CIVIL JUSTICE SYSTEMS

Law and Corporate Behaviour

Integrating Theories of Regulation, Enforcement, Compliance and Ethics

Christopher Hodges

Hart · CH Beck · Nomos

several more years). Combe and Monnier calculated that the lifetimes of the cartels identified between 1975 and 2009 had slightly *increased* over time, from an average of just over five years in 1975 to an average of around nine years in 2009 (overall average seven years), although the size of the annual affected market was not increasing.[96] The nine year average duration of cartels dealt with at EU level between 1990 and 2009 was stable over each segment of five years.[97] The median for those dealt with at European level has been calculated as five and a half years.[98] In those cartels sanctioned by the European Commission in 2011 and 2012 the average duration increased from 3.3 to 6.1 years.[99] Average duration appears to be nine years in the USA,[100] where the individuals who instigated the cartel will typically have moved firms *twice* before the cartel is discovered, and have no risk of adverse consequences from the infringing firm.[101]

Second, the European Commission took between two and seven years (average 4.3 years) in investigating these cartels.[102] Stephan has noted lengthy individual cases.[103] In the *Car Glass* cartel case, the €896 million fine imposed on French glass producer Saint-Gobain was imposed more than a decade after the anti-competitive behaviour was first instigated and some nine years after the infringement ceased.[104]

Third, the evidence (discussed below) is that cartels involve a very small number of individuals within each company, who take care to keep their conspiracy secret, both internally and publicly.

iv. British Business Survey Evidence

A survey comprising 30 interviews with British competition lawyers, economists and firms' managers responsible for competition compliance in 2006, with telephone surveys of 234 senior competition lawyers based in London and Brussels in 2006, and 202 British companies in 2007 sought reasons for the abandonment or modification of proposed mergers or potentially anti-competitive conduct following recent competition authority interventions.[105] The survey found that 'companies abandoned or significantly modified a large number of possible anti-competitive agreements and conduct because of the risk of

[96] Combe and Monnier (n 84).

[97] JK Ashton and AD Pressey, 'Who Manages Cartels? The Role of Sales and Marketing Managers within International Cartels: Evidence from the European Union 1990–2009' CCP Working Paper 12-11 (2012).

[98] JM Connor, 'Cartel Fine Severity and the European Commission: 2007–2011' (2013) 34 *European Competition Law Review* 58–77.

[99] C Veljanovski, *European Cartel Fines in 2012* (London, Case Associates, 2013).

[100] SJ Evenett and VY Suslow, 'Preconditions on Private Restraints on Market Access and International Cartels' (2000) 3(4) *Journal of International Economic Law* 593–631 reported that the mean for pre-WWII international cartels was 4 to 8 years, although an iodine cartel lasted 61 years: PL Eckbo, *The Future of World Oil* (Cambridge, Ballinger, 1976).

[101] DA Crane, *The Institutional Structure of Antitrust Enforcement* (Oxford, Oxford University Press, 2011).

[102] C Veljanovski, *European Cartel Fines Under the 2006 Penalty Guidelines—A Statistical Analysis* (London, Case Associates, 2010) available at http://ssrn.com/abstract=1723843.

[103] A Stephan, 'See No Evil: Cartels and the Limits of Antitrust Compliance Programmes' (2010) 31(8) *The Company Lawyer* 3.

[104] DG Competition Press Release, 'Antitrust: Commission Fines Car Glass Producers over €1.3 Billion for Market Sharing Cartel' (12 November 2008) IP/08/1685.

[105] *The Deterrent Effect of Competition Enforcement by the OFT: Discussion Paper 963* (Office of Fair Trading, 2007). The authors calculated a supposed cartel abandonment rate of 5:1 per actual OFT decision.

OFT investigation.' However, these conclusions have been criticised, Ginsburg and Wright saying they 'should be handled with some caution'.[106]

Further Office of Fair Trading (OFT) research into the construction industry reported that the 'risk of an OFT investigation had not made any impact on the majority of contractors surveyed'.[107] It found 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'.

A survey of 2,009 UK businesses in seven sectors interviewed in 2011[108] reported that:

- A minority (20 per cent) claimed to have directly come across *breaches* of competition law by others, and one in 10 was not sure.
- A very small proportion of businesses said they had *abandoned or changed* arrangements in the last two years (three per cent) because of the risk of infringing competition law.
- A sizable minority (23 per cent) claimed they either did *not take action* to ensure compliance with competition legislation, or simply did not know whether this happened.
- The survey found that 35 per cent of respondents *did not know* the sorts of things competition law was supposed to prevent, and 34 per cent had no awareness of any competition enforcement action; 41 per cent thought abuse of dominance was happening in their local region, and 22 per cent thought there was collusion.[109]

III. Conclusions on the Current Enforcement Policy

Crane has noted that 'Antitrust has become almost exclusively the concern of small groups of legal and economic specialists, who carry on their work without widespread public interest or support.'[110] The analysis above has set out a series of substantive criticisms with the current policy for enforcement of competition law as it exists at EU level. The basis of this policy is a theory of deterrence, applied solely of an ex post context, with a theory of internalisation of financial sanctions, on the assumption that firms are capable of controlling all their staff. It should not come as a surprise that the policy gives rise to problems at both the theoretical and practical levels: The following sections summarise why this is so.

[106] Ginsburg and Wright (n 73). These authors noted several methodological shortcomings (small sample; type of cartel; need to separate modified and abandoned cartels; exclusion of firms previously involved in infringements; did not probe impact of different types of sanctions; lawyers' tendency and interest to exaggerate the number averted).

[107] *Evaluation of the Impact of the OFT's Investigation into Bid Rigging in the Construction Industry* (OFT, 2010) OFT1240. This was undertaken before a Statement of Objections was issued to 112 construction companies in April 2008.

[108] *Competition Law Compliance Survey. Prepared for the Office of Fair Trading by Synovate (UK) Ltd* (Office of Fair Trading, 2011) at http://www.oft.gov.uk/shared_oft/ca-and-cartels/competition-awareness-compliance/oft1270.pdf.

[109] ibid.

[110] Crane (n 103). Crane cites R Hofstadter, 'What Happened to the Antitrust Movement?' in *The Paranoid Style in American Politics and Other Essays* (Cambridge MA, Harvard University Press, 1966) 188.

Importantly, the policy is based on deterrence *alone*, and not an enforcement policy that incorporates other elements, such as are found in almost all enforcement policies adopted in areas policed by other enforcement bodies, whether sectoral regulators, or those responsible for more horizontal subject-matter, such as consumer law, bribery or criminal law. The key elements that are found in other enforcement systems include a series of escalating sanctions, an ultimate deterrent sanction (competition law does not permit making a company insolvent or removing a licence to operate), a responsive approach to imposition of sanctions, and the existence of sanctions for individuals as well as firms.

A. Problems with Deterrence

An enforcement policy based on deterrence alone is inherently limited and does not produce satisfactory results. The conclusion of chapter two was that a system based on deterrence can only work if there is a high level of detection and enforcement, so that anyone who might consider breaking the rules perceives that the likelihood of being caught is high. Economic theory, applied in competition enforcement, is that the two relevant levers on behaviour are the likelihood of being caught and the severity of punishment imposed. However, the psychological evidence also showed that the severity of the penalty (which is such a notable feature of the competition enforcement system, highly emphasised by the authorities) is of little relevance to achieving actual deterrence.[111]

In competition enforcement, by contrast, the policy that is pursued is to maximise the severity of punishment by imposing high fines. If that policy were incorrect, therefore, the imposition of very high fines on companies is merely disguised taxation, and does little if anything in achieving its claimed objective of deterrence. Conversely, if the policy were effective, one would expect that the imposition of high fines, significantly increased in size over time, would have an effect on levels of infringement. If the level of infringement remains high, the main problems would seem to be either that the fines have no effect, perhaps because they are too low or because they are aimed at the wrong targets.

Determination of whether there has been any deterrent effect is a well-known problem of criminology and penology in relation to the deterrence of criminal behaviour.[112] A 2009 review of the literature noted that 'there are in fact very few studies that attempt to directly measure the impact of a particular penalty regime on the incidence of cartelisation.'[113] It noted two studies affording some broad international perspectives. First, Clarke and Evenett's data on vitamin imports from 1985 to 2000 across over 90 countries showed that vitamin prices tended to increase less in countries where cartels are prosecuted and where

[111] A recent indication was the survey of over 2300 Australian businesses, which concluded that higher sanctions alone are unlikely to lead to optimal compliance: C Parker and V Lehmann Nielsen, 'Deterrence and the Impact of Calculative Thinking on Business Compliance with Competition and Consumer Regulation' (2011) 56(2) *The Antitrust Bulletin* 377.

[112] TC Pratt, FT Cullen, KR Blevins, LE Daigle and TD Madensen, 'The Empirical Status of Deterrence Theory: A Meta-Analysis' in FT Cullen, JP Wright and KR Blevins (eds), *Taking Stock: The Status of Criminological Theory* (New Brunswick NJ, Transaction Publishers, 2009).

[113] *An Assessment of Discretionary Penalties Regimes. Final Report. A Report Prepared for the Office of Fair Trading by London Economics* (Office of Fair Trading, 2009) OFT1132, available at http://londoneconomics.co.uk/wp-content/uploads/2011/09/30-An-assessment-of-the-UK-Discretionary-Penalties-Regime.pdf.

fines and other forms of sanctions are imposed.[114] This evidence suggested that active anti-cartel regimes have some degree of effectiveness in deterring cartel activity. Second, Hylton and Deng's comparison of regimes found that the scope of a country's competition law (the types of conduct prohibited under competition laws, the types of penalties that might be adopted under the law and the procedures for enforcing those laws) was positively associated with a measure of the intensity of competition in the country's economy.[115] They also found that increasing the range of instruments available to enforcement authorities had a significant impact on the competition intensity of a country.

On the other hand, a 1994 empirical study into legal case histories in four significant international markets (diamonds, uranium, silver and gold) found an upsurge of cartel criminalisation.[116] Ginsburg and Wright's 2010 study of US stock price movements following indictments for price-fixing concluded that current American sanctions have no more than a transitory impact upon market outcomes and little, if any, deterrent value.[117] They concluded that 'The bulk of scholarly opinion is consistent with the view that despite ever-increasing levels of corporate fines and longer jail sentences, cartel activity is currently under-deterred'.[118] Harding's 2011 review of cartel deterrence concluded that regulators ought not to assume that their enforcement actions are well-known and convey menace.[119]

B. Limitations with Public Sanctioning Ex Post

The competition law system is based virtually exclusively on public enforcement by a public authority. This classic 'command and control' approach to regulation is bound to be limited in effectiveness. Effectiveness would be increased in firms' internal systems and personnel, and any external personnel and systems, were more closely engaged in the system. In other words, the system should adopt a more multi-level and meta approach to regulatory control of behaviour. Such an approach would involve enlisting internal compliance systems, supporting the behaviour of all staff as being based on ethical conduct, providing internal and external whistleblowing, and modifying the perverse motivations for individuals to break the law.

The competition regulatory system for cartels and abuse of dominance omits any ex ante controls, and relies solely on ex post imposition of sanctions. Adopting only an ex post approach is a driver towards adopting an enforcement theory based on deterrence. By definition, the offensive behaviour that has already occurred cannot now be prevented. Therefore, the imposition of sanctions can act only as a retrospective token of society's retribution, and as a means of signalling to the offender and to others that future offences will receive similar treatment. As a means of controlling future behaviour, restricting

[114] JL Clarke and SJ Evenett, 'The Deterrent Effects of National Anti-cartel Laws: Evidence from the International Vitamins Cartel' (2003) 48 *Antitrust Bulletin* 689.

[115] KN Hylton and F Deng, 'Antitrust Around the World: An Empirical Analysis of the Scope of Competition Laws and Their Effects' (2007) 74 *Antitrust Law Journal* 2.

[116] DL Spar, *The Cooperative Edge: The Internal Politics of International Cartels* (Ithaca, Cornell Studies in Political Economy, 1994).

[117] Ginsburg and Wright (n 73).

[118] See Y Bolotova, JM Connor and DJ Miller, 'Factors Influencing the Magnitude of Cartel Overcharges: An Empirical Analysis of the US Market' (2009) 5 *Journal of Competition Law and Economics* 361; Y Bolotova, 'Cartel Overcharges: An Empirical Analysis' (2009) 70 *Journal of Economic Behavior and Organization* 321.

[119] C Harding, 'Cartel Deterrence: The Search for Evidence and Argument' (2011) 56(2) *The Antitrust Bulletin* 345–76.

intervention aimed at controlling it only to the point after an offence has occurred has obvious limitations. Prevention is more likely to be effective if intervention can occur in advance of undesirable acts.

The problem is that it is difficult to design an effective ex ante control for the type of wrongdoing involved here, namely conspiracies such as cartels. The same problem occurs in other generic issues such as bribery. An ex ante licensing system based on an application for an approval to break the law would clearly not be relevant. The nature of the wrongdoing is binary: It is plain wrong, and unlike most regulatory systems the activity is not one that can be carried out in a way that is acceptable to society.

Examples of ex ante regulatory interventions that could be adopted include: Requiring individuals to seek permission for certain activities before they are taken; requiring certain actors to have undergone specified education or to hold professional qualifications, requiring firms to operate internal compliance systems, and requiring regular audit. The EU competition enforcement regime neither requires nor incentivises any of these techniques. Some of these techniques may at first sight seem difficult to apply to the competition context. But they are not impossible: Although a public licensing system for breaches of competition law is inappropriate, requiring certain management decisions to be referred to internal or external counsel for advice, or to a competition agency for advice, coupled with a revised sanctioning regime, is not impossible to contemplate. However, the EU positively rejects including incentives for firms to have compliance systems, even though they are tacitly understood to be relevant, as noted below.

C. Limitations with Focusing only on Firms: The Internalisation Fallacy

Competition enforcement policy assumes that firms are able to control the behaviour of all their personnel. Why should it be assumed that this is any more true than the proposition that a state is able to control the behaviour of all of its subjects? Both a state and a company are human constructs. No state is able to achieve complete adherence to its laws, whether by economic or repressive sanctions. Businesses possess far fewer means of control over their personnel than does a state: Imprisonment or fining are not usually options. Yet economists believe that business entities are able to achieve virtually complete control over staff actions. Posner holds that a 'corporation has effective methods of preventing its employees from committing acts that impose huge liabilities on it'.[120] Page believes that 'actions of employees are fully attributable to the corporation' and argues that the way that this can be achieved is because major firms have compliance programmes that identify the sorts of practices to avoid.[121] But Page agrees[122] agency costs may prevent the firm from controlling its managers in some instances, most likely criminal price fixing conspiracies.[123]

[120] RA Posner, *Antitrust Law* (Chicago, University of Chicago Press, 2001) 271.

[121] WH Page, 'Optimal Antitrust Remedies: A Synthesis' in RD Blair and DD Sokol (eds), *The Oxford Handbook of International Antitrust Economics, Volume 1* (Oxford, Oxford University Press, 2012) ch 11; citing AB Lipsky, 'Managing Antitrust Compliance through the Continuing Surge in Global Enforcement' (2009) 75 *Antitrust Law Journal* 965–95.

[122] Page was responding (and objecting) to Crane (n 101).

[123] RH Lande and JP Davis, 'Benefits from Private Antitrust Enforcement: An Analysis of Forty Cases' (2008) 42 *University of San Francisco Law Review* 879–918.

Arlen and Kraakman argue that companies should not be strictly vicariously liable for the wrongdoing of their employees, since it gives rise to a perverse incentive for companies not to monitor their employees if it gives rise to sanctions on the company.[124] Instead, they argue that corporate criminal liability should be duty-based, so that they could avoid criminal liability if they engage in optimal policing (monitoring, self-reporting and cooperating), and they should face 'residual' civil liability designed to ensure that they adopt optimal prevention measures[125]—unless market forces ensure the firm internalises the social cost of employees' wrongs.[126]

Wils, noting that Arlen and Kraakman's starting assumption is that employees 'commit crimes to benefit themselves',[127] accepts that this would appear to be an adequate assumption for certain types of wrongdoing by employees, such as embezzlement or harassment, which are committed by employees solely for their own benefit, without any benefit for the company, so that there is a natural alignment of the interests of the government and the company to prevent such wrongdoing. But Wils argues that it is legitimate to sanction only firms in the case of antitrust infringements since companies are generally best placed to prevent antitrust infringements, and to do so in the most cost-effective way. He suggests that such a policy avoids perverse incentives, avoids unfairness, and that parent company liability is appropriate. He bases his argument on the assertions that antitrust infringements have the following characteristics.[128] First, antitrust infringements involve employees that have been given substantial authority by their company. The empirical evidence from the population of antitrust infringements that have been detected and prosecuted by antitrust authorities is that most infringements involve senior management.[129] He suggests that the 'rogue employee' explanation, a classic defence in cartel cases, clearly does not fit the many cases where the highest levels of the company are involved. Second, antitrust infringements are financially beneficial to the company. Third, employees are primarily motivated by what they perceive to be their company's interest and/or by the incentives the company has set

[124] J Arlen, 'The Potentially Perverse Effects of Corporate Criminal Liability' (1994) 23 *Journal of Legal Studies* 833, and J Arlen and R Kraakman, 'Controlling Corporate Misconduct: An Analysis of Corporate Liability Regimes' (1997) 72 *New York University Law Review* 687; see also S Oded, 'Inducing Corporate Compliance: A Compound Corporate Liability Regime' (2011) 31 *International Review of Law & Economics* 272; S Oded, *Corporate Compliance: New Approaches to Regulatory Enforcement* (Cheltenham, Edward Elgar, 2013).

[125] Arlen and Kraakman, ibid.

[126] Arlen (n 27).

[127] Arlen (n 124) 834.

[128] Wils (n 75).

[129] See M Berzins and F Sofo, 'The Inability of Compliance Strategies to Prevent Collusive Conduct' (2008) 8 *Corporate Governance* 669 at 675 (finding that senior management were involved in 80% of 69 publicly available cases from Australia, Canada, Denmark, the European Commission, Ireland, Japan, Korea, The Netherlands, New Zealand, the UK and the USA between 2000 and 2006); A Stephan, 'Hear no Evil, See no Evil: Why Antitrust Compliance Programmes may be Ineffective at Preventing Cartels', University of East Anglia CCP Working paper 09-09 (July 2009), 8–10 (listing the positions of individuals involved in 40 international cartels and named in decisions of the European Commission or press releases of the US Department of Justice between 1998 and 2008); JC Gallo, K Dau-Schmidt, JL Craycraft and CJ Parker, 'Department of Justice Antitrust Enforcement, 1955–1997: An Empirical Study' (2000) 17 *Review of Industrial Organization* 75 (69% of all individual criminal defendants in cases brought by the US Department of Justice Antitrust Division between 1955 and 1997 were corporate officers); WJ Kolasky (US Department of Justice) 'Antitrust Compliance Programs: The Government Perspective', Speech given to Corporate Compliance 2002 Conference, Practicing Law Institute, July 12, 2002, San Francisco; and JM Connor, *Global Price Fixing: Our Customers are the Enemy* (Vienna, Kluwer, 2001) 11–12.

for them.[130] Fourth, performance targets and incentives are imposed by firms and exert important effects on individual behaviour.

However, Wils has also previously argued that competition law must impose sanctions on individuals because the level of fines imposed on employers that is required effectively to deter anti-competitive conduct by their employees far exceeds the employers' ability to pay, and because an employer may not in reality be capable of adequately controlling the behaviour of its agents.[131]

Wils notes that there are many examples of cases in which antitrust infringements were committed in (flagrant) disregard of compliance programmes.[132] However, he suggests that leniency programmes are a much better way to incentivise companies to detect and report cartel behaviour engaged in by their employees than granting fine reductions or immunity to all companies that have a compliance programme. Both Page and Wils therefore argue that compliance systems are capable of discovering internal conspiracies involving employees, and imply that such means are capable of discovering virtually *all* such conspiracies. There is no evidence for this. It is true that large companies typically control compliance with much regulatory law through compliance systems, but there is no evidence that that technique is effective in relation to hidden conspiracies involving a small number of individuals. Stephan argues that a problem with compliance systems is that the support of these individuals is considered important to the effectiveness of a compliance programme. In order to avoid detection, they may either underfund compliance efforts altogether, or create a façade of compliance without any serious mechanisms for detecting or preventing cartel behaviour.[133] Yet this is all assumption without empirical support.

There is a marked antipathy within the Commission's sentencing Guidelines towards compliance systems, with the result that they are clearly not incentivised (unlike under almost all other sophisticated regulatory systems, even including the bribery regime). A 2011 UK survey found that although most large companies already use some voluntary compliance measures, '[v]oluntary competition compliance could be strengthened as

[130] See J Sonnenfeld and PR Lawrence, 'Why do Companies Succumb to Price Fixing?' (July–August 1978) *Harvard Business Review* 145; J Sonnenfeld, 'Executive Apologies for Price Fixing: Role Biased Perceptions of Causality' (1981) 24 *Academy of Management Journal* 192; WE Baker and RR Faulkner, 'The Social Organization of Conspiracy: Illegal Networks in the Heavy Electrical Equipment Industry' (1993) 58 *American Sociological Review* 837; JM Conley and WM O'Barr, 'Crime and Custom in Corporate Society: A Cultural Perspective on Corporate Misconduct' (1997) 60 *Law and Contemporary Problems* 5; C Parker, P Ainsworth and N Stepanenko, *ACCC Enforcement and Compliance Project: The Impact of ACCC Enforcement Activity in Cartel Cases* (Canberra, Australian National University, Centre for Competition and Consumer Policy, May 2004); Interview of B Allison by M O'Kane, 'Does Prison Work for Cartelists?—The View from Behind the Bars' (2011) 56 *Antitrust Bulletin* 483, 498; and Kolasky (n 129) at 14; see also C Parker, 'Criminal Cartel Sanctions and Compliance: The Gap between Rhetoric and Reality' in C Beaton-Wells and A Ezrachi, *Criminalising Cartels: Critical Studies of an International Regulatory Movement* (Oxford, Hart Publishing, 2011) 239; and Stucke (n 80).

[131] WJ Wils, 'Is Criminalisation of EU Competition Law the Answer?' in KJ Cseres, MP Schinkel and FOW Vogelaar (eds), *Criminalisation of Competition Law Enforcement: Economic and Legal Implications* (Cheltenham, Edward Elgar, 2006) 81.

[132] See Berzins and Sofo (n 129) 675–78; Parker, Ainsworth and Stepanenko (n 130) at 34, 35 and 60; and Kolasky (n 131); see also the case of Intel, whose antitrust compliance programme was once heralded in the Harvard Business Review to have prevented antitrust infringements, but later turned out not to have: DB Yoffie and M Kwak, 'Playing by the Rules: How Intel Avoids Antitrust Litigation' (2001) 79 *Harvard Business Review* 119 and C Roquilly, 'Intel, dix ans après: Le mythe de la compliance revisité?' *Concurrences* N° 2-2010, 50.

[133] Stephan (n 103).

overall 58 per cent of small companies surveyed and 37 per cent of large companies have no compliance measures in place'.[134]

In contrast, Crane argues that the entire concept of relying on private antitrust damages to deter is flawed because the prospect of damages will not deter managers within firms.[135] Ginsburg and Wright urge that fines alone will not provide sufficient deterrence and alternative sanctions such as imprisonment, which is costly, and debarment, which is not costly, should also be used in antitrust enforcement.[136] They argue that viewing 'the corporation' as an entity is fallacious, since shareholders cannot prevent price-fixing by employees, directors and officers have an incentive to increase corporate value, and no incentive to prevent price-fixing.[137] Shareholders may choose to pursue derivative actions against the senior managers responsible, on behalf of the firm.[138] However, as Stephan points out, there are a number of reasons why such actions are unlikely. 'First, there is little evidence of antitrust audits successfully uncovering secretive hardcore cartels. Knowledge of the infringement will normally surface years after it was instigated and even ceased, meaning that many of the managers responsible may have moved on or retired. Secondly, shareholders may have little incentive to pursue derivative actions. Directors' and officers' liability insurance does not cover intentional breaches of duty by management, meaning that the funds which might be recovered will be relatively minimal.'[139]

A further problem is with the alignment between the intentions of the firm and its 'agents'. The purpose of businesses in a capitalist market system is to make profits, and the economic purpose of employees is to make profit for themselves. The interests of both are frequently aligned by the use of bonuses and share incentives. But this does not mean that every business, or every employee, will make all decisions based exclusively on maximisation of economic benefits. One of the *consequences* of individual employees being involved in illegal activity during the course of their employment may be that either or both of them and their firms gain economically. But does this mean that the firm has approved of their actions, whether in advance or subsequently, or adopted them? How often do company Boards or official management decisions adopt or sanction breaking the law? Did the breach occur because of the negligence or recklessness of 'the firm', through having an aggressive policy on profits or because of a lack of effective internal compliance and detection systems? Will a firm be guilty if an employee kills an employee of a competitor firm, which has a consequence that the former's firm gains economically? At what point can individual agents' actions be taken to 'be' actions of the principal, or to give rise to a liability of the principal?

[134] *Competition Law Compliance Survey* (n 108) paras 1.26 and 1.38.

[135] Crane (n 101) 175–82.

[136] Ginsburg and Wright (n 73): they cite Werden and Simon (n 84); AM Polinsky and S Shavell, 'Should Employees Be Subject to Fines and Imprisonment Given the Existence of Corporate Liability?' (1993) 13 *International Review of Law & Economics* 239.

[137] Ginsburg and Wright (n 73).

[138] In the UK under Companies Act 2006, ss 260–69; F Wagner-von Papp, 'Suing the Suits: Derivative Shareholder Actions to bring home the Message of Antitrust', speaking at UCL/IMEDIPA Santorini Workshop, 28 May 2009.

[139] Stephan (n 103).

6

Empirical Evidence

I. Empirical Evidence on Individual Deterrence

A recent summary of the evidence on deterrence in relation to criminal activity concluded that the results of the general body of research, involving different methodologies, are 'fairly consistent':[1]

(a) The mere existence of criminal law and the criminal justice system has some effect on preventing crime.[2]

(b) Increases in the severity or certainty of punishment alone result in only modest, if any, increases in deterrence.[3]

(c) Studies show statistically significant correlation between *certainty* of punishment and crime rates.[4] The key issue is not the objective risk of being caught, but the *perception* by a person of the severity of the risk that he will be caught, exposed to others

[1] A Bottoms and A von Hirsch, 'The Crime-Preventive Impact of Penal Sanctions' in P Cane and HM Kritzer, *The Oxford Handbook of Empirical Legal Research* (Oxford, Oxford University Press, 2010) 104. See developing realisation of the significance of the evidence a decade earlier in A von Hirsch, AE Bottoms, E Burney and P-O Wikström, *Criminal Deterrence and Sentence Severity. An Analysis of Recent Research* (Oxford, Hart Publishing, 1999).

[2] PH Robinson and JM Darley, 'Does Criminal Law Deter? A Behavioral Science Investigation' (2004) 24 *Oxford Journal of Legal Studies* 173 (citing von Hirsch, Bottoms, Burney and Wikstrom (n 1); A Blumstein, J Cohen and D Nagin (eds), *Deterrence and Incapacitation* (Washington DC, The National Academy of Sciences Panel, 1978) 47.

[3] LS Beres and TD Griffith, 'Habitual Offender Statutes and Criminal Deterrence' (2001) 34 *Connecticut Law Review* 55, 59; see I Ehrlich, 'Crime, Punishment, and the Market for Offenses' (1996) 10 *Journal of Economic Perspectives* 43, 55–63 (surveying the research on the question); PW Greenwood et al, *Three Strikes and You're Out: Estimated Benefit and Cost of California's Mandatory New Sentencing Laws* (Los Angeles, RAND Corporation, 1994) 16 (surveying recent research supporting that increases in sentencing does not provide additional deterrence). But see D Kessler and SD Levitt, 'Using Sentence Enhancements to Distinguish Between Deterrence and Incapacitation' (1999) 42 *Journal of Law & Economics* 343 (discriminating between deterrent and incapacitation effect and finding deterrent effect to be significant).

[4] DP Farrington, PA Langan and P-O Wikström, 'Changes in Crime and Punishment in America, England and Sweden between the 1980s and 1990s' (1994) 3 *Studies in Crime and Crime Prevention* 104–31; D Nagin, 'Criminal Deterrence Research at the Outset of the Twenty-first Century' in M Tonry (ed), *Crime and Justice: A Review of Research* (Chicago, University of Chicago Press, 1998); PA Langan and DP Farrington, *Crime and Justice in the United States and England and Wales, 1981–96* (Washington DC, Bureau of Justice Statistics, 1998); PH Robinson and JM Darley, 'The Role of Deterrence in the Formulation of Criminal Law Rules: At Its Worst when Doing Its Best' (2003) 91 *Georgetown Law Journal* 949, 953–56; A Blumstein, 'Prisons' in JQ Wilson and J Petersilia (eds), *Crime* (San Francisco, Institute for Contemporary Studies Press, 1995) 387, 408–09; FH Easterbrook, 'Criminal Procedure as a Market System' (1983) 12 *Journal of Legal Studies* 289, 295 and fn 7.

and punished, although this may have only a relatively minor influence on people's behaviour.[5]

(d) The major association studies,[6] and meta-analysis,[7] tend *not* to disclose statistically significant correlations between levels of *severity* of sanctions and crime rates. Studies from the 1950s and 1960s had showed, first, that US States with and without the death penalty, that appeared otherwise comparable, had similar homicide rates and, second, that in both the USA and Europe, those jurisdictions that had abolished the death penalty showed no unusual increases in homicide rates.[8] So discouraging has the accumulated evidence now become that some experts have concluded that 'the null hypothesis' should be accepted, namely that variations in the severity of punishment have no effect on crime rates.[9] However, an effect might occur in certain conditions.[10] A sanction at the level of contract or tort compensatory damages is likely to be inadequate, whereas there is some evidence that punitive penalties have an effect.[11]

(e) Deterrence decays over time.[12] This effect suggests a need to reverse the decay with continued high levels of education and visible enforcement.

Hence, social control strategies based exclusively on a rational choice and deterrence model of human behaviour have had at best limited success,[13] and leading criminologists stress the 'importance of linking the deterrence (or rational choice) perspective with theories that rely on other types of control mechanisms' in society (especially normative attachments).[14] Further, studies have found that 'Variables indicating the threat of non-legal sanctions were among the most robust of the deterrence theory predictors'.[15] In other words, the

[5] R MacCoun, 'Drugs and the Law: A Psychological Analysis of Drug Prohibition' (1993) 113 *Psychological Bulletin* 497–512; PH Robinson and J Darley, *Justice, Liability and Blame* (Colorado, Westview, 1995); PH Robinson and J Darley, 'The Utility of Desert' (1997) 91 *Northwestern University Law Review* 453–99; HL Ross, *Deterring the Drinking Driver* (Lexington MA, Lexington Books, 1982); Nagin (n 4).

[6] Farrington, Langan and Wikström (n 4); Nagin (n 4).

[7] TC Pratt, FT Cullen, KR Blevins, LE Daigle and TD Madensen, 'The Empirical Status of Deterrence Theory: a Meta-analysis' in FT Cullen, JP Wright and KR Blevins (eds), *Taking Stock: The Status of Criminological Theory* (New Brunswick NJ, Transaction Publishers, 2006).

[8] Quoted in von Hirsch, Bottoms, Burney and Wikström (n 1) 11.

[9] AN Doob and C Webster, 'Sentence Severity and Crime: Accepting the Null Hypothesis' (2003) 30 *Crime and Justice: A Review of Research* 143–95.

[10] Robinson and Darley (n 2); C Engel, 'Deterrence by Imperfect Sanctions: A Public Good Experiment' (2013) *MPI Collective Goods Preprint*, 2013/9 (finding that imperfectly deterrent sanctions may affect the behaviour of individuals who hold social preferences such as concern for the victim's loss).

[11] T Eisenberg and C Engel, 'Assuring Adequate Deterrence in Tort: A Public Good Experiment' (2014) 11(2) *Journal of Empirical Legal Studies* 301–49.

[12] J Henstridge, R Homel and P Mackay, *The Long-Term Effects of Random Breath Testing in Four Australian States: A Time-Series Analysis* (Canberra, Commonwealth Department of Transport and Regional Development, 1997).

[13] See generally T Brooks (ed), *Deterrence* (Farnham, Ashgate, 2014) (debates continue over whether it is even possible); DS Nagin, 'Criminal Deterrence Research at the Outset of the Twentieth Century' (1998) 23 *Crime and Justice* 1 (review of the literature); M Tonry, 'Learning from the Limitations of Deterrence Research' (2008) 37 *Crime & Justice* 279 (discussing the divergent results of empirical studies on the effect of sanctions on criminal behaviour).

[14] Pratt, Cullen, Blevins, Daigle and Madensen (n 7) 385. See further P-O Wikström, 'Deterrence and Deterrent Experiences: Preventing Crime Through the Threat of Punishment' in SG Shoham, O Beck and M Kett (eds), *International Handbook of Penology and Criminal Justice* (Boca Ration FL, CRC Press, 2008); M Tonry, 'Learning from the Limitations of Deterrence Research' (2009) 37 *Crime and Justice: A Review of Research* 279–311.

[15] Pratt, Cullen, Blevins, Daigle and Madensen (n 7) 385.

imposition of sanctions by the state may not be the most effective means of influencing future behaviour, if other less formal influences are available.

A significant blow to the rational cost calculation concept is dealt by the finding that individuals can be induced to change their behaviour in many cases even when no economic incentives are present.[16] Interventions such as feedback, peer education and social marketing campaigns have successfully reduced energy use among office employees, dormitory residents and individuals living on military bases, when they were not financially responsible for their energy consumption.[17] Other interventions, such as time-of-use information about usage and costs, have reduced energy use without changes in price.[18]

Empirical evidence from examination of rehabilitation of young offenders (borstal) found no appreciable effects on recidivism.[19] Some rehabilitative programmes work, and reduce recidivism by 10 to 20 per cent, where two conditions are fulfilled: (i) There is 'substantial, meaningful contact between the treatment personnel and the participant'; and (ii) the programmes focus on 'developing skills and use behavioural (including cognitive–behavioural) methods.[20] Bottoms and von Hirsch consider that desistance from further offending by those who have committed crimes, where it occurs, seems largely to be accomplished by the probationers themselves through their motivation, and from changes in the nature of the social context in which they live.[21] They note a surprising lack of research evaluating the effectiveness of special deterrence, fines and specially designed penalties, aimed at inducing convicted offenders to desist through 'shock treatments'.[22] Success in affecting the future behaviour of individuals can be influenced by the personal skill of an individual enforcement officer, rather than be a function of the sanction imposed and the theory underlying its imposition. 'Although deference to legal authorities is the norm, disobedience occurs with sufficient frequency that skill in handling the rebellious, the disgruntled, and the hard to manage—or those potentially so—has become the street officer's performance litmus test.'[23] Further, social, environmental and cultural factors can

[16] The following examples are noted by MP Vandenbergh, AR Carrico and LS Bressman, 'Regulation in the Behavioral Era' (2011) 95 *Minnesota Law Review* 715–81.

[17] JE Petersen et al, 'Dormitory Residents Reduce Electricity Consumption When Exposed to Real-Time Visual Feedback and Incentives' (2007) 8 *International J Sustainability Higher Education* 16, 29; AH McMakin et al, 'Motivating Residents to Conserve Energy Without Financial Incentives' (2002) 34 *Environmental Behaviour* 848, 856.

[18] See review in W Abrahamse et al, 'A Review of Intervention Studies Aimed at Household Energy Conservation' (2005) 25 *Journal of Environmental Psychology* 273, 278–79 (reductions in home energy use within a range of 5 to 15%).

[19] R Martinson, 'What Works? Questions and Answers About Prison Reform' (1974) 35 *The Public Interest* 22–54; D Lipton, R Martinson and J Wilks, *The Effectiveness of Correctional Treatment* (New York, Praeger, 1975); L Sechrest, LO White and ED Brown (eds), *The Rehabilitation of Criminal Offenders: Problems and Prospects* (Washington DC, National Academy of Sciences, 1979); SR Brody, *The Effectiveness of Sentencing*, Home Office Research Study No 35 (London, HMSO, 1976).

[20] LW Sherman, DP Farrington, BC Welsh and DL MacKenzie, *Evidence-Based Crime Prevention* (Abingdon, Routledge, 2006).

[21] S Farrall, *Rethinking What Works With Offenders: Probation, Social Context and Desistance From Crime* (Cullompton, Willan Publishing, 2002) 175. This conclusion has led to supporting attempt at self-help and identifying 'hooks for change'.

[22] Bottoms and von Hirsch (n 1).

[23] TR Tyler, 'Psychology and the Law' in *The Oxford Handbook of Law & Politics* (Oxford, Oxford University Press, 2008); SD Mastrofski, JB Snipes and AE Supina, 'Compliance on Demand: The Public's Responses to Specific Police Requests' (1996) 33 *Journal of Crime and Delinquency* 269–301, 272.

all affect success in future compliance: 'Many decades of research have demonstrated that community factors are powerful determinants of levels of crime.'[24] How a person responds to regulation appears to be influenced by personality traits and characteristics.[25]

In direct contradiction to the assumptions of the rational calculator theory, Anderson's interviews with 278 male US prisoners found that about 76 per cent of active criminals and 89 per cent of the most violent criminals either perceive no risk of arrest or give no thought to their possible punishment.[26]

Tyler considers that deterrence works reasonably well in relation to murder in the United States, where significant resource has been devoted and the objective risk of being caught and punished for murder is approximately 45 per cent.[27] Similarly, the USA altered its incarceration practices, increasing the prison population sevenfold, from 200,000 in 1973 to 2 million (7 per cent of the population) in 2000, a rate that is the highest prison population in the world,[28] far surpassing Europe,[29] but declined to 1.6 million in 2011.[30]

II. Empirical Evidence on Corporate Regulatory Deterrence

The empirical evidence of the existence of an effect of general deterrence is at best mixed. Some studies have found that 'deterrence, for all its faults, may impact more extensively on risk management and compliance activity' than applying remedial strategies after the event.[31] Perceptions of the certainty and severity of punishments for violations were found to have virtually no correlation with nursing homes' regulatory compliance rates in most cases.[32] Gunningham, Kagan and Thornton found that mega-penalties tend to penetrate corporate consciousness in a way that other penalties do not.[33] Yeung considered that

[24] W Skogan, 'Crime and Criminals' in P Cane and HM Kritzer, *The Oxford Handbook of Empirical Legal Research* (Oxford, Oxford University Press, 2010).

[25] G Pogarsky, 'Identifying "Deterrable" Offenders: Implications for Research on Deterrence' (2002) 19 *Justice Quarterly* 431–52.

[26] DA Anderson, 'The Deterrence Hypothesis and Picking Pockets at the Pickpocket's Hanging' (2002) 4(2) *American Law and Economics Review* 295.

[27] Robinson and Darley (n 5) 453–99.

[28] United States Department of Justice 2001 (approximately seven million Americans are either in prison, on probation or on parole, and nearly 60 million (almost 30% of the US adult population) have a criminal record; the costs of this punishment have increased 660% from $9 billion in 1982 to $69 billion in 2006); SN Durlauf and DS Nagin, 'Imprisonment and Crime: Can Both Be Reduced?' (2011) 10 *Criminology and Public Policy* 13; C Haney and P Zimbardo, 'The Past and Future of US Prison Policy: Twenty-five Years after the Stanford Prison Experiment' (1998) 53 *American Psychologist* 709–27; TR Clear, 'The Effects of High Imprisonment Rates on Communities' (2009) 37 *Crime and Justice: A Review of Research* 459–80.

[29] D Garland, *The Culture of Control* (Oxford, Clarendon Press, 2001).

[30] US Bureau of Justice Statistics, 2011, at http://bjs.gov/.

[31] R Baldwin, 'The New Punitive Regulation' (2004) 67 *Modern Law Review* 351–83, 373.

[32] J Braithwaite and T Makkai, 'Testing an Expected Utility Model of Corporate Deviance' (1991) 25 *Law and Society Review* 7–40, 35

[33] N Gunningham, R Kagan and D Thornton, *Shades of Green: Business, Regulation and Environment* (California, Stanford University Press, 2005).

criminal empirical studies have failed to provide reliable findings about the relative deterrent effects of various types and levels of penalty for various offences.[34]

Studies reveal that the profit-maximisation motive as a driver of corporate behaviour is not always present.[35] For example, in anti-competitive acts, only some (price fixing and monopoly, illegal tying and downstream pressures on suppliers) were linked to economic strain. Other types were associated with economic munificence (patent, warranty and advertising), and some defied economic modelling.[36] Longitudinal antitrust studies have found legal sanctions had only modest specific deterrent effects on recidivism.[37] Simpson and Rorie comment that one interpretation is that the objective risk of discovery and sanction in those studies was quite low.[38]

Gunningham, Kagan and Thornton found that hearing about legal sanctions against other firms in the mining sector prompted many of them to review, and often to take further action to strengthen, their own firm's compliance programme.[39] Thus, publicity about prosecution may have a general deterrent effect, especially in strongly regulated industries. Gunningham suggests that the spread of regulation and extensive publicity of prosecutions against reputation-sensitive companies has diminished the deterrent impact of tough enforcement.[40]

In relation to specific deterrence, Gunningham considers[41] that the evidence of a link between past penalty and improved future performance is stronger than it is for general deterrence, and suggests that a legal penalty against a company in the past influences the future level of compliance.[42] He relied on the finding by Baldwin and Anderson that 71 per cent of companies that had experienced a punitive sanction reported that 'such sanctioning had impacted very strongly on their approach to regulatory risks … For many companies the imposition of a first sanction produced a sea change in attitudes.'[43] However, Gunningham noted that the literature also suggests that action falling short of prosecution (for example, inspection, followed by the issue of administrative notices or administrative penalties) can also achieve a 're-shuffling of managerial priorities'[44] even when those

[34] K Yeung, *Securing Compliance. A Principled Approach* (Oxford, Hart Publishing, 2004), quoting: A Ashworth, *Sentencing and Criminal Justice* (London, George Weidenfeld and Nicholson, 2000) 60–61; D Beyleveld, 'Deterrence Research as a Basis for Deterrence Policies' (1979) 18 *Howard Journal of Criminal Justice* 135; Bottoms, Burney, von Hirsch and Wikstrom (n 1) (capable of having deterrent effects).

[35] 'Studies are fairly inconsistent regarding economic characteristics and noncompliance' and 'The inhibitory value of formal legal sanctions is far weaker than we might expect': SS Simpson and M Rorie, 'Motivating Compliance: Economic and Material Motives for Compliance' in C Parker and VL Nielsen (eds), *Explaining Compliance. Business Responses to Regulation* (Cheltenham, Edward Elgar, 2012).

[36] SS Simpson, 'The Decomposition of Antitrust: Testing a Multi-level, Longitudinal Model of Profit-squeeze' (1986) 51 *American Sociological Review* 859–75.

[37] SS Simpson and C Koper, 'Deterring Corporate Crime' (1992) 30 *Criminology* 347–76.

[38] Simpson and Rorie (n 35).

[39] Gunningham, Kagan and Thornton (n 33).

[40] N Gunningham, 'Enforcement and Compliance Strategies' in M Cave, R Baldwin, M Lodge (eds), *The Oxford Handbook of Regulation* (Oxford, Oxford University Press, 2010).

[41] Gunningham, ibid.

[42] S Simpson, *Corporate Crime and Social Control* (Cambridge, Cambridge University Press, 2002).

[43] R Baldwin and J Anderson, *Rethinking Regulatory Risk* (London, DLA/LSE, 2002) 10.

[44] J Baggs, B Silverstein and M Foley, 'Workplace Health and Safety Regulations: Impact of Enforcement and Consultation on Workers' Compensation Claims Rates in Washington State' (2003) 43 *American Journal of Industrial Medicine* 483–94, 491.

penalties are insufficient as to justify action in pure cost–benefit terms.[45] However, routine inspections without any form of enforcement apparently have no beneficial impact.[46] Gunningham's conclusion is that 'the impact of deterrence is significant but uneven and that unless it is used widely and well, it may have negative consequences as well as positive ones.'[47]

Some consider that certain organisations are *predisposed* to break rules, and can be 'distinguished by structural, cultural, or procedural characteristics that increase the odds that their personnel will recognize and exploit lure [the attractions and opportunities for crime]'[48] That perspective leads to viewing certain companies as having a culture that is more or less 'moral'. Some studies report that price fixing tends to be viewed as standard operating procedure and is rarely seen as criminal.[49]

However, a different view would be that it is the culture of the individuals in the given organisation whose culture and behaviour is the cause of the problem rather than the culture of 'the firm'. The existence of predisposing factors within a particular firm would be a predictor but not a cause that could justify punishment of 'the company'. Certainly, the motivations of individual managers have been noted as relevant by some research. Managers have been noted to be more willing to break the law when they perceive individual 'career' benefits.[50] Equally, a strong inhibitory effect of morality on non-compliance has consistently been seen across studies, and not a classic cost–benefit calculus, although the threat of formal sanctions increased the perceived immorality of the behaviour.[51] Perceptions of the immorality of an action strongly inhibit manager intentions to offend.[52]

Whilst it is argued that since no one system of behaviour-control is satisfactory, and hence a pluralist approach should be adopted, problems of injustice and over-deterrence arise as a result of a lack of coordination between different sanctions. For example, a firm might suffer a criminal penalty, civil liabilities and reputational damage. There is little attempt to coordinate these sanctions, and to ensure that their combined impact is proportionate, just and effective.

Research has shown that corporations convicted of US federal crimes in 2006–2008 were fined in the range from $5.7 to $17.3 million, and faced significant additional civil sanctions

[45] WB Gray and JT Scholz, 'Does Regulatory Enforcement Work: A Panel Analysis of OSHA Enforcement Examining Regulatory Impact' (1993) 27 *Law and Society Review* 177–213.

[46] S Shapiro and R Rabinowitz, 'Punishment versus Cooperation in Regulatory Enforcement: A Case Study of OSHA' (1997) 14 *Administrative Law Review* 713–62, 713.

[47] Gunningham (n 40).

[48] N Shover and A Hochstetler, *Choosing White-Collar Crime* (New York, Cambridge University Press, 2006) 51.

[49] G Geis, 'The Heavy Electrical Equipment Antitrust Cases of 1961' in G Geis and R Meier (eds), *White-collar Crime: Offenses in Business, Politics, and the Professions* (New York, Free Press, 1977) 117–32; SS Simpson and N Leeper Piquero, 'The Archer Daniels Midland Antitrust Case of 1996: A Case Study' in H Pontell and D Shichor (eds), *Contemporary Issues in Crime and Criminal Justice: Essays in Honour of Gilbert Geis* (New Jersey, Prentice Hall, 2001) 175–94.

[50] SS Simpson and N Leeper Piquero, 'Low Self-control, Organizational Theory and Corporate Crime' (2002) 36 *Law & Society Review* 509–48; SS Simpson, C Gibbs, L Slocum, M Rorie, M Cohen and M Vandenbergh, 'An Empirical Assessment of Corporate Environmental Crime-Control Strategies' (2013) 103(1) *Journal of Criminal Law and Criminology* 231.

[51] Simpson and Rorie (n 35).

[52] R Paternoster and SS Simpson, 'Sanction Threats and Appeals to Morality: Testing a Rational Choice Model of Corporate Crime' (1996) 30 *Law & Society Review* 549–84; Simpson and Leeper Piquero (n 50); SS Simpson, J Garner and C Gibbs, *Why do Corporations Obey Environmental Law? Assessing Punitive and Cooperative Strategies of Corporate Crime Control,* National Criminal Justice Reference Service Report (2007) 2001-IJ-CX-0020.

in which the civil element exceeded the criminal fine by more than $30 million in 1996 dollars.[53] The stock price of convicted firms falls as a result of the market's anticipation that it will earn less revenue, have higher costs, and/or face a market that does not give full weight to any positive financial information.[54] However, whilst corporate market value declines sharply where fraud is alleged, and the decline exceeds the sanctions imposed and the loss of criminal profits,[55] firms do not suffer a market sanction when they are either sanctioned for regulatory violations involving non- contracting third parties[56] or convicted of an environmental violation.[57] Any analysis that does not incorporate these sanctions into the expected government-imposed penalty will obtain an artificially high measure of the reputational penalty.[58]

III. Studies on Liability Deterrence

There are significant challenges in undertaking empirical studies on whether, and the extent to which, law in general, or specific types of law (criminal, private, tort, etc) or features (differing types of severity or incidence of penalties, or caps on liability or many other features) might have an effect on future behaviour. However, it remains true that there is no single comprehensive study that looks broadly at the deterrent effect of tort law.[59] Instead, we have to draw conclusions from two types of research studies: Those that look at individual facts, and the few that attempt to take an overview of other studies. The most important are summarised below, starting with the large meta studies from around two decades ago, followed by the more significant of the recent individual studies.

Before proceeding, we can note a recent behavioural science study that found that although the threat of potential criminal sanctions on individuals had a large and statistically significant effect on subjects' stated willingness to engage in risky behaviour, the threat of potential tort liability did not.[60] This supports the 'incremental theory' above,

[53] C Alexander, J Arlen and MA Cohen, 'Regulating Corporate Criminal Sanctions: Federal Guidelines and the Sentencing of Public Firms' (1999) 42 *Journal of Law and Economics* 393, 410; J Arlen, 'Corporate Criminal Liability: Theory and Evidence' in A Harel and KN Hylton (eds), *Research Handbook on the Economics of Criminal Law* (Cheltenham, Edward Elgar, 2012).

[54] JM Karpoff and JR Lott, Jr, 'The Reputational Penalty Firms Bear from Committing Fraud' (1993) 36 *Journal of Law and Economics* 757.

[55] Karpoff and Lott, Jr, ibid; see JM Karpoff, DS Lee and GS Martin, 'Cost to Firms of Cooking the Books' (2008) 43 *Journal of Financial and Quantitative Analysis* 581.

[56] Karpoff and Lott, Jr, ibid.

[57] JM Karpoff, JR Lott, Jr and E Wehrly, 'The Reputational Penalties for Environmental Violations: Empirical Evidence' (2005) 68 *Journal of Law and Economics* 653.

[58] CR Alexander, 'On the Nature of the Reputational Penalty for Corporate Crime: Evidence' (1999) 42 *Journal of Law and Economics* 489.

[59] See MM Mello and TA Brennan, 'Deterrence of Medical Errors: Theory and Evidence for Malpractice Reform' (2002) 80 *Texas Law Review* 1595 at 1604 stating that 'empirical evidence of deterrence is indeed difficult to come by'.

[60] WJ Cardi, RD Penfield and AH Yoon, 'Does Tort Law Deter Individuals? A Behavioural Science Study' (2012) 9 *Journal of Empirical Legal Studies* 567. The study surveyed over 700 first-year US law students, presenting a series of vignettes, and asked subjects to rate the likelihood that they would engage in a variety of potentially tortious behaviours under different legal conditions. Students were randomly assigned one of four surveys, which differed only in the legal rules applicable to the vignettes.

while suggesting that there may be a threshold effect, and that tort liability deterrence might fall below the scale of effectiveness.

A. Meta Studies

Three studies are noted here. Schwartz undertook a 1994 survey of the evidence of deterrence in the areas of workers' compensation, no-fault automobile laws, medical malpractice, products liability, nonprofit and governmental agency liability, landowner liability, and New Zealand's replacement of its tort system with a national accident compensation fund.[61] He concluded that although tort law does not result in 'strong deterrence'—that is, tort law does not deter economically inefficient tortious behaviour comprehensively and systematically—there was some evidence that it serves as a 'weak' deterrent—that it deters in some situations.[62] The evidence underlying Schwartz's conclusions was not primarily quantitative, however, but largely anecdotal.[63]

Dewees, Duff and Trebilcock made a comprehensive overview of quantitative data from the United States and Canada on automobile, medical, product, environmental and workplace injuries, published in 1996.[64] They concluded that the common law torts system may have some deterrent effect, but it varies depending on context, and the effect is not sufficient to overcome the many significant defects in the tort system.[65] In relation to medical accidents, it was 'impossible to reach firm conclusions regarding the medical malpractice system as a mechanism for deterring accidents'.[66] A similar conclusion applied in relation to work accidents.[67] In relation to road accidents, the authors compared the data from tort-based systems and non-tort, first-party insurance systems, and concluded on the basis of the available evidence that both systems would have similar deterrent effects provided they contain similar incentives to take care in the form of risk-related insurance premiums.[68]

They found that the tort liability system is not achieving its goals at a reasonable cost, has expanded far beyond the areas in which it is cost effective, and should be substantially contracted and supplemented by administered compensation systems:

> [T]he empirical evidence has convinced us that a single instrument, the tort system, cannot successfully achieve all ... of the major goals claimed for it, and attempting to use it in pursuit of objectives for which it is not well suited is both costly and damaging to its ability to perform well with respect to other goals that it is better able to realize.[69]

[61] GT Schwartz, 'Reality in the Economic Analysis of Tort Law: Does Tort Law Really Deter?' (1994) 42 *UCLA Law Review* 377, 381–87 (describing a number of realistic objections), at 377.

[62] ibid, 379.

[63] Mello and Brennan (n 59) 1604.

[64] DN Dewees, D Duff and M Trebilcock, *Exploring the Domain of Accident Law: Taking the Facts Seriously* (Oxford, Oxford University Press, 1996).

[65] ibid at 413; see also D Dewees and M Trebilcock, 'The Efficacy of the Tort System and its Alternatives: A Review of Empirical Evidence' (1992) 30 *Osgoode Hall Law Journal* 57, 131–34 (finding mixed evidence of deterrence after reviewing studies in automobile safety, malpractice, product liability, workplace injuries and environmental harm).

[66] Dewees, Duff and Trebilcock (n 64) 112.

[67] ibid, 355.

[68] ibid, 416.

[69] ibid, 412.

They endorsed no-fault compensation systems and proposed extensions of them, preserving tort to a residual role in cases of egregious behaviour causing serious harm.

Smith's 2005 study compared the data on motor vehicle and non-motor vehicle fatality rates reported from 113 countries to the World Health Organization's mortality database over a period of 50 years, on the basis that such events were causes whose likelihood of occurrence was affected by the degree of care.[70] He found that motor vehicle accident fatality rates in countries whose legal systems are based on English common law have fallen below those in civil law countries, especially French and Socialist civil code systems, and also German code jurisdictions. Motor vehicle accident rates do not differ significantly between common law and Scandinavian systems. Fatality rates for accidents other than motor vehicles were lowest (and had fallen faster) in common law countries, followed by French, German and then Scandinavian civil code countries, with the highest fatality rates occurring in former members of the Soviet Union and Eastern Bloc countries. Various major problems arise with this study, not least reliance on gross fatalities and variations in private liability law as measures of deterrence, variations in driving culture and circumstances, and criminal law (Germany has no upper speed limit). It should be noted that Scandinavian countries have long relied on no fault insurance compensation schemes.

B. Individual Studies

Studies often provide only indirect evidence on whether the general threat of tort liability deters risky conduct. Moore and Viscusi's celebrated study of the creation of workers' compensation systems, and the consequential imposition of premiums on all employers, found a decrease in worker fatality rates.[71] However, although this says something about compensation schemes compared with tort law, it says little about any underlying level of deterrence by tort law. Viscusi found no clear correlation or pattern between punitive damages and deterrence of risky behaviour.[72] Looking at jury verdicts in automobile accident cases, White found that drivers take less care in states that have comparative fault rules than in states employing contributory negligence.[73] Sloan et al found that both requiring drivers to purchase third-party insurance and higher alcohol prices discouraged binge drinking, whilst switching from contributory to comparative negligence increased it, and generally neither tort nor non-tort deterrents affected the fraction of bingeing episodes after which the individual drove.[74] Comparing various tort reform changes in different states between 1981 and 2000, Rubin and Shepherd found that various reforms (caps on non-economic damages, a higher evidence standard for punitive damages, product liability reform, and

[70] ML Smith, 'Deterrence and Origin of Legal System: Evidence from 1950–1999' (2005) 7 *American Law & Economics Review* 350.

[71] MJ Moore and WK Viscusi, *Compensation Mechanisms for Job Risks. Wages, Workers' Compensation, and Product Liability* (Princeton, Princeton University Press, 1990); see also JR Chelius, 'Liability for Industrial Accidents: A Comparison of Negligence and Strict Liability Systems' (1976) 5 *Journal of Legal Studies* 293, 303–06.

[72] WK Viscusi, 'The Social Costs of Punitive Damages Against Corporations in Environmental and Safety Torts' (1998) 87 *Georgetown Law Journal* 285, 296–98.

[73] MJ White, 'An Empirical Test of the Comparative and Contributory Negligence Rules in Accident Law' (1989) 20 *RAND Journal of Economics* 308.

[74] FA Sloan, BA Reilly and C Schenzler, 'Effects of Tort Liability and Insurance on Heavy Drinking and Drinking and Driving' (1995) 38 *Journal of Law & Economics* 49.

prejudgment interest reform) were associated with fewer non-motor vehicle accidental deaths, while reform of the collateral source rule (which bars evidence that the plaintiff has already been compensated by other sources) was associated with an increase in deaths.[75] On the other hand, in a separate study Shepherd found that some tort reforms in the medical malpractice area (caps on total damages and collateral source rules) were associated with increases in death rates, while others were not.[76]

More relevant are the studies that compare liability with non-liability. A number of studies have found that imposition of liability on commercial servers of alcoholic beverages consistently reduces fatalities from alcohol-related motor vehicle accidents.[77] Comparisons of states that rely on tort liability litigation as against states that have no-fault automobile compensation systems, which bar negligence suits for automobile accidents, has produced mixed results: Some studies finding a greater increase of fatalities,[78] and some not.[79]

C. Medical Malpractice

The United States has experienced three 'medical malpractice crises', triggered by spikes in liability insurance premiums in the mid-1970s, mid-1980s and around 2000.[80] There has been widespread tort reform aimed at restricting liability and limiting insurance costs, although it has been argued that each 'crisis' in liability insurance pricing was a by-product of insurance cycles.[81] At the same time, there has been a long-term decline in the volume of medical malpractice litigation.[82]

[75] PH Rubin and JM Shepherd, 'Tort Reform and Accidental Deaths' (2007) 50 *Journal of Law & Economics* 221. Overall, the tort reforms led to an estimated 14,222 fewer accidental deaths.

[76] J Shepherd, 'Tort Reforms' Winners and Losers: The Competing Effects of Care and Activity Levels' (2008) 55 *UCLA Law Review* 905; see also AH Yoon, 'Damage Caps and Civil Litigation: An Empirical Study of Medical Malpractice Litigation in the South' (2001) 3 *American Law & Economics Review* 199, 221–23 (finding that the enactment of damage caps reduced the average damage awards in medical malpractice litigation, while its later nullification increased the awards).

[77] FA Sloan, EM Stout, K Whetten-Goldstein and L Liang, *Drinkers, Drivers, and Bartenders: Balancing Private Choices and Public Accountability* (Chicago, University of Chicago Press, 2000).

[78] A Cohen and R Dehejia, 'The Effect of Automobile Insurance and Accident Liability Laws on Traffic Fatalities' (2004) 47 *Journal of Law & Economics* 357, 382 (an increase in fatalities of approximately 10% with the adoption of no-fault rules); JD Cummins, RD Phillips and MA Weiss, 'The Incentive Effects of No-Fault Automobile Insurance' (2001) 44 *Journal of Law and Economics* 427 (a significant positive association between no-fault and increased fatalities); ME Landes, 'Insurance Liability and Accidents: A Theoretical and Empirical Investigation of the Effect of No-Fault Accidents' (1982) 25 *Journal of Law & Economics* 49, 50 (an increase in fatalities); FA Sloan et al, 'Tort Liability Versus Other Approaches for Deterring Careless Driving' (1994) 14 *International Review of Law & Economics* 53, 66–67 (an 18% increase in fatalities with the adoption of no-fault rules).

[79] AR Derrig et al, 'The Effect of Population Safety Belt Usage Rates on Motor Vehicle-Related Fatalities' (2002) 34 *Accidents Analysis & Prevention* 101 (no significant effect); P Zador and A Lund, 'Re-analysis of the Effects of No-Fault Auto Insurance on Fatal Crashes' (1986) *53 Journal of Risk & Insurance* 226, 235 (a decrease in fatalities with the adoption of no-fault rules); SP Kochanowski and MV Young, 'Deterrents Aspects of No-Fault Automobile Insurance: Some Empirical Findings' (1985) 52 *Journal of Risk & Insurance* 269 (finding no significant effect).

[80] Annual medical liability system costs are estimated to be $55.6 billion in 2008 dollars, or 2.4% of total healthcare spending: M Mello, A Chandra, AA Gawande and DM Studdert, 'National Costs of the Medical Liability System' (2010) 29(9) *Health Affairs* 1569.

[81] F Sloan and L Chepke, *Medical Malpractice* (Cambridge MA, The MIT Press, 2008). Arguing that trends in premiums 'have been more moderate than much of the rhetoric asserts', rising from 0.91% of US healthcare spending in 1975 to 1.58% in 2002 [58–59].

[82] DA Hyman and C Silver, 'Double, Double, Toil and Trouble: Justice-Talk and the Future of Medical Malpractice Litigation' (2014) 63 *DePaul Law Review* 547.

Sloan and Chepke concluded that there is no statistical association between the sophistication of physicians' practices and the frequency of lawsuits against them.[83] They concluded: 'There is no convincing empirical evidence to indicate that the threat of a medical malpractice claim makes health care providers more careful. This lack of empirical support represents a serious indictment of medical malpractice as it currently exists.'[84] In 2002, Mello and Brennan, reviewing the literature in this area, had found only 'thin' evidence that medical malpractice liability deters malpractice.[85]

Kessler and McClellan examined the effect of tort reforms that directly reduce expected malpractice awards, such as caps on non-economic damages, on Medicare hospital spending for acute myocardial infarction and ischaemic heart disease from 1984 to 1990. The reforms lowered hospital spending by 5.3 per cent for myocardial infarction and 9.0 per cent for heart disease.[86] In subsequent work examining data through 1994, Kessler and McClellan found that such direct reforms reduced hospital spending by 8.3 per cent, but this estimate was based only on myocardial infarction.[87] In a further analysis incorporating information about levels of managed care through 1994, they estimated that direct reforms reduced hospital spending by 3.8 per cent for myocardial infarction and 7.1 per cent for heart disease.[88] These studies showed no difference in mortality rates between those groups of states that had and had not introduced tort reforms, suggesting that liability-restrictive reform reduced defensive medicine (in this case, diagnostic and therapeutic procedures in excess of what is called for solely by professional judgement) without harm to patients.[89]

Reviewing data from the 1979 to 2005 National Hospital Discharge Surveys and an extensive set of variations in various tort rules, Frakes found a small and statistically insignificant relationship between malpractice forces and avoidable hospitalisation rates (reflective of outpatient quality) and inpatient mortality rates for selected medical conditions.[90]

Paik, Black and Hyman found that the per-physician rate of paid medical malpractice claims has been dropping for 20 years, irrespective of whether states had a liability cap or not, and in 2012 was less than half the 1992 level.[91] Lawsuit rates, in the states with available

[83] Sloan and Chepke (n 81).

[84] ibid, 80–81.

[85] See Mello and Brennan (n 59) 1598.

[86] D Kessler and M McClellan, 'Do Doctors Practice Defensive Medicine?' (1996) 111(2) *Quarterly Journal of Economics* 353; D Kessler and M McClellan, 'The Effects of Malpractice Pressure and Liability Reforms on Physicians' Perceptions of Medical Care' (1997) 60 *Law & Contemporary Problems* 81.

[87] D Kessler and M McClellan, 'How Liability Law Affects Medical Productivity' (2002) 21(6) *Journal of Health Economy* 931.

[88] D Kessler and M McClellan, 'Malpractice Law and Health Care Reform: Optimal Liability Policy in an Era of Managed Care' (2002) 84(6) *Journal of Health Economy* 175.

[89] Sloane and Chepke (n 81) 77, suggest that the context of an argued reduction in the cost of care by 5 to 9% is that 'real spending on personal health services increases by about this much in a two-to-three-year period. These reforms are not a panacea for reducing the growth in [health care] expenditures.'

[90] M Frakes, 'Does Medical Malpractice Deter? The Impact of Tort Reforms and Malpractice Standard Reforms on Healthcare Quality' *Cornell Legal Studies Research Paper No 12-29*. 'At most, the evidence implies an arguably modest degree of malpractice-induced deterrence. For instance, at one end of the 95% confidence interval, the lack of a non-economic damages cap (indicative of higher malpractice pressure) is associated with only a 4% decrease in avoidable hospitalizations.'

[91] M Paik, BS Black and DA Hyman, 'The Receding Tide of Medical Malpractice Litigation: Part 1—National Trends' (2013) 10 (4) *Journal of Empirical Legal Studies* 612. 'Small' paid claims (payout <$50,000 in 2011 dollars) have been dropping for the full period; 'large' paid claims (payout ≥$50,000) have been dropping since 2001. Payout per large paid claim was roughly flat. Payouts per physician have been dropping since 2003, and by 2012 were 48% below their 1992 level. The 'third wave' of damage cap adoptions over 2003–2006 contributed to this trend, but there were also large declines in no-cap states.

data, had also declined, at similar rates.[92] Allowing for the gradual phase-in of damages caps, strong evidence was found that damage caps reduce both claim rates and payout per claim, with a large combined impact on payout per physician.[93] Allowing for phase-in also found that tort reforms other than damage caps had no significant impact on either claim rates or payout per claim.[94] The same researchers also found that damage caps had no significant impact on Medicare[95] hospital spending, but led to four to five per cent higher Medicare physician spending.[96] They found no evidence of a post-adoption drop (or rise) in spending for these caps, and concluded that (i) there is no evidence that damage caps reduce overall Medicare spending, and (ii) third-wave caps induce a gradual increase in Medicare physician spending.[97]

A study of hospitals in North Carolina from January 2002 to December 2007 reports that there was no statistically significant decrease in medical errors during this period, in spite of efforts to reduce them.[98] On the other hand, Zabinski and Black's analysis of five states that had adopted caps on non-economic damages during 2003–2005 found consistent evidence that patient safety (measured by adverse events) generally falls after the reforms, compared to control states.[99]

Chen and Yang studied the impact of a series of court rulings in Taiwan that increased physicians' perceived liability exposure, and subsequent amendment to the law that reversed the courts' rulings, on physicians' test-ordering behaviour and choice of delivery method.[100] They found that obstetricians most at risk for liability increased laboratory tests in response to the ruling, but did not change the likelihood of delivery by Caesarean sections. They identified no consistent patterns of preventable complications, post-delivery emergency department visits, or hospital re-admissions associated with physician behavioural change. The overall pattern of results was highly suggestive of the practice of defensive medicine among physicians in Taiwan, but payment incentives and provider organisational forms may have mediated the impact of changing liability risks.

A study of a medical liability insurer's archive of death cases in North Carolina from 2002 to 2009 (156 cases involving 401 physician-defendants) found that men were significantly

[92] ibid.

[93] M Paik, BS Black and DA Hyman, 'The Receding Tide of Medical Malpractice Litigation: Part 2—Effect of Damage Caps' (2013) 10(4) *Journal of Empirical Legal Studies* 639. The drop in claim rates was concentrated in claims with larger payouts, which might be expected to be most affected by a damages cap. Stricter caps have larger effects.

[94] ibid.

[95] In the USA, there is free hospital care only for the elderly (Medicare) and poor (Medicaid), disability benefits only for persons (under 65) who suffer total and lasting disablement. Over 85% covered by private medical insurance (before the Patient Protection and Affordable Care Act of 2010): JG Fleming, *The American Tort Process* (Oxford, Clarendon Press, 1988).

[96] M Paik, B Black and DA Hyman, 'Do Doctors Practice Defensive Medicine, Revisited' draft 2014.

[97] ibid.

[98] C Landrigan, GJ Parry, CB Bones, DA Goldmann, AD Hackbarth, DA Goldman and PJ Sharek, 'Temporal Trends in Rates of Patient Harm Resulting from Medical Care' (2010) 363(22) *New England Journal of Medicine* 2124.

[99] Z Zabinski and BS Black, 'The Deterrent Effect of Tort Law: Evidence from Medical Malpractice Reform' (2014) Northwestern Law & Econ Research Paper No 13-09.

[100] BK Chen and C-Y Yang, 'Increased Perception of Malpractice Liability and the Practice of Defensive Medicine' (2014) 11(3) *Journal of Empirical Legal Studies* 446.

more at risk for diagnostic errors, and some evidence that age and number of defendants were predictive of treatment errors.[101]

Arlen's study of accidental medical error found that many, if not most, physicians who provided suboptimal care did not know they were doing so but instead misdiagnosed the patient, unintentionally selected the wrong treatment or erred in treatment provision.[102]

A 2006 Canadian review of patient safety and tort law concluded:[103]

> The debate about medical error and patient safety has been reframed to reflect a new understanding of how error and injury in health care occur. Rather than the traditional focus on the personal responsibility of health care providers, this new patient safety approach maintains that it is the institutional systems within which health care providers operate that cause harm more than individual practitioners. Reconfiguring the system and the way error is treated within it, it is contended, will result in safer care. Underlying systemic factors play a significant causal role in most adverse events and near misses in health care; it is thus inappropriate to blame individual health care providers when patients are injured. Analysis cannot be limited to occurrences at the 'sharp end', where practitioners interact with patients and each other in the process of delivering care, but must also include consideration of the role played by the 'blunt' or remote end of the system, ie regulators, administrators, policy makers and technology suppliers, who shape the environment in which practitioners work. However, the extent to which this approach to error reduction, and in particular, the de-emphasis on individual fault-finding, has been or can be incorporated into legal reasoning is not clear. It contrasts starkly with tort law, in which recovery of damages is largely premised on a finding of fault. The intersection of the two affects uptake of the patient safety approach, since law shapes the environment for the provision of health care, assessment of risks, and response to adverse events by all concerned. In important ways, law conditions the solutions that can be implemented, because people are guided in their conduct by the applicable legal frameworks and requirements.

Hyman, Rahmati, Black and Silver have recently analysed the database of the Illinois Department of Insurance for all claims from 1980 to 2010,[104] which covered three of four crises in medical malpractice premiums and resultant tort reform. They found that the total direct cost of Illinois' med mal system has never exceeded one per cent of health care spending, and that figure has declined steadily since 1992. Paid claim rates rose sharply from 1980–1985, roughly levelled off from 1986–1993, and then experienced a sustained decline. By 2010, paid claims rates were 75 per cent lower than in the peak year (1991). Mean and median payout per claim steadily increased since 1980, but these increases are largely attributable to the disappearance of smaller claims involving less severe injuries. In summary, of the three med mal insurance crises during the sample period, the researchers found that only the first coincided with a major change in med mal liability risk.

[101] CT Harris and RA Peeples, 'Medical Errors, Medical Malpractice and Death Cases in North Carolina: The Impact of Demographic and System Variables' (2014) Wake Forest University Legal Studies Paper No 2469959.

[102] J Arlen, 'Economic Analysis of Medical Malpractice Liability and Its Reform' NYU School of Law, Public Law Research Paper No 13-25 NYU Law and Economics Research Paper No 13-15.

[103] JM Gilmour, *Patient Safety, Medical Error and Tort Law: An International Comparison. Final Report* (Toronto, Osgoode Hall Law School, 2006).

[104] DA Hyman, MH Rahmati, BS Black and C Silver, 'Insurance Crisis or Liability Crisis? Medical Malpractice Claiming in Illinois, 1980–2010', Northwestern Law & Econ Research Paper No 13-29 U of Texas Law, Law and Econ Research Paper No 524 Illinois Program in Law, Behavior and Social Science Paper No LBSS 14-12.

7

Conclusions

Deterrence is a simple idea, that casts a massive shadow across legal theory and some—but not all—areas of enforcement policy. It plays a fundamental role in the theoretical justification and goals of the enforcement of competition law globally (whether by public or private means) and of the system of private enforcement that is at the heart of the US legal system. In contrast, despite repeated references in scholarly literature, deterrence has a much lower profile in both theory and practice in relation to English law, whether criminal enforcement or private liability. We will see in chapters 8 to 20 that deterrence plays little role in the enforcement of regulatory law in the UK.

The idea that a democratic society should attempt to influence its actors to abide by its legitimate rules is not controversial. However, any justification for deterrence as a policy of enforcement of law needs to be founded on the fact that it actually works—or, at least, works in a sufficient number of instances and works in ways that are fair and do not produce an unacceptable incidence of undesirable effects. In short, there needs to be robust evidence that deterrence affects future behaviour. The many historical assertions that enforcement of law deters future behaviour will no longer do: We need actual proof from empirical evidence. On the evidence assembled in this Part, such evidence is simply not convincing. Furthermore, as chapter one shows, there are far better explanations of what *does* affect human behaviour.

Individual deterrence comes up against the major problem that humans make decisions for many different reasons, as discussed in chapter one above. The rational actor of economic theory is an inaccurate model on which to predict human behaviour: We are *homo sapiens* not *homo economicus*. It should, therefore, be no surprise to note the evidence above of failings by criminal sanctions, liability law and competition enforcement policies to produce effective deterrence. A person who receives a sanction once might commit the same infringement again for all sorts of reasons.

A deterrence theory postulates that a sanction imposed *after* an infringement will affect the incidence of the same infringement in future, or maybe a related infringement. However, it would appear more likely that an ex ante control will be more effective in affecting future behaviour than an ex post sanction. That idea suggests that we should look at regulation, commitments and culture for mechanisms that might be more effective than ex post deterrent sanctions.

General deterrence seeks to affect everyone, whether or not they have committed an infringement. It comes up against a major problem in relation to affecting businesses. No convincing explanation has emerged as to *how* imposing a fine on a business affects the behaviour of any—let alone all—of the individuals who work in the business, or how the managers affect staff behaviour, or how it will affect the systems and culture of the organisation. There is surprisingly little empirical evidence on how firms take decisions, how often

decisions are based on solely economic factors, and to what extent risks of future costs affect decisions. Much of the literature on the effects and origins of corporate infringements fails to distinguish adequately between the roles, motivations, behaviours and effects of sanctions on, on the one hand, the corporation and, on the other hand, the humans involved. Behaviour that is initiated by individual employees, or a small number of employees, is frequently attributed to the corporation that employs them without further analysis. Whilst (some of) the *consequences* of an infringement may be attributed to an employer (such as vicarious or strict liability to pay compensation for damage caused to a third party, or to remove profits that have been obtained illegally), an assumption that the *cause* of an infringement should be attributed to an inanimate corporate entity rather than to the humans involved raises a logical inconsistency. It might be productive to consider business organisational structures and how they work, make decisions, discipline staff and affect their behaviour. A convincing causative mechanism is lacking for deterrence. We start to address these questions in the rest of this book.

General deterrence in tort law is a theory about producing an optimal level of accidents and who should bear the costs of accidents, based on economic theory about how competitive markets work.[1] It is not a theory about who should be paid compensation, and is not convincing as a theory of affecting behaviour. Not only does the evidence suggest that tort law has limited potential to deter,[2] but tort law also does not distribute the cost of accidents in the way general deterrence theory would require.[3]

It cannot be said that an ex post sanction would never have any effect. Indeed, the empirical evidence from the psychology research finds that people will obey a rule where they perceive that the likelihood of being identified in breaking it, and subject to moral embarrassment (not necessarily significant punishment), is high. An everyday example can be seen in the behavior of drivers who can exceed the speed limit where they think that the likelihood of being identified by an official and fined a small sum is negligible, but take care not to exceed the limit where the risk is high (such as where average speed checks exist that are believed to be operational).

There is certainly evidence that the US liability system *does* affect some business decisions, for example in not marketing certain products or making changes in design, labelling and warnings. But it has not been shown whether those business decisions were the result of regulation or other reasons. Would the decisions have been made anyway, perhaps for ethical, commercial or regulatory reasons? Or could appropriate decisions be better induced by such alternative means? The development of liability enforcement as a means of regulation occurred at a time when little regulation existed. The interaction of regulation, reputation, ethics and liability constraints has never been satisfactorily elucidated. Assertions about the deterrent effect of tort liability on its own have continued to be made within a closed silo of tort academics and liability lawyers, without outward-looking illumination. The position on product warnings is almost a travesty: Lengthy information documents list every

[1] Based on G Calabresi, *The Costs of Accidents* (New Haven CT, Yale University Press, 1970). Enormous literature, including: R Bowles, *Law and Economy* (Oxford, Martin Robertson, 1982) ch 7; AM Polinsky, *An Introduction to Law and Economics* 2nd edn (Boston, WoltersKluwer, 1989) chs 6 and 7; RA Posner, *Economic Analysis of Law* 9th edn (New York, WoltersKluwer, 2014) ch 6.

[2] This was questioned some time ago even in the USA: GT Schwartz, 'Reality in Economic Analysis of Tort Law: Does Tort Law Really Deter?' (1994) 42 *UCLA Law Review* 377.

[3] G Calabresi, 'Does the Fault System Optimally Control Primary Accident Costs?' (1968) 33 *Law and Contemporary Problems* 429.

possible adverse consequence and thereby exempt the manufacturer from legal liability, whilst this does little for achieving safety in practice. Viscusi concluded that the safety-inducing potential of product liability fails to be realised, and that risks from new and innovative products are especially uncontrollable by liability.[4]

Corporate actions are now subject to very extensive regulatory systems and requirements, which have been extended over the past 50 years very extensively, covering almost every aspect of business economic practice and in considerable detail. It is these regulatory rules, and businesses' associated internal systems and rules, that drive and extensively control many granular decisions made within businesses. Such decisions are not made in a theoretical vacuum in which the only consideration is, for example, to balance the possible costs and benefits of the consequences of an individual decision. An indication of the extent of such systems for various sectors is given in the descriptions of the basic architecture of safety regulation in chapters 19 and 20 below.

Various adverse consequences of pursuing deterrence through the liability system have also been noted, such as it is very expensive, it results in unfair settlements and unjustly excessive penalties, sometimes imposes significant costs on the innocent, attracts certain types of case and ignores others, is significantly diluted and gamed as a result of insurance, and can produce resistance and reduced cooperation. The list is worrying, especially when clear positive evidence that future behaviour is *actually* affected is lacking. As Cane concludes, given the high administrative costs of the tort system, it may be that such deterrence as the tort system achieves is not worth the price paid for it.[5]

In both competition and liability systems, there is a tendency to believe that sanctions should be large and ever increasing in order to have effect. This appears to impose damage on a wide range of stakeholders and does not guarantee an absence of repetition of non-compliance or recidivism. Imposing a fine on a corporate group without sanctioning the one or two managers responsible for a cartel, who will usually be working in different businesses by the time both the firm and the authorities have identified their behaviour, achieves little. Of course the firm should adopt compliance and scrutiny procedures, and be incentivised to do so, but the underlying fault is that of the individuals concerned. As we will see in Part C, this means that there should be at least Ayers-Braithwaite pyramids that address both the individuals and the organisation—in different ways.

Kahan argues that deterrence plays a relatively small role in shaping individuals' policy preferences. He argues that public debate on issues such as capital punishment, gun control or hate crimes is captured by the hard and simplistic rhetoric of deterrence, so that although many people support social norms and liberal morality, they feel forced to avoid adopting such soft views publicly.[6] It may be said that the result is a policy schizophrenia in which deterrence is widely talked about, but the reality that it is ineffectual is ignored. Hence there is a social and political barrier to adoption of an approach to 'enforcement' that works more effectively. Deterrence is mere chimera: What matters is what we value and not whether deterrence plays some role.[7]

[4] WK Viscusi, 'Does Product Liability Make Us Safer?' (2012) 35(1) *Regulation* 24.

[5] P Cane, *The Anatomy of Tort Law* (Oxford, Hart Publishing, 1997); P Cane, *Atiyah's Accidents, Compensation and the Law* 8th edn (Cambridge, Cambridge University Press, 2013) 477.

[6] DN Kahan, 'The Secret Ambition of Deterrence' (1999) 113 *Harvard Law Review* 414.

[7] KM Carlsmith, JM Darley and PH Robinson, 'Why Do We Punish? Deterrence and Just Motives for Punishment' (2002) 83 *Journal of Personality and Social Psychology* 284.

The adherence to deterrence in the United States owes much to its Constitutional ideology (individualism, personal freedom and dislike of public regulation) and the political structures that this has entrenched (especially those involved in the litigation industry). In contrast, European jurisdictions, irrespective of whether they are traditionally based on common law or civil law foundations, place little credence in the idea that liability law has much effect on the future behaviour of either individual defendants or of others.

An important point of social policy also arises. Does a society wish to be based on an aggressive, accusatory and adversarial culture, in which individuals assert unlimited personal freedom until condemned, or does it prefer a culture of inter-relational support and cooperation? The US adversarial model tends to the former type and the EU (European Union) solidarity model tends towards the latter type. Is deterrence the right concept? The word carries connotations that are negative, repressive and authoritarian.[8] It is in fact antipathetic to personal freedom, rather than supportive.

If these concerns are correct, the justification of enforcement on grounds of deterrence fails, in which case the ongoing reliance on such a theory as a basis for upholding law is both unjustified and unethical. This has major implications for the whole basis of the American legal system, and for competition enforcement, with ever-increasing fines.

This idea has profound implications for law and legal theory in Europe. It is time to accept that liability law has little deterrent effect, and to examine the consequences for substantive law and for legal structures. If we start from the proposition that deterrence is basically not produced by legal rules, structures or procedures, how should we (re)design those legal rules, structures and procedures so as to achieve the twin underlying objectives of affecting future behaviour and delivering support to those who have suffered harm? For a start, if we jettison the idea of deterrence, the tort liability system looks even more inadequate, ineffective and costly than most scholars already know it to be. And we need to look for completely different means of affecting behaviour.

The idea of what sort of culture we wish to encourage is important for another reason. The purpose of legal rules is to set standards of behavior that the collective society wishes to adopt as universal rules. Given the pervasive nature of regulatory rules that cover so many aspects of behavior, noted above, it is important that the regulatory and compliance systems within which such rules exist operate so that compliance is maximised (and not merely optimal, as the economics standard would have). If compliance is to be maximised, many systems now function simply on the constant monitoring and circulation of information, as will be discussed in chapter 17 onwards below. The critical finding is that people are far more likely to share the information that is vitally needed in order to maintain performance standards if the culture of both their business environment and public space is ethical, positive and supportive, as opposed to being based on blame and repressive deterrence.

[8] Leader, 'Corporate Settlements in the United States: The Criminalisation of American Business' *The Economics* 30 August 2014, 10; arguing that the legal system has become 'an extortion racket' involving untransparent use of excessive power by public prosecutors. It has been noted above that Qui Tam claims under the False Claims Act have generated some 3,000 lawsuits and $20 billion in recoveries in the period 1999–2014. Although dwarfed by fines in securities, fraud and antitrust cases, fines imposed by, for example, the Consumer Product Safety Commission in 2014 for failure to report potential product defects reached a high of $12.2 million, including an agreed civil penalty of $4.3 million against Baja Inc and One World Technologies Inc involving minibikes and go-carts: *World Technologies Inc vs Baja Inc*, CPSC Docket 15-C0001, available at: www.cpsc.gov/PageFiles/172144/15012CivilPenaltyAgreement.pdf.