The first thing was to get out of jail. So you imagine the worst and you prepare for the worst, as you should do being a sensible person, hoping that the worst won't happen. You have to be prepared for something pretty unpleasant coming towards you, and I certainly slept very badly for the first few days, and I don't think I ever really slept very well while in the United States.

It was a bizarre existence. We were confined to the apartment between the hours of 10:00 at night and 6:00 in the morning. I was always awake by 6:00 and walking the streets for exercise. While I was walking, I was going over and over in my mind "if this, or if that happens," trying to work things out. It becomes almost all-consuming because you can't think about much else.

What were your priorities at that time?

My priority was just to get back to the United Kingdom. That was key. After about four or five days of being released, it became clear there was a possible deal on offer to go back to the United Kingdom. That gave us great comfort, although it had never been tried before in this way. At that stage we didn't know about plea bargains or what might or might not happen. The original plea bargain, which was never altered as far as I am aware, was offered relatively early after about six or seven weeks. I remember the phone call and our Ameri-

¹² Michael Ramsey of Houston, Texas, was counsel to Mr. Allison in the U.S. proceedings.

can lawyers taking it. They told that I was being offered two years and that we had to pay fines. That came through fairly early, and then there was the long period of negotiation to try and get the return to the United Kingdom, without us having to spend any time in custody in the United States. That really seemed never ending.

We would wake up each morning hoping something would be through on the e-mail and we read e-mails two or three times to see if we could scan some hidden meaning in them, which there wasn't. We felt we had to search every single new e-mail and document like some crazed scholars rereading the Koran or the Bible to try and interpret it in the way that they wanted. I don't think we found a way of coping with it but it was a peculiar time.

In general terms, what do you feel about the process in the United States as opposed to the process in the United Kingdom? Some say the nature of the U.S. system puts intolerable pressure on people to enter into agreements they perhaps otherwise wouldn't. Others say it encourages people to admit that they've engaged in wrongdoing to get it over with quickly and put it behind them.

I think there is considerable pressure on you to do a deal. I am not suggesting that innocent people would do a deal, although I could see that some people might just do that to get back home. I can recall well going into court for the first time in the United States and the judge telling us this had a maximum term of ten years. Your face drops at that ten years. It was pretty frightening faced with the possibility of ten years. I thought if somebody was going to offer me eighteen months or two years, I would take it. Thanks a lot, let me get out of here. It's almost like an insurance policy. The concept of spending even five or six years in a U.S. jail, let alone ten, was pretty frightening.

I'm not a big fan, even though I'm a beneficiary, of the plea bargain system. I don't necessarily think it gets at the truth. I'm not even sure it gets at guilt or innocence. There is extreme pressure on people to settle simply because it's the lesser of two evils, to avoid the risk of a very lengthy prison term when you could get away with perhaps a fifth or a sixth of that. It puts great pressure on people to just get it over with and get on with their lives. The DOJ would say very clearly

that this gets results: "Our conviction rate as a consequence of this is very high." Yes it is, but it's not a system I would be very happy about introducing into the United Kingdom, for example. I cling to the old-fashioned concept of innocent until proven guilty. It's the state's job to prove your guilt, not the other way around. Was it Voltaire who said it is better for 100 guilty men to go free than for one innocent man to go to prison? Maybe he got the proportions slightly wrong but nonetheless the concept strikes me as being accurate.

Would you have accepted a much larger fine if you could have avoided going to jail?

At that time, I would have probably paid it. I would have probably paid the fine to avoid going to jail. It's very alien for ostensibly respectable middle class people like me, university educated, never been in trouble before, to suddenly be faced with the prospect of going to jail. Nobody in their right mind would want to go to jail. It's a pretty unpleasant place. If somebody had said to me you can avoid going to jail by paying a bigger fine then I would probably have paid it to avoid going to jail. But that is because you are frightened. All of a sudden you are faced with this terrible thing especially in the United States. The image of a U.S. jail is not pleasant. Certainly, unlike the *Shawshank Redemption*, Morgan Freeman isn't there to hold your hand. You are frightened to death of what's going on, and the desire to do a deal, I think, is overwhelming. If you can avoid going to jail, you will do whatever it takes even if it means giving up most of the money that you have.

What was particularly frightening about the prospect of going to jail?

The unknown, I guess, and the image prison has. It's really not a normal standard ledger. That is not what it is like. So the fear of the unknown and the fact that your personal reputation is shredded, it's in tatters. Even though I didn't have any personal gain, and that was accepted by everybody, there is no smoke without fire, is there? You have clearly broken a law. I recall somebody saying to me, "What you have done, was it really that bad? Does it deserve this jail sentence?" at which I shrugged my shoulders saying, "Well, the law believes so, and that is the end of it."

I think I was more aggrieved about the sentence and going to prison than I thought I would be before going to prison. I don't think about it very much these days. I think about it occasionally. Sometimes I wake up at three in the morning and think things might have been a bit different, but then I also think what would have happened if I had retired and gone to the United States and been arrested as a participant in the cartel. I would have been entirely on my own resources, and what on earth would I have done in those circumstances? It was almost a silver lining to get caught when I did, when I was still employed.

What do you think about the length of the sentence that you received?

Like any criminal I would say that whatever sentence I got was too long. But I would say, genuinely looking at it on balance, it was a little over the top. Sending someone to jail doesn't just mean taking away that part of their lives whether for one year or two years. There's the waiting for it to happen. If after being in prison for the first three or four weeks a relatively intelligent man or woman didn't realize that it was a really bad idea to end up in there, then the prison system simply would not be doing its job. Even though I only ultimately spent eight months in prison, it was a very long eight months. I found a way of coping with it and dealing with it but it's a hell of a long time. Two years strikes me as a hell of a long time out of someone's life. If you take their cognizant years as probably being sixty years, to lose two of them is a lot. You don't lose two years, you lose more than that because you lose the time up to the imprisonment and you lose time afterwards as well.

I think it was a pretty harsh sentence for what was involved. Clearly the DOJ had their own pitch to make about it, to show how they were successful in prosecuting the cartel. They threw numbers about that were a little on the inflated side in terms of the value of the cartel and how damaging it had been to the people that were subjected to it. This was a little over the top but that's what happens. People will always try to over-exaggerate the role they played in some event or the fact that they had done this fantastic deal. There's no room for grey areas, especially in a court case. There's a winner and a loser, and the loser doesn't get the opportunity to put his position forward. Not that I am suggesting that we weren't guilty and that we hadn't done what we were accused of, but it's a pretty harsh lesson to learn.

Overall, in relation to what happened to you, do you think there is anything that you would want to have happened differently?

The timeframe in the United States and the waiting for trial in the United Kingdom could have been compressed because I was pleading guilty. I knew I was going to prison, I just wanted to get on with that. Of course, I wish we'd never gone down this road in the first place. But I would have wanted to have the time compressed so that we could have started the sentence much earlier and therefore got out of it earlier and started on with the rest of our lives much earlier. But that's wishful thinking.

This was a groundbreaking case. To get us back to the United Kingdom was a remarkable achievement. The plea bargain that was negotiated by my U.K. and U.S. lawyers meant that I would be returned to the United Kingdom and plead guilty to the U.K. cartel offense, without serving any more time in the U.S. prison system. If my sentence was two years or more from the U.K. court, then I would serve it in the United Kingdom. If it was less, then the DOJ reserved the right to have me return to the United States to serve the difference. We've benefitted from that. The case was handed to the OFT on a plate, and yet they did seem to make a meal of it. We were always going to go into court and plead guilty. They didn't have to provide a huge amount of evidence. We weren't going to change our minds. We arrived in the United Kingdom on December 17, 2007 and were sentenced on June 11, 2008. I rather suspect it could have been done a bit faster, but then that's just me thinking that.

Cartel conduct is often portrayed as wealthy companies and wealthy company executives taking advantage of less well-off consumers to feather their own nests. Against that background, how would you place what happened in Marine Hose?

I think it is about two things. Having once made that sort of profit, it's very difficult to slip down the league table. If you're Chelsea [top of the league in soccer], second place isn't really good enough. There's always a requirement for a business to do better next year than it did this year. There's always that pressure. Survival in the market was my motivation for doing what I did.

But given the circumstances, I would not put myself out in such a risky and precarious position personally in order to achieve that. The

personal damage, be it time, be it money, be whatever it is, is too great to allow yourself to worry about what will happen to other people. That's a terrible sentence to come out with, it really is. I would never ever do it again, and I wouldn't recommend to anyone that they do it. The loss to you in terms of your life is too great. Nobody will appreciate it afterwards. For people to do what they think is the right thing can sometimes cost them, and in my case I guess it wasn't that serious, I lost a few months or a year or two of my life but I certainly wouldn't recommend anybody to go down the route of cartels.

Do you think that people in certain industries have a cultural perception that this sort of cartel behavior is necessary for industries to continue to be competitive and survive?

I don't think peoples' attitudes have changed that much. The primary function if you are a businessman is to make sure your business survives, and to some extent people almost do anything in order to achieve that. I think what's changed is, first of all, manufacturing is disappearing from the United Kingdom and it's disappearing from Europe. It's all moving to the Far East. The internationalization of business, the globalization, means that the world has changed around the people who are still operating manufacturing industries in the United Kingdom. Their competition is not so much within Europe. It's the Far East where cost is much lower and so it's much more apparent to them that they have to be competitive in order to survive. It's the international landscape that's changed rather than people's cultural attitudes.

One can think of scenarios where price fixing is actually for the benefit of a particular industry or for the benefit of a country. Do you think it's too simplistic to say that price fixing is always dishonest, it's always wrong?

I guess I'm biased but I do not go down whole-heartedly the route of being dishonest. I think the majority of people causing cartels are usually doing it not for personal gain but for their business, for their firms. I don't think from what I've seen that many individuals are doing it for their own ends. They are doing it because it's expected of them, because they've always done it, or because it's the only way they are going to survive. I don't view it as dishonest. I can distinctly recall when the OFT interviewed me they said, "Do you accept that

your behavior was dishonest?" I knew I had to say yes in order to get the deal, but it stuck in my throat having to say it because I have always considered myself an honest, truthful person. I was always the last person to expect to end up in jail, but I did.

There is no point, I have to accept that what I did was dishonest as the law states it to be. Is the law always right? Clearly not. But I knew what I was doing was against the law; therefore I have to accept that the law considers me dishonest even though I don't view myself as a dishonest person. I wasn't really cheating on my golf card but there you are.

Do you think there's still a complacency in British industry about it?

Yes. I read a survey recently that the vast majority of people in Britain don't even think a cartel is a crime. I think there is a complacency in the United Kingdom about cartels because it has been a long established practice. I can see that cartels are ultimately a bad thing for the consumer and the public, although one could make an argument to say that some things will disappear if those fixes aren't in place.

How has the experience affected you? Do you think it has changed you?

I don't actually think it's changed me all that much because I came to terms with it very quickly; I knew pretty much straightaway that I was in deep trouble. I always tried, and I'm going to sound like the *Life of Brian* at the moment, I always tried to look on the bright side. That is my way of coping with it, trying to find humor in the situation as best I could. Even in the very early days.

I hope it hasn't affected me too much. It's probably made me much more aware of areas of the world that I knew nothing about. I've never been a hanger or a flogger but I'm certainly even more inclined for that view now. I'm probably much more liberal about prison and punishment than I was previously. I don't think prison achieves too much but, hey, I'd say that wouldn't I? I hope I'm more tolerant of other peoples' foibles and mistakes and I do believe that there's always two sides to a story, nearly always, and I try not to rush the judgment on anything I read or see. So I hope it's made me more tolerant and I hope it hasn't affected me too much, I hope I haven't changed too much. I was reasonably happy with the bloke I

was before but it's done nothing for my golf game, and that's what I'm blaming. It's nothing to do with my swing, no.

Bryan Allison was released from his prison term in March 2009. The Marine Hose deal, as it became known, was acclaimed as setting a precedent for dealing with cross-border cases involving foreign defendants. It remains to be seen if this is the case, but it clearly put the spotlight on issues surrounding how to deal with defendants caught in cartel conduct that affects more than one jurisdiction. No doubt these issues will become increasingly important as cartel conduct is criminalized in more and more countries.

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COMPILED BY BENJAMIN TOBY*

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* U.S. Librarian and Information Services Manager, Freshfields Bruckhaus Deringer LLP.

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