New Perspectives on Economic Crime

Edited by
HANS SJÖGREN
GÖRAN SKOGH

New Horizons in Law and Economics

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NEW HORIZONS IN LAW AND ECONOMICS

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NEW HORIZONS IN LAW AND ECONOMICS

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1. Introduction

Hans Sjögren and Göran Skogh

Criminology traditionally focuses on crimes against property and person, on deviant behaviour, and on treatment of offenders. Dominating fields of study are psychiatry, psychology and sociology. Without diminishing the importance of the traditional research it is clear that crime in business, such as illegal pollution, tax evasion, infringement of brand name and so on requires contributions from other sciences as well. Obvious disciplines are business administration, economics and information technology.

The focus on deviant behaviour and treatment may explain why crime in business is neglected relative to its importance. Economic incentives to circumvent the law arise whenever a state imposes costly regulations. This is true for taxes and tolls, as well as for restrictions on, for example, trade or effluence. Obedience to law presumes supervision and various types of sanctions. If regulations are to be followed, a loyalty to the authorities also has to prevail. Laws and rules have, in other words, to be both ethically and economically defensible, and in line with the public sense of justice. Hence research into ethics, various fields of law, history and political science has important contributions to make to the study of crime.

An important obstacle in the fight against crime in business is the limited enforcement in an open society. Physical and human capital moves easily between territories, while crime control mainly remains national. Moreover, individual loyalties differ and change – norms are neither globally unified nor static. Hence new incentives to gain profit illegally arise. Indeed, the movement of people and capital, in combination with tax avoidance and new crimes in a global business community, may threaten the modern tax-based welfare state.

In sum, the variety and complexity of crimes in international business makes research into crime important on various fronts. This conviction motivates this book, which surveys recent contributions to the growing field of research into 'economic crime'. By 'economic crime' is meant crime committed to gain profit within an otherwise legal business. The crime may damage private citizens, business and/or the public sector. The definition thus includes tax evasion as well as various forms of fraud and embezzlement in

otherwise legal corporations. We disregard crime in organizations that have a criminal motive and are illegal throughout, for instance illegal trade of drugs.

Our overview presents recent research on economic crimes in economics, public law, environmental law, economic psychology and history. In these areas the surveys below complement and extend traditional criminology.

In the next chapter Nuno Garoupa presents the state of the art in the economics of crime following the seminal work of Gary Becker (1968) applied to business. Firms should, according to the theory on optimal law enforcement, be punished more severely than individuals if the firms are wealthier, less risk-averse and cause more damage. Corporate crimes are committed by corporations as well as by individuals. Yet a crime committed within a firm is not necessarily in the interest of the firm. An important issue examined is how the firm might align the interests of the employee with its own. A principal–agent framework is shown to be suitable in the search for useful insights into business crime. The chapter also surveys how a corporation may also protect itself from becoming a victim of crime. A controversial area mentioned is the corporate influence on rule making and on law enforcement. There are also controversies in the reviewed literature regarding the social benefit of criminalizing certain business activities such as insider trading and anti-competitive regulations.

In Chapter 3 Cindy R. Alexander introduces the principal–agent perspective on corporate misconduct and its implications for the design of sanctions and prediction of misconduct. She explains how contemporary economists have adapted the Becker model to incorporate insights on the different roles that shareholders, directors and managers may play in corporate misconduct and its prevention. Related empirical evidence has begun to emerge in the USA. Crime appears to be less frequent among corporations in which insiders (directors and officers) possess concentrated ownership. This illustrates the importance of insider incentives and suggests corporate crime harms shareholders. Evidence on the effect of board composition is mixed, however. Participants in corporate misconduct appear to bear sanctions from the labour and product markets as well as hidden internal sanctions and sanctions from the justice system, which illustrates the role of external market forces in disciplining misconduct. Stock prices indeed respond to crime news anticipating external market sanctions. This reaction appears to reflect narrow self-interest rather than altruism or other reactions to misconduct. News of a crime against a third party with whom the corporation has no business, such as environmental crime, is met by stock price movements not distinguished from zero.

Chapter 4 by Anthony Ogus reviews the literature – legal, sociological and economic – on the role of criminal law in the enforcement of regulation. It maps regulatory enforcement systems and indicates how different forms of

intervention might be efficiently applied. The main focus is on economic deterrence theory. Moreover, it expands on the standard model to show how account must be taken of different stages in the enforcement process, and with different enforcement regime alternatives. The analysis suggests that the routine use of administrative charges should provide sufficient incentives for compliance with much regulation, particularly where the social costs of contravention are low. Where they are high, the threat of criminal sanctions may be necessary.

In Chapter 5 Michael G. Faure and Marjolein Visser provide an overview of the application of theories on the economics of crime to environmental criminal law. They begin by addressing the question of why criminal law should be used at all to deter environmental pollution. An inevitable question in this respect is whether other instruments, such as civil liability, would not suffice for the deterrence of environmental pollution. The chapter also looks at what the optimal penalties for environmental pollution would be. In practice it can be observed that there is an increasing interest in administrative penal law. Hence the question arises as to why, in some cases, administrative law might provide better results than criminal law. In addition, given that environmental crimes are committed mostly within the corporate sphere, it is necessary to ask whether criminal law should be applied to companies and/or to individual actors.

Chapter 6 by Karin S. Thorburn deals with issues related to fraudulent actions during financial distress. Within that perspective, she discusses corporate governance mechanisms designed to ensure that the profits of the firms are returned to their investors. There are signs that, under a weak governance system, the risk of expropriation by corporate insiders is substantial. Thorburn reports extant evidence on governance failures that result in fraudulent transfers and financial reporting fraud. Implications for governance of financially distressed firms are also discussed. The survey clearly point to a certain relationship between board characteristics and the occurrence of fraud for publicly traded firms: the more independent the board of directors, the better monitoring it provides and the lower is the incidence of corporate fraud.

Paul Webley provides in Chapter 7 an overview of the area of tax compliance by businesses, with a focus on economic crime. From a systematic review of economic and psychological theories in this area Webley identifies some robust empirical findings. These are that non-compliance by individuals is associated with the tax system being seen as unfair, with people having opportunities to evade, and with being younger, male and egotistical. If a person believes that non-compliance is widespread he or she is more likely not to comply and if the tax authorities provide a poor service non-compliance is more likely. Webley also reviews research on VAT compliance, employer

evasion of unemployment insurance taxes and tax compliance by small businesses and wealthy individuals. The survey confirms the importance of fairness, legitimacy and good treatment by the tax authorities. Webley's contribution also reveals that there are clear limits to our present knowledge about tax compliance, caused by the use of restricted samples, an over-reliance on self-report and limited theorizing about business compliance.

Since the 1980s crime has become an important field of historical research, but the specific field of economic crime has not yet attracted much attention. Finally, in Chapter 8, Dag Lindström reviews the main empirical findings in this field. Some historical studies indicate a growing number of violations against trade regulations during the beginning of the early modern period. From the sixteenth century onwards more systematic state intervention appears and new control systems are introduced. Violations against trade regulations and toll ordinances probably made up the major part of economic crime before the nineteenth century. During that century the scope of economic crime and the appropriate control systems went through fundamental changes as the tax systems and the legal and institutional framework of business activities radically changed.

To conclude, economic crime is not a new phenomenon. There has always been a conflict between private interests and public interests, crimes and enforcement. Global trade and limited power of the state is also an established fact. What is new is, on the other hand, is information technology and the speed in trade and business. Also new – with the exception of the work of Jeremy Bentham (1780) – is the economic theory of crime and its application to business activities. The contemporary economic analysis of crime was initially concerned with individual deterrence in a cost–benefit setting. That is, potential criminals are supposed to compare the illegal gain from an offence with the expected cost, including expected punishment. The cost–benefit analyst investigates the optimal law enforcement by weighing the costs of crime, the cost of policing and the costs of punishments. This approach has emerged as a normative comprehensive framework to prescribe optimal legal policies when individuals behave rationally. This approach can, as is demonstrated in the book, be beneficially applied to corporate illegal activities in business. The surveys also show that there is a vast area of unexplored research on economic crime which must be approached from different scientific perspectives.

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2. The economics of business crime

Nuno Garoupa

INTRODUCTION

Recent developments in business and corporate crimes have sparked new debate on the efficiency of different legal policies, including corporate criminal liability and effective deterrence of business crime. After a series of prominent cases in the 1990s (for example the collapse of Barings, the Drexel affair), governments became increasingly concerned about internal control mechanisms and the growing incidence of large-scale frauds. The imposition of criminal penalties on senior management and on corporations was considered. Nevertheless, in most European countries, corporate criminal liability was not introduced and most reforms were aimed at directors and employees, but not at corporations as legal entities. In some particular cases, as in the EU Money Laundering Directive (1991), the directors become criminally liable rather than the corporation when employees engage in money laundering.

In the USA, but not generally in Europe, firms are criminally liable for crimes committed by their employees within the scope of the firm and to its benefit. The nature of corporate crime comprises essentially fraud (usually against the government), environmental violations, and antitrust violations (Cohen, 1996).

The recent scandals in the USA (for example accounting frauds by WorldCom, Adelphia Communications, Xerox, the collapse of Enron and Enron's auditors, Andersen) have reopened the debate on the use of corporate criminal liability in achieving efficient deterrence.[1] In fact, given the different legal policies applicable to corporations in the USA and in Europe, an interesting empirical open question is how different European and US corporations are as a consequence of different criminal liability rules. Surprisingly, it seems that these differences are less important than expected (Instefjord et al., 1998).

Business and corporate crime poses a serious challenge for the classical economic model of enforcement. Are corporate and business crimes any different from other crimes? Are these crimes best deterred by punishing

individuals, punishing corporations, or both? What is optimal structure of sanctions? Can the classical model prescribe efficient policies, or do we need a different set-up for business crime?

In this chapter we look at the economics of business crime. At the same time, we identify new areas for research and provide new insights into the subject.

Before we look at the economics of business crime, we take a brief look at the more traditional economic theory of crime. A detailed survey can be found elsewhere (Garoupa, 1997; Polinsky and Shavell, 2000), but a quick review will help further analysis of corporate crime.

In the classical model (Becker, 1968), an offense is committed by a rational individual who decides whether or not to commit the crime based on the probability and severity of punishment. However, in the context of corporations or organizations, the crime results from different possible actors committing or preventing offenses.

We do not mean that the classical model is not useful in the context of business crime. Some of the insights provided in the context of the rational individual can be easily carried over into the business context. However, generally speaking, firms or corporations rather than individual criminals commit business crimes. Thus the principal–agent framework seems very appealing and particularly suitable for generating useful insights into business crime. In fact, empirical and anecdotal evidence suggests that wrongdoing by corporations is largely an agency cost problem. It appears to be the case that the managers do not commit corporate crimes to serve the interests of the shareholders (Alexander and Cohen, 1996 and 1999). Thus, extending the usual economic model of crime to a principal–agent framework is not only natural, but also important in order to explain corporate crime.

Our understanding of business crime is threefold. First, we must consider business crime in the more traditional sense, that is, crime committed largely by legal corporations. Naturally, the arguments in favor and against corporate criminal liability must be assessed (Garoupa, 2000b). Overall, the law and economics literature is not very enthusiastic about imposing severe penalties on corporations. A detailed analysis can be found in Chapter 3 of this book.

Our second approach is to consider corporations as victims of crime, with special reference to cyber crime. We argue that the classical argument about inefficient precautionary measures by potential victims is easily extended to the context of business crime, and has important implications for the deterrence of cyber crime (second section).

Our final approach will be to see business as the object of criminal activities. In some cases the harm or social loss caused by business crime is controversial, with some scholars arguing that the social loss is zero. An example of this controversy is insider trading, or more generally, crimes in

financial markets. A second characteristic is that most business offenses are in fact categorized as regulatory violations, and thus subject to a different enforcement framework (third section).

We also investigate two related topics. On the one hand, we discuss the political economy of business crime, that is, the ability of the corporation involved in illegal activities to influence policy making (fourth section). On the other, we also look at organized crime in the sense of business crime by illegal organizations as opposed to business crime by legal corporations (fifth section).

CORPORATIONS AS VICTIMS OF CRIME

Corporations become victims of crime when they suffer a loss as a result of an offense committed by a third party, including employees and managers. Recently, as a result of cyber crime, which primarily targets business interests, a renewed interest in the topic has emerged.

As potential victims, corporations can exercise precautionary measures in order to reduce the probability of victimization. Nevertheless, it is not clear if these recautionary measures are part of efficient deterrence, let alone encouraged by the government. Precautionary measures are chosen by corporations for private reasons; hence the choice of precaution is usually not socially optimal (Shavell, 1991).

Within the economic literature on private precaution, we can distinguish three arguments against the efficiency of precautionary measures. Even though developed in the context of the classical model, these arguments can easily be extended to business crime.

The first argument against the efficiency of private precaution goes along the following lines: corporations are expected to over-invest in precaution because they do not take into account the gains for the perpetrator. The argument that a victim, whether an individual or a corporation, ignores criminal gains implies that the private value of precaution is higher than its social value (Ben-Shahar and Harel, 1995).

A second argument justifies over-investment by a different rationale. Faced with a corporation or business that takes precautionary measures, the perpetrator will prey on the firm that took fewer precautions. As a consequence, precautionary measures divert rather than deter crime (Hui-Wen and Png, 1994). However, because corporations do not care about overall deterrence, but their own likelihood of victimization, they over-invest in precaution.

The last argument goes on the opposite direction: corporations will tend to under-invest in precaution because they anticipate that the government will

reduce public enforcement accordingly. Alternatively, they over-rely on governmental law enforcement. The private value of precaution is lower than its social value (Hylton, 1996).

The problem of inefficient behavior by potential victims has led Harel (1994) to argue for a 'contributory fault' rule in criminal law. In tort law, contributory negligence is defined as a rule by which responsibility for an accident is apportioned between the tortfeasor and victim. Damages are reduced for contributory negligence on the part of the victim. A similar interpretation is proposed for criminal law: if a corporation satisfies the standard precaution, the offender is inflicted with a high sanction; if a corporation fails the standard precaution, the offender is inflicted with a low sanction. Offenders have some information on potential victims' private precaution and will search for victims who fail to take the standard precaution. This obviously induces victims to choose the standard precaution.

As victims of crime, corporations are also important in helping authorities to punish crime and as such they must be given the appropriate incentive. Usually, a corporation decides to report a crime by considering the cost of reporting, including reputation and possible effects on profits; the consequent increase in the likelihood of recovery, in particular compensation; the effect on deterrence of future crimes; and legal obligations that must be fulfilled (depending on the corporate criminal liability rules in place). Notice however that monetary compensation for reporting (thus covering some of the costs borne by the corporation) might not give the appropriate incentive due to its negative effect on precautionary measures (Garoupa, 2001).

In the context of business crime, however, there is anecdotal evidence that corporations tend to prefer private solutions rather than reporting crime to the authorities, in particular when the perpetrator is an employee or a manager of the company. It seems that concerns for business reputation are usually the reason for this, but it could also be a consequence of corporate criminal liability in the sense that most of these arrangements imply a cover-up of the underlying crime (Arlen, 1994). These private agreements are usually inefficient and have a negative effect on deterrence. The possibility of a private solution dilutes deterrence because it reduces the expected sanction for offenders. As a consequence, legal policy should discourage private agreements (Shavell, 1993).

Of particular relevance for corporations is cyber crime. The most famous crimes on the Web, the ILoveYou computer virus and service attacks on Yahoo, eBay and ETrade, suggest that corporations and business interests are the main targets of computer offenses. In terms of losses, the ILoveYou worm may have been the most devastating and harmful crime ever, causing more than US$11 billion in losses. Thus it is not surprising that companies have invested in protection and safeguards in cyberspace, for example encryption.

At the same time, governments have been taking measures to improve safety on the Web, in particular assuring consumers that online transactions are as safe as transactions in the real world.

Deterrence of cyber crime is more difficult than for other types of crime due to its nature. Cyber crime usually requires fewer resources and less investment to cause a given level of harm. In part, computers provide a cheaper means to perpetrate damaging crimes. On the other hand, some of the safeguards may actually promote other types of criminal activities (for example encryption may protect organized crime communications).

Corporations play an important role in deterring cyber crime. Besides precautionary measures (for example encryption or firewalls) and helping enforcers (for example reporting crimes or providing accurate reports concerning service attacks), some responsibility should be imposed on companies developing and using the Internet service providers (ISPs). These companies can develop ways to make crime more expensive, and may be able to do so in ways that the government cannot always directly accomplish, for example cost-effective regulation of the architecture of the Net (Katyal, 2001).

BUSINESS AS THE OBJECT OF CRIME

A possible meaning of business crime is that business is the object of the underlying criminal behavior. In principle, one might think that business crime is no different from other types of crime from the viewpoint of the classical model. There are, however, two particular reasons that justify a separate section on this issue. First, in some cases the harm or social loss caused by business crime is controversial, with some scholars arguing that the social loss is zero. An example of this controversy is insider trading or, more generally, crimes in financial markets. Second, most business offenses are categorized as regulatory violations, and thus subject to a different enforcement framework.

In the context of insider trading, there is controversy concerning the efficiency of deterring this behavior. Some scholars see insider trading as a means to compensate managers for their effort. Thus, even if some individuals may lose from the existence of insider trading, the social value is not necessarily negative because it generates incentives for managers to exert more effort and perform better. Punishing insider trading would reduce compensation for managers and consequently reduce effort and productivity (Carlton and Fischel, 1983; Haddock and Macey, 1986 and 1987). Furthermore, given the nature of the information and expertise required for insider trading, it is more efficient to allow for self-regulation, such as 'the

Wall Street honor code,' rather than relying on criminal law (Painter et al., 1998).

On the other side of the controversy, we find the argument that insider trading provides inequitable compensation because it gives insiders a monopoly on the use of corporate information. As a consequence, it distorts the market for corporations and corporate information generating a deadweight loss and inefficiencies. On this view, severe punishment of these activities would be justified (Brudney, 1979).

Efficient enforcement of insider trading regulations would require a proper balance of these two arguments. Insiders caught making large trades should be severely punished since market distortions are more inefficient following large trading volumes or large price fluctuations. Small traders however should not be penalized (DeMarzo et al., 1998).

Another important aspect of business as the object of crime is the fact that most business crimes are categorized as regulatory violations. Hence most of these offenses are subjected to regulatory hearings rather than criminal proceedings, in some cases to both. Also, in many jurisdictions they are punished by regulatory agencies rather than by courts. This categorization raises two questions: is punishment by regulatory agencies more efficient than by courts, and should these offenses be subjected to both regulations and criminal law?

The use of criminal law in enforcing regulations and antitrust law has not been perceived as the most effective and efficient way to achieve optimal deterrence (Landes, 1983; Ogus, 1994, ch. 5). However, in the context of environment regulations, for example, it has been argued that criminal fines may play a useful role in overcoming regulatory ineffectiveness (Kadambe and Segerson, 1998; Heyes, 2000).

There are two conceivable enforcement solutions to regulation: a system with a low burden of proof (hence high probability of conviction) and low penalties (due to the high frequency of errors in adjudication) and a system with a high burden of proof (hence low probability of conviction) and high penalties. For the sake of argument just suppose the regulatory penalty and the criminal sanction are both monetary fines. Given socially optimal enforcement effort, it is usually more effective to fine offenders by a regulator (first system) rather than by the courts (second system). The rationale for this result is that a regulatory penalty is less costly and entails a higher probability of effective sanction for the offender, due to a lower burden of proof and disregard for mental states or other qualifications of the offender's misconduct. Also, the regulator may sanction *ex ante* (that is, even before the act results in a harm), which can serve as another means of alleviating the judgment proofness problem, whereas courts typically sanction *ex post* (Rubinfeld and Sappington, 1987).

Even though it is generally more effective to have a penalty imposed by a regulator rather than by the courts, in some conditions it is optimal to have both. There are two lines of reasoning to justify this coexistence.

On the one hand, individuals may want to dispute regulatory decisions and consequently appeal to the courts. The possibility of an appeal is efficient at two levels. *Ex post*, it corrects for errors (Shavell, 1995). *Ex ante*, it produces adequate incentives for regulators to perform efficiently (Jost, 1997a and 1997b).

A second line of reasoning justifies the coexistence at the same time of regulatory hearings and criminal proceedings, not as a result of an appeal, but as independent acts. Apart from the obvious case in which the regulatory fine cannot be optimal due to a wealth constraint of the offender and so imprisonment is required for efficient deterrence (hence, the need for criminal law), the possibility of agency costs when delegating law enforcement, legal error and collusion between the regulator and the offender might, under certain limited conditions, justify the observed legal dichotomy, and the imposition of a criminal sanction on top of a regulatory penalty (Garoupa and Gomez, 2002).

POLITICAL ECONOMY OF BUSINESS CRIME

Special attention should be devoted to the political economy aspects of business crime. So far we have analyzed how legal policy, including law enforcement and corporate criminal liability, deters business crime. Now we look at the other side of the coin: how business affects legal policy. In that respect, business crime differs substantially from individual crime:

1. Corporations can more easily corrupt enforcers, regulators and judges. They are better organized, are wealthier and benefit from economies of scale in corruption. Not surprisingly, the OECD convention against corruption targets companies and public officials rather than individuals. Corruption is especially problematic because it weakens deterrence (Bowles and Garoupa, 1997; Chang et al., 2000; Polinsky and Shavell, 2001, Garoupa and Klerman, 2003).
2. Corporations are better placed to manipulate politicians and the media. By making use of large grants, generous campaign contributions and influential lobbying organizations, they may directly (via legislator) or indirectly (via opinion makers) push law changes and legal reforms that benefit their illegal activities.

Public choice has offered several theories of lobbying which can be easily

extended to consider illegitimate business activities. This would be a good starting-point for understanding how business shapes law making and law enforcement.

3. Corporations have easier access to lawyers and legal consultants who can uncover legal loopholes. For example, companies may commit tax avoidance without running into tax evasion due to better counseling with respect to tax law (Alm, 1988; Weisbach, 2002), or they may become 'tax ghosts' without being detected by the tax authority (Cowell and Gordon, 1995).

Legal advice can diminish social welfare by diluting deterrence. The social desirability of legal counseling is controversial since it affects the decision on whether or not to commit a crime (Kaplow and Shavell, 1989 and 1990; Shavell, 1988 and 1989). Better counseling may help corporations to avoid punishment, and hence lower the expected cost of crime.

4. In many cases, corporations produce and have complete control over the information that enforcers and regulators need to detect illegal activities. Regulators and enforcers might find it more difficult to convict corporations because they lack information and expertise. The 'revolving door' phenomenon is well known in the regulation literature. Also, 'creative accounting' has made its way into the media jargon.

In some circumstances, enforcers and regulators cannot assess social damage without the benefit of insights provided by corporations. Enforcement may have to target removal of illegal gains rather than just determining effective punishment due to information limitations (Bowles et al., 2000).

5. Corporations benefit more from globalization and free movement of capital to better hide their illegitimate activities than individuals. Corporate avoidance activities are more effective. Avoidance activities generate waste and reduce the effectiveness of law enforcement (Gravelle and Garoupa, 2002).

These characteristics affect the design of optimal law enforcement. Within the classical model, some of the aspects we have pointed out have been addressed, for example, how enforcement should change when avoidance activities become quite frequent or how enforcement should be designed in an environment with corruption.

Law enforcement can also benefit from the insights of the principal–agent setup. Business crime is usually a cooperative crime in the sense that it

involves more than one individual, namely at least one principal and one agent, but quite frequently multiple principals and multiple agents. In this context, distrust between agents and principals may deter business crime *ex ante* and reveal information and evidence *ex post*.

Well-designed plea-bargaining or leniency programs increase the effectiveness of law enforcement and reduce enforcement costs (Spagnolo, 2000; Cooter and Garoupa, 2001). However, if not well designed, plea-bargaining could be counterproductive because it reduces the expected cost of illegal activities and thus generates more crime (Garoupa, 2002).

ORGANIZED CRIME

So far our understanding of business crime has been of crimes involving corporations,whether as the perpetrator or as the victim. In this section, we analyze business crime as the byproduct of organized crime, in the sense of crime committed by illegal organizations with the following characteristics: economies of scale and exploitation of monopolistic prices on the supply of illegal goods and services, practice of violence against other legal and illegal business, criminal hierarchy with internalization of negative externalities and management of portfolio of risky activities, avoidance of resource dissipation through competitive lobbying and corruption; and easier access to markets (Fiorentini and Peltzman, 1995).

We emphasize the following differences between organized crime and business crime: (i) organized crime is carried out by illegal firms (with no legal status), the criminal market being their primary market and legitimate markets secondary markets; (ii) corporate crime is carried out by legal firms (with legal status), the legitimate market being their primary market and the criminal market their secondary market. Whereas organized crime exists to capitalize on criminal rents and illegal activities, corporations do not exist to violate the law. Organized crime gets into legitimate markets in order to improve its standing on the criminal market, corporations violate the law so as to improve their standing on legitimate markets.

There are different reasons for the existence and persistence of organized crime in different societies. In general, we can say that organized crime emerges because there is an absence of state enforcement of property and contractual rights, which can also include the collapse of legitimate business institutions. Organized crime provides primitive state functions but at a cost typically much higher than modern governance. Hence its control is necessary, since it can easily corrupt existing institutions and business environment (Skaperdas, 2001).

The economic literature on organized crime is quite scarce when compared

to the work by economists on individual crime and criminal law. Economic analysis of organized crime has stressed welfare comparisons between different market structures (monopoly versus competitive supply) of offenses. Crimes are economic bads, not goods. A monopolistic market is more efficient than a perfect competitive one in the presence of bads because the output is smaller (Buchanan, 1973; Reinganum, 1993; Garoupa, 2000a). Besides monopoly power, transaction costs also determine the activities of organized criminal firms, being more successful when there is a production cost advantage (Dick, 1995). This explains, for example, why organized crime supplies protection to illegal firms dealing with victimless activities where the activities are easily observable, while self-protection is the rule for organizations involved in appropriation.

The criminal organization can be modeled as a vertical structure where the principal extracts some rents from the agents through extortion. As long as extortion is a costless transfer from individuals to the criminal organization, it has been shown that the existence of extortion is not only social welfare improving because it makes engaging in a criminal offense less attractive, but it also allows the government to reduce expenditure on law enforcement (the government free-rides on the entry barriers created by criminal organizations). However, when extortion is costly because the criminal organization resorts to threats and violence, the existence of extortion is social welfare diminishing and may lead to more expenditure on law enforcement (Garoupa, 2000a).

However, illegal organizations are not just the kind of firms that operate in the criminal market or commit business crimes. They also operate in legitimate input and output markets and compete with the state in the provision of public services. They exist as an alternative provider of goods and services to the private sector and compete with the government in terms of tax rates and provision of public goods. Their existence can have a beneficial effect because the 'kleptocratic' tendencies of the government are moderated (Grossman, 1995). However, they may distort legal markets (for example money laundering, control of unions, unfair competition) and create inefficiencies (Gambetta and Reuter, 1995). Incorporation into legitimate business can be a problem but at the same time a solution by making detection easier (Skaperdas, 2001).

The institutional environment of organized crime has not been analyzed by economists with the attention it deserves. One major issue that constrains the relationship between those involved in organized crime is that contracts are not enforceable in court. This is not to say that illegal contracts are not enforceable. One mechanism to enforce an illegal contract is the threat and use of violence. The participants in illegal markets lack access to state-provided facilities for the settlement of disputes. Consequently, violence can be an effective method in resolving disagreements. Furthermore, victims of violence

are disadvantaged in seeking police protection: the process of providing an informative complaint will convey information to the police about the illegal activities of the complainant.

Violence arises when the criminal organization wants to monopolize the market or avoid competitive entry. Moreover, in the long run, the violent gang is usually replaced by reputation, increasing profits and saving on labor costs (Reuter, 1983). The threat of violence also affects the organization of the market *ex ante* by avoiding misunderstandings and controlling the degree of subjective uncertainty.

A second mechanism to enforce an illegal contract is reverting to arbitration. Seeking the Mafia's arbitration can be of advantage to criminal firms because violence is costly and uncertain: the cost of acquiring reputation is high in an environment where disputes are frequent. Moreover, there is a complete absence of feasible symbols of quality and reliability. On the supply side, allowing the Mafia to act as a referee solves the problem of defining property rights.

Given that enforcing criminal contracts is expensive, either because violence is not inexpensive (even if only at a threat level) or because solving the matter within the Mafia's institutional system is not costless (it may include costs of arbitration, rents to be paid as subscription, bribes), one might think criminal organization would prefer an employment relationship rather than a subcontracting one. Monitoring and enforcing a contract are easier in an employment relationship. The cost of monitoring subcontractors is augmented because there is no book-auditing, and record-keeping must be minimal to reduce evidence.

The problem posed by an employee is that his detection can compromise the whole organization with higher probability than an external subcontractor. Employees can provide information about past and future deals leading to arrest and seizure of assets involved in the transaction. Therefore the entrepreneur aims to structure the relationship so as to reduce the amount of information available to employees concerning his own participation, and to ensure that they have minimal incentive to inform against him. Moreover, employees are afraid of other employees. Thus dispersion and monitoring naturally emerge so as to control individual risk.

One consequence of these observations is that illegal firms should be smaller than if the product were legal (Reuter, 1983; Garoupa, 2002). In policy terms, sanctioning the organization more severely affects not only the dimension but also the characteristics of a criminal network. Severe punishment reduces the dimension of the network, but it might increase the effectiveness (criminal productivity) of its members. Ultimately smaller firms are easier to manage and consequently fewer mistakes are committed, diminishing the likelihood of detection (Garoupa, 2002).

FINAL REMARKS

In this chapter we have investigated enforcement policies to tackle business crime. We have seen that most of the literature has focused on corporate criminal liability (see Alexander, Chapter 3 in this volume), but we have analyzed four other aspects: corporations as victims of crime (with special reference to cyber crime), business as the object of crime (for example financial markets and regulatory violations), corporate influence on rule making and law enforcement, and business crime as a byproduct of organized crime.

We have identified several controversies that will require more research before some policy recommendations can be formulated. With respect to corporate criminal liability, law and economics does not seem to be enthusiastic. However, as regards efficiency of crime avoidance (precautionary measures) and social damage of business crime (in particular, insider trading), there is no clear agreement so far.

NOTE

1. A guide to financial scandals, including the facts related to all the cases mentioned in this chapter, can be found at http://www.ex.ac.uk/~RDavies/arian/scandals.

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3. Corporate crime, markets and enforcement: a review

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INTRODUCTION

Many issues in the design of optimal sanctions for crime are the same whether the offender is a corporation or individual. In each instance, the canonical problem facing the government or enforcement authority is to design and implement an enforcement strategy that promotes optimal deterrence in the sense of maximizing social welfare. This is typically measured as the difference between the saving from preventing harm to the victim and the sum of the gain to the offender foregone when crime is deterred and the cost of the enforcement resources used in generating deterrence, as the previous chapter explained. Valuable insights have arisen from extensive research treating corporate offenders as little different from individuals in weighing benefits against costs when facing the decision to commit crime. Yet refinements to the underlying assumptions about why corporate crime occurs and the nature of corporate sanctions can significantly enhance the practical relevance of resulting insights.

This chapter focuses on the practical implications of a small yet growing body of research that beneficially focuses on two features that distinguish crimes by corporations from crimes by individuals. First, corporate crimes tend to arise from actions of more than one person. This multi-agent property of corporations has been the focus of an extensive theoretical literature that views the modern corporation as a nexus of contracts, or hierarchy, and highlights the roles of transactions costs and property rights within the corporation in shaping corporate conduct. Economic models of corporate crime draw upon this larger literature to examine how the multi-agent feature of the corporation affects the optimal design of sanctions for corporate offenses and related choices of enforcement strategy.

The nature of the sanction also distinguishes corporate crime from crimes committed by individuals in other settings.[1] Corporate crimes by definition occur during efforts to produce goods and services in order to generate gains from trade, and thus profits. This raises the possibility that a

corporation's crime might injure trading partners and thereby adversely affect its profits in ways unrelated to any government-imposed sanction. The incentives that affect crime's occurrence depend on the offender's *total* sanction, not just on the government-imposed sanction. Accordingly, evidence of sanctions imposed by trading partners – or through market processes operating independently of the government – can have affect the government's best choice of sanction and related enforcement strategy.

The outline of this chapter is as follows. The first part revisits the economic model of crime and its extension to the analysis of crime by corporations. Throughout, the term 'crime' refers to violations of legal rules that impose harm on someone other than the offender.[2] This follows Becker (1968) yet attaches broader meaning to the term than is customary in US legal scholarship, where it is reserved for the subset of offenses addressed through criminal, not just civil (or other), court processes. The expression, 'corporate crime' accordingly refers here to violations that inflict harm on someone other than members of the corporation (such as its contemporaneous owners, shareholders, managers, employees and other agents). This excludes embezzlement and other offenses to the extent they are committed by one participant in the corporation against another. It includes offenses against related parties, such as customers and suppliers (as in procurement fraud), and offenses against third parties who have no business dealings with the offending corporation (for example, environmental misconduct).[3]

The second part of the chapter reviews selected empirical evidence from the economics literature on corporate crime. It also reviews evidence on causes and consequences of other corporate misconduct, such as financial reporting violations that are injurious to shareholders. The objective is to highlight practical implications of the theory, and some of the empirical issues addressed in recent literature, that appear worthy of future research. Three areas of inquiry are discussed. One concerns the effect of internal governance institutions, such as management's stock ownership and the composition of the board of directors, on the occurrence of corporate misconduct. Other areas of empirical research address the external mechanisms[4] of corporate governance and the roles they may play in determining what resources the corporation devotes to promoting, or avoiding, corporate misconduct. Findings from research on the relation between corporate misconduct and each of two external governance mechanisms – managerial labor markets and product markets – are discussed. A practical implication of evidence that corporations receive sanctions through external, and not just internal, mechanisms is that the government enforcement authority's optimal sanction may be lower for some, but not all, corporate crimes than it would be without such external sanctions. A brief summary

and conclusion reviews implications for the relation between internal and external governance institutions and the occurrence of corporate crime.

THE ECONOMICS OF CRIME AND ITS APPLICATION TO CORPORATIONS

Economics research highlighting the role of corporate structure or governance in the design of sanctions and, more generally, the causes and consequences of corporate crime is built upon a foundation that has two parts. The first is the canonical model of crime that has evolved from the early work of Becker (1968) and others. Insights into the properties of optimal sanctions from that research, reviewed in the previous chapter, are relevant. One such property is that, under the simplifying assumption of risk neutrality maintained here, the enforcement authority sets the sanction so as to confront each prospective offender with an expected sanction equal to the expected harm from the offense.

Other properties of the optimum depend on the enforcement technology. Higher fines and higher detection probabilities are generally substitutes in the production of deterrence. Monetary sanctions are generally costless for society to impose. Increasing the probability of detection can be costly to achieve. Adding imprisonment to the sanction also is socially costly. From these observations, it is clear that an additional property of the optimal enforcement strategy in this context is that the monetary sanction is to be set equal to the offender's ability to pay, with the detection probability and term of imprisonment, if any, chosen so as to minimize their combined cost while permitting the achievement of an expected sanction equal to the harm from the offense.

This standard perspective on the design of optimal sanctions abstracts from other issues, such as risk aversion, that have been confronted in some recent research. It nevertheless highlights properties of effective enforcement programs that remain relevant to this date and that are applicable to the analysis of corporate crime and to the design of effective enforcement strategies.

Application to Corporations

The second critical foundation for economic research on corporate crime is the theory of the modern corporation that views the corporation as a 'nexus of contracts' or hierarchy, in which an owner, or principal, at the top of the hierarchy chooses terms of contract (and makes other institutional choices) while an employee, or agent, at the bottom of the hierarchy devotes effort to generating a product or service from which the principal and agent may jointly profit.

This perspective highlights the roles that different types of actors – principal and agent – can play in corporate crime. The agent's contribution to crime is sometimes more apparent to the casual observer than that of the principal, whose role may be equally critical to the offense. The employee who falsifies records on product quality, enters into an agreement to fix prices, or dumps toxic waste into a stream causes the offense through actions that may be no less critical than the actions of a manager or management team that encourage the individual employee to commit the offense directly, or indirectly, by creating a work environment that leads the employee to believe part of his or her job is to participate in the offense.

An important contribution of the literature on the economics of corporate crime has been to illuminate the potentially significant role that hidden actions by the principal in the modern corporation – such as shareholders or top management – can play in causing, or preventing crime.[5] The work of Polinsky and Shavell (1993) and Segerson and Tietenberg (1992) nicely illustrates the practical implications of this perspective. Their careful modeling of crime choice in a principal–agent setting follows earlier work by Kornhauser (1982) and Sykes (1981, 1984) in confronting several questions that the multi-agent, or principal–agent, perspective on the structure of the modern corporation raises for the design of sanctions. Paramount is the question of whether the enforcement authority's optimal strategy is to impose sanctions on the principal, the agent, or both.[6]

From the perspective of the corporation as a nexus of contracts, it may not matter who gets the sanction. Equal deterrence might be achieved by imposing a given sanction on the principal, the agent, or both (through some arbitrary distribution scheme). This insight follows application by Demsetz (1972) of Coase's (1960) insight – on the potential irrelevance of the initial assignment of property rights to the ultimate allocation of resources – to the problem of deciding how best to assign liability between transacting parties. Specifically, changes in the distribution of a given sanction between principal and agent do not, in principle, affect either party's actions if conditions of full information, zero transactions costs and the absence of endowment effects – for example, no constraints on either party's ability to pay the full sanction – are met.[7] To the extent transactions cost arise, the natural solution might be to impose the full sanction on the agent. This is because it might appear easier for the enforcement authority to detect or verify the agent's involvement in the crime.

Yet Kornhauser (1982), Sykes (1981, 1984) and others have identified obstacles that can make it prohibitively costly to achieve a given level of general deterrence by penalizing the agent alone. For example, the agent may be less able to pay the large monetary sanction that some offenses may warrant. Faced with a limited ability to pay, the enforcement authority's best

means of imposing an expected sanction equal to the harm from the offense would be to raise the probability of detection, add imprisonment to the sanction, or both. These alternatives are socially costly. The implication is that the same level of deterrence may be achieved at lower social cost by imposing the sanction on the principal instead (if the principal is able to pay).

In addition, the enforcement authority's costs of detecting and preventing a specific agent's contribution to a corporate crime may be high. It may be much easier for the principal to monitor and enforce law-abiding conduct from within the corporation.[8] If the principal's cost of monitoring the agent's actions were low enough, for example, he might compensate for being able to impose a smaller sanction than the government can impose by monitoring the agent more closely. By confronting the agent with a high probability of detection, the principal might cause the agent to face an expected sanction that is the same, or similar, to the expected sanction that the principal faces. Put differently, the principal's self-interested response to the threat of receiving a sanction from the government would be to monitor the agent more carefully and thereby (in effect) pass his expected sanction on to the agent. An enforcement strategy that confronts the principal with a low probability of receiving a high sanction can thus trigger the use of internal governance resources to limit the agent's participation in corporate crime. Finally, the principal may have easier access to information about the risks of corporate crime, and how to avoid it, than does the agent.

Potentially offsetting these advantages of penalizing the principal rather than the agent is the concern that the principal might actually find it difficult, or impossible, to deter the agent's participation in corporate crime. From the perspective of economic theories of the corporation as a nexus of contracts, or hierarchy, this concern derives from the observation that, even within the corporation, contracts can be imperfect and incomplete and the costs of monitoring and enforcing compliance can be high.[9] The responsiveness of corporate conduct to the incentives of corporate principals is thus a critical issue in the analysis of corporate crime and its control, just as it is in the analysis of other forms of corporate conduct.

At issue is how elastic is the supply of deterrence to the imposition of sanctions on the principal, or owner, of the corporation. This is an empirical question that research has only recently begun to address. The more general economics literature on corporate governance provides some guidance by drawing attention to the distinct roles that internal and external governance mechanisms play in shaping corporate conduct.[10] Emerging evidence on the effectiveness of market-based corporate governance institutions in deterring corporate crime and related offenses seeks to clarify the practical relevance of this more general literature while also shedding light on the causes and consequence of corporate misconduct.

EVIDENCE: CORPORATE GOVERNANCE AND CORPORATE MISCONDUCT

Findings from two related lines of research illustrate the practical relevance of emerging empirical evidence on corporate crime and its control. The first concerns the relation between internal mechanisms of corporate governance and misconduct, focusing on the institutions of stock ownership and board composition, each of which has received considerable attention in the general literature. The second area of interest is the role that external governance mechanisms can play in shaping incentives to commit or avoid crimes. Attention here centers on two such mechanisms – managerial labor markets and product markets. An additional external mechanism, the market for corporate control, has received less attention in the literature on corporate misconduct, although some evidence has been reported to indicate that this mechanism may complement product-market sanctions in disciplining managers of business units that commit fraud against related parties, such as customers and suppliers.

Corporate Crime and the Internal Institutions of Corporate Governance

Corporate crime research has devoted more attention to stock ownership and board composition than to other internal governance institutions, as it typifies more general research on the economics of corporate governance. This may reflect the greater public visibility of these mechanisms. Economics research dating back to Berle and Means (1933) draws attention to the question of whether top managers might own too little stock in relation to their influence, or control, over the modern corporation. Investor activists and regulators periodically raise similar concerns, focusing on the issue of whether top management might exercise undue influence over the corporation through its influence over the decisions, and indeed composition, of the corporation's board of directors. Investigations of the relevance of these issues to corporate misconduct apply insights and methods from these more general lines of research to discover what role these governance institutions might play in the occurrence, or avoidance, of crime.

Stock ownership by management

Several recent studies have documented the presence of a negative correlation between the fraction of outstanding stock held by the top managers of public corporations and reports of unlawful conduct in those corporations. Two conclusions have been drawn from this. The first is that the incentives of top management appear to affect the occurrence of corporate offenses.[11]

The second is that corporate crime and related offenses tend to make

shareholders worse off. This is in contrast to the alternative view that shareholders benefit from corporate crime and that managers are thus rewarded for encouraging it.

Gerety and Lehn (1997) and Beasley (1996) investigate the determinants of public reports of audit fraud and related financial disclosure violations in cross-sectional data on US public corporations drawn from the 1980s. Both studies compare data on the concentration of stock ownership by top management of offending corporations with similar data from matched samples of corporations that did not reportedly commit any such offenses in the same period, matching by size and line of business. Gerety and Lehn (1997) report that the largest shareholders on boards of directors of non-offending corporations tend to own more stock than their counterparts on offending corporations – 4.51 percentage points more, on average.[12] Beasley (1996) reaches a similar conclusion through his analysis of a sample of US public corporations that reportedly engaged in financial statement fraud during 1980–91. Focusing on the fraction of stock held by directors who are not employees (or officers) of the firm, Beasley finds the occurrence of fraud in his data to be negatively correlated with this measure of ownership concentration.[13] In combination, the Gerety–Lehn and Beasley studies present evidence consistent with the view that misconduct occurs less frequently among corporations in which stock is more closely held by members of the board of directors. Both studies interpret this as evidence that concentrated stock ownership beneficially aligns the incentives of directors with the interests of shareholders and thereby causes them to do their jobs of representing the shareholder interest more diligently.

Similar evidence that stock ownership serves to align the interests of top management (directors or officers) with the interests of shareholders appears in a third study. Alexander and Cohen (1999) examine the relationship between ownership concentration and the frequency of corporate crime on the part of US corporations, also during the 1980s. Comparing the ownership structures of corporations that received US criminal fines for a variety of offenses with the ownership of non-offending corporations in a matched sample, Alexander and Cohen report the presence of a negative relationship between the occurrence of corporate crime and the concentration of ownership in the hands of directors and officers of sample companies. The implication of the Alexander–Cohen evidence is thus similar to that of Gerety–Lehn and Beasley.

In examining their data more closely, Alexander and Cohen (1999) test whether the negative correlation between ownership concentration and crime frequency persists within the subsample of corporations in which directors' and officers' ownership stakes are relatively small. This is an important test because, as director and officer ownership stakes become large, further

increases in those stakes can have 'entrenchment' effects that outweigh the incentive-aligning effect of more concentrated ownership.[14] For example, if fraud actually benefitted shareholders rather than harmed them, greater shirking at more concentrated ownership stakes could take the form of reduced efforts to encourage, rather than to discourage, fraud by the corporation.[15] Alexander and Cohen report that the negative correlation between crime frequency and ownership concentration in their data persists and is statistically significant even among corporations in which ownership concentration is relatively low, controlling for other factors. This is consistent with the view that corporate crime makes shareholders worse off, *ex ante*, and that the incentive effect of director and officer stock ownership is to reduce agency costs in the corporation and thereby reduce the frequency of corporate crime.

Board composition

Researchers' interest in board composition follows proposals by various shareholder activists and regulatory bodies to require companies to put more 'independent' directors on their boards. What constitutes an independent director tends to vary across commentators and over time. By any definition, however, the independent director is an outsider in the sense of not being an employee of the firm. In defining outsiders, economists also have tended to exclude directors who supply a product to, or have other business dealings with, the firm. Thus an attorney (or banker) who supplies the firm with legal (or financial) services in addition to being a member of its board of directors would tend not to be included in the researcher's definition of an outside director. The New York Stock Exchange (NYSE) in June 1978 introduced a rule requiring that listed companies have audit committees composed entirely of non-management directors. The National Association of Securities Dealers (NASDAQ) in 1987 established a requirement that listed firms have audit committees in which at least a majority of members are non-management directors.[16] Recent accounting scandals have precipitated more stringent requirements, with the NYSE moving to require that a majority of the entire board of directors, and not just the audit committee, be 'independent' directors.[17]

To evaluate the relevance of board composition, researchers have examined data on the fraction of board seats occupied by outside directors in relation to offense frequency.

The evidence to date on the relation between board composition and corporate offense frequency is mixed. Beasley (1996) reports lower rates of financial statement fraud among corporations whose boards have more non-employees as members. Other studies have yielded little or no evidence of a systematic relationship between outsider board participation and corporate offense frequency. In their study of accounting fraud and related offenses,

Gerety and Lehn (1997) find only a weak negative relationship between reports of fraud and the presence of outside directors on boards. Alexander and Cohen (1999) indeed find a weak *positive* relation between reports of US federal crimes by corporations and board participation by outsiders. These findings arise and persist after controlling for the sizes and lines of business of sample corporations, in addition to other factors.

Contrary to the urging of some commentators, the results of studies of the relation between board composition and accounting fraud (or, more generally, financial disclosure violations) do not robustly support the view that adding outsiders to the board can successfully reduce the frequency with which a corporation commits accounting fraud or engages in other financial violations.[18]

To summarize, as a guide to the further development of an economic theory of corporate crime, these initial findings are consistent with the view that the corporate frauds and other offenses studied tend to make shareholders worse off, and that concentrated ownership of stock has an incentive-aligning effect that leads managers to expend greater effort preventing their occurrence. While there is some evidence to suggest that placing more non-employee or 'outside' directors on a company's board can serve to reduce relevant agency costs, this evidence is weaker in the sense of not being robust to changes in the data across studies.

Labor Markets and *ex post* Settling up

Additional evidence on the transmission mechanism between corporate sanctions and the conduct of managers and employees appears in several empirical studies of the aftermath of corporate misconduct, focusing on consequences for directors and for the managers most closely (and publicly) connected with their corporations' offenses. These studies seek to document the workings of a 'managerial labor market' that rewards (punishes) managers who perform well (poorly) with increased (reduced) demand for their services.[19] To the extent managers and other employees realistically anticipate receiving sanctions for their misconduct from the labor market, one also would expect to find evidence of managerial turnover in response to news of corporate crime.

Evidence of reduced demand for the services of directors in response to the public revelation of their corporations' offenses appears in a study of events following the revelation of accounting fraud and related US financial reporting violations. Gerety and Lehn (1997) report that directors face reduced demand for their services after the revelation of accounting frauds by companies on whose boards they serve, as indicated by reduction in the number of directorships held in other companies in the several years after the fraud. This

alternatively may reflect an increase in directors' perceived costs of continuing to provide their services as directors, leading them to cut back on the supply of those services following revelation of an offense. This evidence is nevertheless consistent with the view that serious allegations of accounting fraud make directors worse off, including outside directors (contrary to the view that outsiders – or 'independent' directors – are somehow immune from the various market forces that guide managers' actions).

Other research has investigated the frequency with which managers separate from firms around the dates that their apparent roles in corporate offenses become publicly known. Alexander (1999) reports that managers and employees of corporations convicted of US corporate crimes tend to separate from their firms, and that this appears to occur more frequently if the crime harms a customer or supplier of the corporation, as in fraud, than if the crime harms a third party, as in environmental crime. A manager or employee reportedly separated in 83 percent of the fraud-like cases studied, which is more than twice the 36 percent rate of separations found in a companion sample of third-party (environmental) offenses. Focusing on CEO/president and director turnover alone, Agrawal et al. (1999) find no significant difference in rates of turnover between fraud and non-fraud corporations in separate data. Evidence of job loss as a result of involvement in corporate crime is what one would expect to find if managers typically received sanctions from managerial labor markets for their participation in crime. Of course, one would have to know more about the ease with which these managers obtain alternative employment to know whether this job loss actually constitutes a sanction for their involvement in the offense.

To summarize, the evidence that directors appear to experience reduced demand for their services from other corporations after the public revelation of a corporate offense is consistent with the view that managerial labor markets impose sanctions on the top management teams of offending corporations, in addition to any sanctions that they may receive from the government. Evidence of turnover at lower levels of management is consistent with the presence of labor-market sanctions at lower levels of the hierarchy. Additional research on the cost to the manager of this turnover, including the effect on demand for the manager's services, would more fully reveal the magnitude of the labor-market sanction relative to other sanctions for a given offense.

Product Markets and 'Reputational' Sanctions

Similar to the '*ex post* setting up' that corporate directors and managers may face, shareholders appear to bear sanctions in connection with reduced demand for their corporations' goods and services when an offense becomes

publicly known. Theoretical and empirical research by economists has to date consistently supported the view that product-market sanctions of this type are not borne for all kinds of offenses. Only the offending corporation's trading partners appear to have an adequate incentive to impose product-market sanctions, which require that the party imposing the sanction reduce its demand for the corporation's product after the offense becomes known. All of this suggests that corporations tend not to pay reputational sanctions for environmental offenses (or, at least, not through the product market), even though the product-market sanction for offenses, such as fraud, against a corporation's customers and suppliers can be substantial, as the rest of this section explains.

In an early study of how US product markets respond to news of corporate misconduct, Pelzman (1981) reported that publicly traded corporations appear to sustain substantial losses in goodwill when named as targets of US Federal Trade Commission investigations for having possibly violated that government agency's rules against false and misleading advertizing. Jarrell and Pelzman (1985) found similar evidence of substantial losses in shareholder wealth around news of product recall announcements, noting that the loss constitutes a 'puzzle' to be addressed by future research.

Subsequent empirical research has interpreted these otherwise unexplained losses in shareholder wealth using economic models of reputation associated with the work of Klein and Leffler (1981) and of Shapiro (1983).[20] In the Klein–Leffler/Shapiro context, 'reputation' is defined in terms of consumer expectations about product quality. A 'reputational penalty' is borne when consumer expectations are not met. The suppliers' market-based incentive to maintain quality at a high level derives from (i) the reputable firm's ability to earn a positive price–cost margin (or 'quality-assuring premium') on each unit sold and (ii) consumers' credible threats that they will terminate their business dealings with the firm if it does not meet their high expectations. The intuition of these models applies to a wide range of settings and is not confined to the buyer–seller environment that is the main focus of research on the reputational penalties that corporations pay for violating the law.

Empirical evidence in support of this view of the market's response to news of corporate crime has evolved from Karpoff and Lott's (1993) study of stock-price consequences of allegations of corporate fraud.[21] Their evidence is that corporations experience an average −2.66 percent stock-price decline at the first news of alleged fraud against private parties. The effect is not limited to fraud against private parties. Karpoff and Lott report a −2.86 percent stock-price decline, on average, in response to the first news of alleged fraud against the government. These declines are not explained by subsequent legal sanctions, according to their analysis of the public reports of legal sanctions imposed on a subsample of the firms in their data. Karpoff and Lott interpret

this evidence as reflecting the adverse effect of news of the fraud on the corporation's reputation in product markets, as in the Klein–Leffler/Shapiro paradigm.

Consistent with this interpretation of the stock market's adverse reaction to allegations of fraud as evidence that product markets impose sanctions on corporations for their offenses against related parties, studies of the stock-price consequences of environmental offenses reveal much smaller average stock-price declines. Indeed, Jones and Rubin (1999) report an average market-adjusted stock-price *increase* of 0.016 percent, on average, around the first reports of 64 environmental violations by oil and electricity companies in the US over the 1970–92 period. Karpoff et al. (1998) find an average stock-price decline of −0.85 percent around the first news of environmental violations in a larger sample of 283 violations, 1980–91 (with a median of −0.39 percent). They compare this with the sizes of the legal penalties that the offending corporations eventually pay, based on public reports. The evidence is that legal sanctions fully account for the stock-price decline in their data. This strongly supports the view that those corporations tend to experience stock-price declines (and thus losses in the market value of their equity) solely because the market anticipates the payment of a legal sanction. This research seeks yet does not find any evidence that a general public distaste for environmental misconduct adversely affects the offender's stock price at the first news date.

The evidence is that corporations sustain more adverse stock-price reactions to news of fraud and other related-party offenses than they do in response to news of environmental and other, third-party, violations. Further research has examined the robustness of this to other settings, such as accounting fraud. Gerety and Lehn's (1997) study of 37 corporations accused of audit fraud and related US financial disclosure violations in 1981–87, for example, uncovers evidence of a stock-price decline of −3.05 percent, on average, around the date the accusation is revealed to the market.

More recent studies have examined the nature of the sanction more closely. In a sample of 78 US criminal convictions of corporations over the 1984–90 period, for example, Alexander (1999) found that 15–18 percent of offending business units were either shut down or experienced changes in ownership (for example through divestiture) after the crime date. The highest rate of shut-down or divestiture – 43 percent – occurred after offenses involving fraudulent underperformance of work on contracts between the offending corporation and an injured customer or supplier. This finding is consistent with the view that the corporate control market imposes sanctions on the managers of offending business units by placing the underlying assets under the control of a competing management team. It is also consistent with the alternative (not mutually exclusive) hypothesis that corporate crime arises in large part from

moral hazard problems occurring at the early stages of financial distress. Yet the finding that the relation between crime and shut-down or divestiture frequency is stronger for offenses against related parties more closely fits the product-market (or reputational) sanction hypothesis.

One finding of the Alexander (1999) study is not consistent with the stylized Klein–Leffler/Shapiro model of reputational sanctions, however. Most of the parties injured by criminal frauds in the Alexander (1999) data are agencies of the US federal government. Their injuries tend to occur in the process of their purchasing goods and services from suppliers who fraudulently overcharge them or fraudulently and secretly cut quality below the promised level. The finding of a high frequency of government purchasing agencies as victims may be an artifact of the process by which the US government determines what cases to bring to the criminal court, rather than to other courts that may impose sanctions. Of greater relevance to the general theory of reputational sanctions, however, is the fact that the injured party in these cases is not the small, atomistic customer found in the typical Klein–Leffler/Shapiro setting. If the injured party in fraud is a large customer or supplier that does not view deterrence as a public good but instead has an incentive to invest strategically in deterrence, the practical implications of the existence of a reputational or product-market-related sanction may ultimately be quite different from what they are in the atomistic setting. Karpoff et al. (1999) relatedly examine how the structure of the markets in which injured parties conduct their business with the corporate offender can affect the processes by which sanctions are imposed by the government and by external markets.

The Karpoff et al. (1999) study examines the stock-price consequences of defense procurement fraud, in which suppliers fraudulently fail to supply promised goods or services to the US Department of Defense (DoD) or fraudulently charge prices higher than they had agreed to charge. Their findings suggest a link between stock-price loss due to fraud announce-ments and subsequent losses of business. An interesting distinguishing feature of their study, however, is that the frequency with which companies lose business after news of fraud depends on the company's prior relationship with the customer, in this instance the DoD. Karpoff et al. suggest an 'influential contractor' variant of the traditional 'regulatory capture' hypothesis to explain this. In their view, well-established suppliers use their influence over the DoD to avoid losing business after fraud, while less-established suppliers face substantial sanctions. To demonstrate that influence derives from a supplier's relationship with the DoD, and not just its size, Karpoff et al. control for offender size in multivariate regression analyses of the determinants of the stock-price effect of the first news of the offense. They find that a corporation's ranking with the DoD has significant explanatory power, even

after taking size into account. The practical implication is that the structure of the market in which the offending corporation and injured parties transact their business can have a significant effect on the sanctions that the offender receives, even from the government enforcement authority.

DISCUSSION

A key issue in the theoretical literature on corporate crime and its control is whether the enforcement authority's best strategy is to penalize the corporation, and thus its shareholders, rather than placing the entire sanction on managers and employees implicated in the offense. Evidence that the threat of shareholder loss creates an incentive for top managers to take steps to prevent crime, reviewed here, supports the view that imposing sanctions on shareholders can beneficially deter corporate crime and that an enforcement strategy of only imposing sanctions on shareholders can be sufficient in some instances. Further research into the mechanisms by which threats of shareholder loss translate into changes in corporate structure and conduct is warranted, however.

The evidence reviewed in this chapter also highlights a related issue: whether the optimal strategy for the enforcement authority might in some instances be to impose no sanction at all. If the sanctions that the corporation receives from the market are large enough, efforts by the enforcement authority to impose even larger sanctions can create incentives for the corporation to devote too many resources to the deterrence of crime. The implication is that the enforcement authority's optimal choice of sanction depends not just on the offender's prior probability of detection or on the magnitude of the harm from the offense, but also on the size of the market sanction. This in turn depends on the nature of the offense and the structure of the market in which it occurs.

Empirical research reviewed here, for example, highlights evidence that market-based sanctions tend to be higher for fraud against customers or suppliers than for environmental offenses. In comparison with the sanction for an environmental crime, the optimal corporate sanction for fraud against customers or suppliers is thus reduced by the amount of whatever market-based sanction shareholders sustain. The size of the deduction depends on the structure of the market in which the corporation and injured party transact.

The extension to accounting fraud and embezzlement is straightforward.[22] The enforcement authority's optimal sanction for corporate issuers in accounting fraud and embezzlement cases is generally zero – to the extent shareholders are the parties injured by these offenses, as appears typically to

be the case. There remains some scope for contribution by the enforcement authority, however. This is because offenses by managers and employees that cause significant harm can call for larger expected sanctions than the corporation is able efficiently to impose through threats of closer monitoring, job loss or other measures. Anecdotal evidence indeed suggests that US enforcement authorities typically focus their enforcement efforts on investigation and prosecution of relatively large cases, involving large harms, that exhaust the issuer corporation's capacity efficiently to discipline offending managers and employees. A strategy of relying on the internal governance mechanisms of corporations for deterrence of smaller offenses – but not all offenses – by managers and employees is consistent with the model of enforcement that is reviewed here.

The economics literature on accounting fraud and its control is undergoing change even as this chapter goes to press.[23] A series of accounting scandals among major corporations, particularly in the USA, has within the past year led to changes in the regulatory environment and an upsurge in related litigation. The interest of economics and finance researchers in this area has grown accordingly. US regulators are expected to impose higher sanctions on violators of securities laws, and monitor prospective offenders more closely under the Sarbanes–Oxley Act of 2002. That legislation also requires corporations to meet more stringent disclosure and internal governance standards than previously. This is in addition to the private-sector initiatives being implemented in response to concerns about the adequacy of prior monitoring and enforcement. The economic underpinning for some of this change is apparent from previous research.[24] Other changes are more difficult to reconcile with previous literature and are thus likely to receive special attention in new research. For example, new evidence on whether, and how, required changes in the internal governance structures of corporations can promote more efficient deterrence of accounting fraud is likely to emerge. Because some of the most dramatic regulatory changes of recent times have occurred in the USA, much of this research will employ data on US corporations, although similar regulatory issues have arisen elsewhere, so that new research on the optimal design of regulation purporting to cause corporations to engage in more efficient monitoring will likely emerge outside the USA also. This will complement other ongoing research into the optimal design of government enforcement strategies.

SUMMARY AND CONCLUSION

The small yet growing body of research that is the focus of this chapter seeks to illuminate the conditions under which corporate crimes and related offenses

occur in relation to the government's choice of enforcement strategy. This research takes the perspective of the modern corporation as a 'nexus of contracts' or 'hierarchy' and applies that perspective to the setting of Becker (1968) in which economic actors choose whether to engage in crime. An empirical literature has begun to employ methods from the more general literature to investigate the relation between crime and internal and external mechanisms of corporate governance.

Two findings from research to date appear to have the greatest practical implications for the theory of corporate crime and the choice of sanctions and related enforcement strategy. First, corporate crime appears to occur less frequently among corporations in which insiders – directors and officers – possess more concentrated stock ownership. This supports the notion that shareholders do not benefit from corporate offenses but instead benefit from the costly steps that directors and officers take to prevent their occurrence and that, moreover, penalizing shareholders for corporate offenses creates incentives for insiders to take steps to avoid their occurrence. While placing 'independent directors' on a corporation's board of directors is sometimes viewed as helping to improve the alignment of management's actions with the shareholder interest, the evidence from research reviewed here does not robustly support the claim of a negative correlation between offense frequency and the number or proportion of board seats occupied by outside directors.

Second, participants in corporate crimes bear sanctions from external markets, rather than solely from the government (or not at all). The evidence is that participants receive sanctions through the managerial labor market and the product market. Directors participate in fewer boards, and implicated managers are terminated following revelation of certain types of corporate offenses. This is consistent with the imposition of sanctions through the managerial labor market. News of a crime against a related party, such as a customer or supplier, is met with stock-price declines that are economically and statistically significant, on average, and larger than what one would expect to find if the market were reacting only to the anticipated government sanction. News of a crime against a third party, with whom the corporation has no business dealings, is met with stock-price movements that are not distinguishable from zero, on average. This is consistent with the view that stock-price responses to crime news reflect anticipated sanctions from the product market, and that product-market participants impose those sanctions by acting in their narrow self-interest, rather than out of any sense of altruism or other reaction to the news of the misconduct.

How the presence of external, or reputational, sanctions affects the enforcement authority's optimal choice of sanction depends on what other relationship, if any, exists between the two. If they are imposed independently of one another, the enforcement authority's optimum sanction is reduced by

the magnitude of the sanction that the corporation receives through the market. Otherwise, interaction between the two sanctions must be considered when determining the enforcement authority's optimal strategy of enforcement. This is because a public commitment on the part of the enforcement authority to devote more resources to corporate crime detection and the imposition of sanctions can trigger a reaction in which potential injured parties, such as customers or suppliers, commit to the imposition of a smaller market-based sanction, by devoting fewer private-sector resources to this task, for example. The enforcement authority's commitment to less intensive monitoring and enforcement can similarly trigger an increase in market-based sanctions. Thus evidence that corporations receive market-based sanctions is not enough on its own to support a policy of reducing the sanction of the enforcement authority by an amount exactly equal to the sanction that the corporation receives through the market. The issue of how external sanctions respond to changes in the sanctions imposed by government, and how government sanctions should be adjusted in light of their presence, thus remains a topic for future research.

An additional remaining issue concerns the extent to which observed correlations between corporate crime and a corporation's *ex ante* governance structure, on the one hand, and the market's *ex post* external response to crime, on the other, reflect the direction of causation that has been imputed here. The imputation of a causal connection between low concentrations of insider ownership and high frequencies of corporate crime has in previous research rested on the assumption that the prospect of crime is not one of the primary forces that guides the choice of ownership concentration in public corporations, controlling for firm size and line of business. This assumption is supported by recent findings of Kole and Lehn (1999) from panel data on the airline industry. Insider ownership concentration tends to change quite slowly over time, even in response to dramatic changes in the regulatory structure of the industry that are widely cited by economists as being important to the value the market attaches to insider ownership concentration. The issue of whether there exists a causal link between board composition and corporate crime is less pressing in light of the weak and mixed findings on board composition. Nevertheless, a clearer indication of the causes of board composition as distinct from the causes of corporate crime might help to explain why different researchers have generated different findings on this feature of internal governance generally.

NOTES

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author, and do not necessary reflect the views of the DOJ or any other government agency.

1. See Alexander et al. (1999) and 'Developments' for discussion of the conditions under which an act is viewed as a corporate crime under US law, and Fischel and Sykes (1996) on the relation between criminal and civil liability in the US court system.
2. This generic use of the term 'crime' follows the seminal article of Becker (1968), in which the term refers to a broader class of misconduct than would be prosecuted under criminal legal procedures in the USA. The fact that some offenders in the USA receive sanctions through more than one legal process is discussed in Fischel and Sykes (1996), explaining how poor coordination between different courts or legal processes can lead to costly imposition of excessive total sanctions, particularly when those sanctions are imposed on corporations (that is, the principal or owner of the corporation) and not just individual offenders.
3. Polinsky and Shavell (1992) provides a comprehensive survey of the evolution of the economic theory of public enforcement of the law, including criminal law. For other economic perspectives on enforcement of criminal and non-criminal rules, focusing on corporations, see Cohen (1999) and Garoupa (1997).
4. In drawing this distinction between internal and external governance mechanisms, I follow Kole and Lehn (1999, p. 109), who cite Jensen (1993) and Gilson (1996) and provide evidence (as does Gilson, 1996) that internal and external mechanisms appear to respond at different rates to changes in the business environment. They distinguish internal from external mechanisms according to whether or not parties making relevant choices are inside the firm.
5. One classic example of a difficult-to-observe action by the principal is Posner's (1992) suggestion that a principal might encourage corporate crime by seeking out and hiring agents who have, in addition to other qualifications, strong preferences for (and thus relatively low private costs of) engaging in crime.
6. For example, under a US legal rule that holds a principal and agent 'jointly and severally liable' for an agent's offense, a court could allow the injured party to obtain compensatory payments from the principal, the agent, or both, as long as the sum of all payments obtained falls short of a given maximum (see Sykes, 1984, note 4 and related text).
7. See Kahneman et al. (1990) and more recently List (2002) on endowment effects in relation to Coase (1960).
8. See, for example, Kornhauser (1982, 1377) 'there is some reason to believe the enterprise can better identify responsible actors than courts; ... agents might underestimate the risks of causing damage, suggest[ing] that enterprise liability would be more efficient'. Arlen (1994) identifies conditions under which it can be in the principal's interest to react to the prospect of a sanction by putting less, not more, effort into detecting the agent's participation in corporate misconduct. See also Polinksy and Shavell, 2000.
9. For examples of economic models that illustrate the possible costs of transacting across layers of corporate hierarchy, see Williamson (1967) and McAfee and McMillan (1995).
10. See above, note 5.
11. Jensen and Meckling (1976) introduces the notion of top management's stock ownership (and other governance institutions) as a means of reducing agency costs in public corporations. See also Berle and Means, 1933.
12. They interpret this as evidence that having a large shareholder on the board reduces the probability of accounting fraud. Their data reveal no significant difference between the percentage stakes held by all board members combined in the two samples from the 1981–87 period (52 corporations of each type), however.
13. Beasley interprets his finding as being consistent with the view that increased stock ownership by outside directors leads to stronger incentives for outside directors to engage in monitoring to prevent financial statement fraud. Beasley finds little evidence of any relationship between fraud and the stock ownership of managers on the board of directors in his data.
14. Morck et al. (1988) and others have argued that this is due to the fact that, as ownership becomes concentrated in the hands of one party (agent), the voting rights attached to stock can become sufficiently concentrated to allow the holder to divert wealth away from other

shareholders in ways that may be difficult for outsiders to detect. At sufficiently high levels of management ownership, the adverse 'entrenchment' effect of stock ownership can thus be large enough to offset the beneficial 'incentive' effect. In this vein, Demsetz (1983) and Demsetz and Lehn (1985) discuss the potential for concentrated stock ownership to enable the holder to engage in 'perquisite' consumption at the expense of other shareholders. Morck et al. (1988) document the appearance of such an effect in cross-sectional data on US corporations. They do so by providing evidence that Tobin's Q – a measure of management's value added to the corporation – is positively correlated with the concentration of management's stock ownership when management's stake is less than 5 percent, but then becomes *negatively* correlated with the size of management's stake when that stake varies between 5 and 25 percent of shares outstanding in cross-sectional data. Somewhat similar relationships between the concentration of management's stock ownership and Tobin's Q appear in McConnell and Servaes (1990), Kole (1996) and Holderness et al. (1999). See Himmelberg et al. (1999) for evidence on the endogeneity of ownership and the related practical application of insights from this line of research.

15. Macey (1991) indeed presents an analysis in which shareholders benefit from the encouragement of crime, even after potential sanctions from the enforcement authority are taken into account.
16. See Gerety and Lehn (1997) and Beasley (1996) for useful discussions of audit committees in relation to outside directors and the occurrence of accounting fraud.
17. See, for example, Lublin (2002). New rules on independent directors are being finalized as this chapter goes to press in autumn 2003.
18. Baghat and Black (1999) provide a useful survey of empirical evidence on the relationship between board composition and various measures of corporate performance. See also Agrawal and Chada (2003).
19. See Fama (1980) on the notion of a managerial labor market and its implications for corporate conduct.
20. See also Tirole (1988), pp. 121 and 123. Alexander (1999), on which this analysis is based, provides more detailed discussion of the economic theory of reputational sanctions and its application to the analysis of sanctions for US corporate offenses.
21. This is the first research that to my knowledge makes explicit the notion that a reputational sanction in the sense of Klein–Leffler/Shapiro may account for the stock-price consequences of the public announcement of corporate offenses.
22. For related analysis of optimal sanctions for securities fraud, see Arlen and Carney (1992).
23. See, for example, Agrawal and Chada (2003).
24. Council of Economic Advisers (2003) surveys the regulatory changes that occurred in the USA in response to the accounting scandals of the new millennium and provides an economic perspective on these events.

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4. Enforcing regulation: do we need the criminal law?

Anthony Ogus

INTRODUCTION

The aim of this chapter is to review the position of criminal law in the enforcement of regulation. This requires me, first, to clarify the scope of the study and to explain why, in terms of current policy concerns, it is an important topic.

In the social sciences, 'regulation' has been given a bewildering variety of meanings (Mitnick, 1980). To lawyers, however, it has more precise connotations (Ogus, 1994, pp. 1–3): it is that area of public law by which the state and its agents seek to induce individuals and firms to outcomes which, in the absence of such inducements, they would not freely reach. For the purpose of this chapter, I narrow the field further to 'social regulation', the economic justification for which is to be located in externalities, information asymmetry or coordination costs. In practice this covers mainly health and safety regulation, financial regulation, environmental regulation and professional regulation.

Arriving at adequate generalizations applicable to the enforcement of regulation, so defined, in a variety of jurisdictions is problematical. As we shall soon see, there are different enforcement regimes (criminal, civil and administrative) but the content of each and their interrelationship vary significantly from country to country and from one legal culture to another. Further, the range of human activity governed by these institutions is enormous, from parking a vehicle in a street to operating a nuclear energy plant. Nor should we overlook questions of mental attitude: it is far from clear that the institutional response to deliberate, fraudulent conduct should be the same as to an innocent mistake.

With these cautionary remarks in place, we can move to the reasons why the enforcement of regulation is of such importance to contemporary policy making. We should note, in the first place, the trend towards deregulation (Majone, 1990). At least in some sectors, governments have been experimenting with a more 'hands-off' approach to industry, reducing the

coercive character of regulation, leaving it to firms or professional associations to devise detailed rulebooks, or introduce self-regulatory systems, to achieve regulatory goals, and focusing more on the adequacy of internal regulatory management (Gunningham et al., 1998). Controversy surrounds much of this, not the least because the enforcement implications are often unclear.

Second, we are living in an era of diminishing trust in public agencies and when governments are coming under increasing pressure, from the press and other sources, to respond vigorously to 'disasters' or 'scandals' of various sorts (O'Neill, 2002). The suspicion that existing regulatory rules are, in general, adequate but insufficiently enforced may be well founded; but it may also be that critics are making the mistake of expecting 'perfect enforcement', instead of 'optimal enforcement', which crucially sets off the costs of enforcement against the benefits.

Third, the globalization of markets has brought into focus the interaction between national regulatory regimes. Unquestionably, there has been a trend towards greater mutual recognition of national regimes and, in some areas, harmonization, in order that transboundary competition should not be thwarted (Esty and Geradin, 2001). However, one does not have to be unduly cynical to recognize that governments may seek to foster domestic industry and/or attract industry to their shores by engaging in a policy of lax regulatory enforcement (Ogus, 2002). And if other countries respond in kind, we may have a 'race to the bottom'.

The answer to most of these concerns should lie in the notion of optimal regulatory enforcement, that is, in a strategy in which the costs of enforcement are justified by their benefits. In this chapter I investigate the extent to which different enforcement regimes are capable of implementing such a strategy, with particular attention to the role of the criminal law. This subject has attracted a large literature, legal, sociological and economic. After briefly surveying the legal and sociological perspectives, I focus on the economic approach. However, it is first necessary to clarify the differences between enforcement regimes.

CHARACTERISTICS OF ENFORCEMENT REGIMES

Economists and sociologists tend to have an oversimplified view of how regulation enforcement operates in practice because they often fail to recognize key differences that exist between the various regimes. In Table 4.1, I attempt to capture such differences.

This is, of course, an oversimplification and is based on what is typically found in many jurisdictions.[1] Here I limit myself to identifying its main

Table 4.1 Differences between enforcement regimes

	Criminal law	Civil–private law	Civil–public law	Administrative law
Prosecutor	Public prosecutor	Victim	Regulatory agency	Regulatory agency
Decision-maker	Court	Court	Court or tribunal	Regulatory agency
Sanctions	Fine Confiscation Prison	Damages Injunction	Penalty Injunction Licence (revoke or suspend)	Cessation-order Charge
Burden of proof	High	Medium	Medium	Low
Procedural safeguards	High	Medium	Medium	Low

features. We note, first, that, from right to left, we move from routine to exceptional enforcement measures. In the ordinary case, the matter is unlikely to leave the hands of the regulatory enforcement agency which has power to issue cessation orders and to levy relatively modest financial charges. Typically, the matter would reach an independent tribunal only if the offender failed to comply with an order or refused to pay the charge[2] (although in cases of very serious breaches, the agency might proceed directly to this level with a view to securing the suspension or revocation of a licence). I include the possibility of a private civil law claim because in some areas, notably where personal injuries are involved, this may be important. However, most regulatory contraventions do not give rise to civil liability of this kind; or if they do, the individual victims do not incur sufficiently serious losses to justify expenditure on private claims. The criminal law tends to be used only for serious contraventions: in some jurisdictions, the process comes within the administrative system, in that the regulatory agency has the option of charging the offender with a criminal offence, should other means of securing compliance fail; in other jurisdictions, the case is taken over by some public prosecuting office.

The characteristics of burden of proof and procedural safeguards[3] go together and are highly significant. The more serious the process, the greater

the safeguards for the individual or firm involved in the alleged contravention. So, for example, within common law jurisdictions, the agency may need to do little by way of proof for the routine administrative charge, but if the individual appeals to the tribunal, the conditions required for the contravention must be proved 'on the balance of probabilities'; and, if the case is heard in a criminal court, the relevant standard is that of 'beyond all reasonable doubt', and some degree of mental responsibility may be required (Cartwright, 2001). It follows from all this that the administrative costs of enforcement increase very sharply as we move from the routine to the exceptional processes.

LEGAL PERSPECTIVE ON THE ROLE OF THE CRIMINAL LAW

It was indicated in the last section that, in practice, in most jurisdictions the criminal law is regarded as a 'last resort' for regulatory enforcement policy. We must now relate that to theoretical considerations: what are the objectives of the criminal justice process? In general, lawyers focus on:

- retribution – often known as the 'just deserts' theory according to which offenders are punished according to the severity of their offence;
- social condemnation – the criminal process enables society publicly to denunciate derogations from its values (Ashworth, 1999).

Ashworth, a leading criminal justice theorist, derives from these objectives a series of principles which he thinks should dominate the use of the criminal law (Ashworth, 2000). They include, most importantly, that:

- it should be used only to censure people for substantial wrongdoing;
- it should be enforced with respect for equal treatment and proportionality;
- those accused of crime should be protected by procedural safeguards;
- sanctions should be proportionate to the seriousness of the wrongdoing.

Ashworth does not spell out the implications of these principles for regulation, but they may readily be inferred, if only intuitively (see also Cartwright, 2001):

- the criminal justice system is appropriate only for those regulatory contraventions which are serious in the sense that they give rise to a substantial amount of harm;
- the notion of individual moral responsibility which is central to the

criminal law is difficult to reconcile with many regulatory offences which often involve strict and corporate liability.

SOCIOLOGICAL PERSPECTIVES

Sociologists have tended to examine the cultural and behavioural aspects of regulatory enforcement (for a survey and bibliography, see Baldwin and Cave, 1999). To some extent, of course, these reflect important historical traditions. In some continental European jurisdictions, terminology and procedures have been used to differentiate regulatory contraventions from the ordinary criminal law. Germany has, perhaps, the most coherent and comprehensive system of regulatory enforcement. Its origin can be traced to the end of the nineteenth century and the major expansion in that period of state intervention. Theorists then argued that non-compliance with administrative regulation should be distinct from traditional criminal processes (Goldschmidt, 1969). A general concept of 'administrative offences' (*Ordnungswidrigkeiten*), procedurally different from criminal liability (*Straflichkeit*) was introduced in 1949.

Whether or not influenced by foreign practice, American sociologists in the 1960s questioned the appropriateness of the criminal law for regulatory enforcement, arguing that the latter lacked the moral basis of the former (Kadish, 1963; Ball and Friedman, 1965).[4] Although there are still adherents to this view (Brown and Rankin, 1990), it is countered by those who seek to impute a notion of moral culpability in, and thereby criminalize, regulatory contraventions, at least where serious harm is involved (for example Wells, 2001).

The theoretical work has been supported by a number of empirical studies (see Hutter, 1997, for survey and bibliography). These suggest that there is some difference between the more coercive approach of enforcement agencies in the USA, on the one hand, and a more persuasive approach in Sweden and the UK on the other (Kelman, 1981; Vogel, 1986). The reluctance to use the criminal process has sometimes been interpreted as evidence of capture or at least official pusillanimity (Gunningham, 1974). More frequently it is considered as part of a rational strategy to induce compliance which, from a sociological perspective, is more readily secured by cooperation rather than coercion (Hawkins, 1984; Hutter, 1997).

ECONOMIC ANALYSIS AND DETERRENCE THEORY

What then of the economic objectives of the criminal law? Here we may have regard to the familiar law-and-economics literature (surveyed in Eide, 2000)

which posits deterrence, creating incentives for prospective offenders to comply with the law, as its most important function.

The economic models are explored in other chapters in this collection. Here it should suffice simply to acknowledge that, given the costs of law enforcement, the goal is not to induce perfect compliance, but only optimal compliance (Stigler, 1970). This can be defined as minimizing two sets of costs: unprevented damage costs (that is the costs which the regulation is designed to prevent) and the administrative costs of enforcement.

The predicted level of compliance is determined by the standard models based on Becker (1968). Potential offenders will comply when the anticipated profit from the illegal act(ivity) is less than the costs arising from being apprehended, discounted by the probability of apprehension. Too much of the economic literature nevertheless bases the amount of apprehension costs exclusively on the formal sanction imposed by the court. This gives rise to a major conundrum. Empirical evidence (see Ogus and Abbot, 2002) suggests that the probability of conviction is no higher than 0.05 and the typical penalty imposed by the courts for more serious contraventions is around €10 000. If these figures reflect the reality, then, given the likelihood that the offender's profit will typically exceed €500, it would seem that the deterrence condition in the predictive model is met only if:

- the potential offender is highly risk averse; or
- the potential offender's subjective perception of the formal sanction likely to be imposed is very high; or
- the potential offender significantly overestimates the probability of a conviction and formal sanction; or
- significant stigma or market reputational costs attach to a conviction; or
- significant adverse consequences attach to enforcement procedures which fall short of a criminal conviction or anticipated non-criminal procedures.

This last possibility is surely the most significant and the standard economic model should be broadened to accommodate the various strategies which can be employed by an enforcement agency, including steps which fall short of criminal prosecution and conviction. In Figure 4.1 we see a typical criminal law enforcement pyramid (derived from Ayres and Braithwaite, 1992, p. 35).

The percentage of apprehended contraventions is indicated on the bottom horizontal axis and above it lie the procedures of increasing severity which may be undertaken by the enforcement agency. The logic is that the agency proceeds through these stages on a cost–benefit basis, estimating whether the increased administrative costs of each further step are justified by the benefits of increased compliance. In general, the costs to the offending firm increase

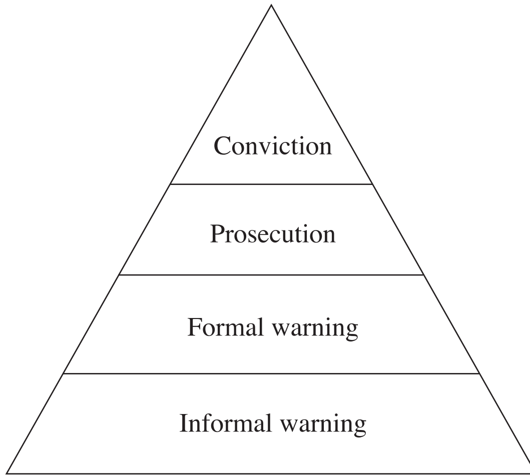

Figure 4.1 A typical law enforcement pyramid

with each higher stage. At the same time, viewed *ex ante*, and given the mounting administrative costs, there is a significant reduction in the probability that that stage will be reached.

Different probabilities and associated costs therefore attach to the various stages in the enforcement process and to this may be added the enforcement possibilities of alternative regimes, for example, an administrative process. The normative question now arises for discussion, how the various possibilities may be ordered, such as to optimize deterrence.

OPTIMALISING COST-GENERATING INTERVENTIONS

The regimes portrayed in Table 4.1 and the various procedural steps involved in them represent a series of institutional interventions giving rise to different combinations of:

- probabilities of intervention;
- costs on those apprehended for contravention;
- administrative costs.

The policy goal then becomes that of selecting the combination of interventions which, at the lowest administrative cost, in aggregate, and discounting for the probability of their occurrence, will generate costs for the offending firm likely to exceed the profits they secure from the illegal act. My

mathematic incompetence prevents me from articulating a model implementing that goal. Instead, I shall limit myself to some observations on what features of the regimes shown in Table 4.1 are most likely to serve this purpose, linking this to insights drawn from the economics literature.

Administrative Charges

We may begin with the cheapest regime, that of administrative enforcement, as reflected in the pyramid in Figure 4.2.

For most small and relatively insignificant regulatory contraventions, proceeding as far as, or at least with the threat of, the administrative charge is likely to be satisfactory and sufficient (Kerrigan et al., 1993). The reason is that once the offender has been apprehended, the administrative costs of reaching that stage are modest and therefore, viewed *ex ante*, the probability of the sanction is relatively high. The administrative costs will, of course, increase significantly if there is an appeal against the charge, but that is true also for the offender who is thus unlikely to be motivated to embark on the procedure unless the charge is disproportionately high and the chances of a successful appeal are substantial.

There are, nevertheless, two major limitations to the administrative sanction which should be noticed. First, because of the low public profile of the system, the costs arising from stigma and an inferior market reputation are unlikely to be significant. Even with a relatively high probability of infliction, the formal sanction may then be insufficient to deter contravention. The second point is

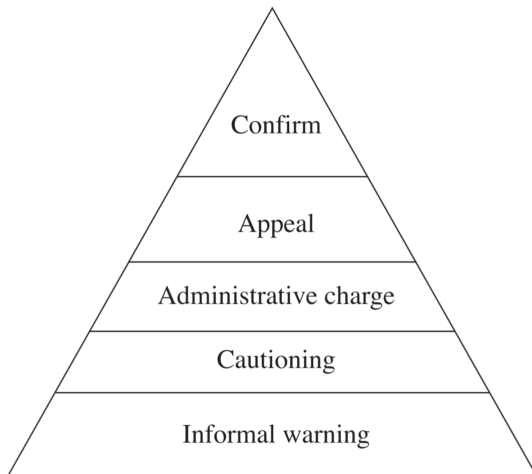

Figure 4.2 Administrative enforcement pyramid

linked to the first. There are limits to the severity of the administrative charge. This is not only because, as indicated in the previous paragraph, offenders aggrieved by the amount will be more likely to appeal to a tribunal and thus raise the administrative costs. It is also because once a sanction reaches a certain threshold of severity it is, for constitutional or human rights reasons, regarded as a 'criminal penalty' and thus necessarily subjected to criminal justice procedures.[5]

Criminal Prosecutions

Let us return now to the criminal justice approach as represented in Figure 4.1. Here, in contrast to the administrative process, the costs of the enforcement agency escalate between apprehension and prosecution. The explanation is clear (Rowan-Robinson et al., 1990, pp. 255–63): it is very expensive for the enforcement agency to marshal sufficient evidence to obtain a conviction, given existing principles of criminal procedure including, notably, the burden of proof, restrictive rules of evidence and (in very serious cases) requirement of a jury trial.

These costs play a key role in promoting what Ayres and Braithwaite (1992, pp. 29–7) refer to as the 'tit-for-tat' strategy. Both agencies and firms will recognize that it is in their interests to cooperate (the firm by complying with the regulation; the agency by not wielding the big stick). Should either player defect, the other can retaliate (the agency by bringing a prosecution; the firm by withholding key information which the agency will need to secure conviction).[6]

The Use of Criminal Process Safeguards

Since compliance, even in the Ayres-Braithwaite model, is still dependent on there being a plausible residual threat of a major penal sanction, the question arises whether the procedures which generate such high costs are necessary. The conventional view is that they protect the innocent from wrongful conviction (Williams, 1958, pp. 154–8),[7] an argument which can, in economic terms, be reformulated as one of error costs (Posner, 1973, p. 399). Nevertheless, while it may be desirable to devise procedural rules to reduce wrongful conviction costs, the greater the precautions that are taken, the more we generate increases to both enforcement costs and damage costs; the latter occurs because we will fail to convict, and thus also to deter, some contraventions. It follows that there is, in theory, an optimal level of procedural safeguards where the marginal benefit, the reduction in wrongful conviction costs, is approximately equal to the marginal cost (increase in enforcement costs and damage costs) (Posner, 1973, pp. 410–17).

The costs of false convictions are generally assumed to be significantly higher than those of false acquittals. The 'beyond reasonable doubt' burden of proof is an example of a rule which reduces wrongful conviction costs but increases damage costs. Hylton and Khanna (2001) have recently estimated that for to this be, on economic grounds, preferable to the 'balance of probabilities' standard used in civil law cases, the wrongful conviction costs must be, in the given area, at least 2.64 times the damage costs.[8] However, this and other procedural rules serve to increase the damage costs not only by acquitting guilty parties, but also by failing to deter others, because of the reduction in the probability of conviction. Taking account also of the very significant additions to administrative costs resulting from the stricter rules, the weighting necessarily attributed to wrongful conviction costs by the current criminal process must be much larger than the 2.64 mentioned.

Of course, assessment of the costs in this area is particularly difficult, not the least because account must be taken of 'remoter' costs such as adversely affecting confidence in the judicial system; and there is a high degree of subjectivity attaching to the hurt arising from wrongful conviction. Using American empirical criminal justice data on some of the cost variables, Hylton and Khanna (2001) feel able to conclude that the higher standard of proof cannot be justified by the reduction in error costs rationale. I remain agnostic about this judgement in so far as it applies to mainstream criminal offences. It may be that the traditional procedural safeguards associated with the criminal justice system approximate to that optimal level, once account is taken of the fact that criminal conviction for such offences often leads to imprisonment and generally a high level of social stigma. But intuition suggests that, in a regulatory context, where the defendants are mostly firms, the costs of a wrongful conviction should not be exaggerated. Imprisonment is not in practice an option and personal stigma may not be serious. If that intuition is correct, the traditional criminal justice safeguards are not optimal for regulatory contraventions.

Suspension and Revocation of Licences

Some regulatory regimes operate in conjunction with a licensing system. Since the suspension or revocation of a licence has the effect of depriving the firm of the lawful right to engage in a profitable activity, it can be treated as incapacitating the offender, in the same way that imprisonment incapacitates an individual in relation to mainstream crime. As such, it may obviously serve a preventive function, and thus is particularly appropriate where the social harm arising from the contravention is very large and/or there are problems in deterring the conduct by *ex post* sanctions (Shavell, 1993, pp. 261–2). But the very fact that it is a stringent penalty means that it can also play a significant

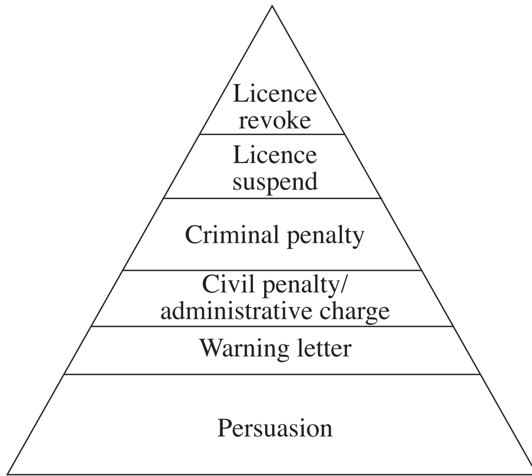

Figure 4.3 Ayres and Braithwaite's model enforcement pyramid

deterrent role. Indeed, in some circumstances, it may be more effective than a conventional financial penalty, since the effect of the latter is dependent on the wealth of the offender. Imprisonment is not a feasible option for an insolvent firm and potential bankruptcy thus impedes deterrence (Coffee, 1981).

It is, therefore, unsurprising that Ayres and Braithwaite (1992, p. 35) in their model enforcement pyramid (Figure 4.3) place the suspension and revocation of a licence at the apex, to be invoked if, but only if, the conventional criminal penalty fails to deter. The rationality of such an approach is evident. The ultimate sanction, loss of the licence, is, as they observe, 'such a drastic one … that it is politically impossible and morally unacceptable to use it with any but the most extraordinary offences' (Ayres and Braithwaite, 1992, p. 36). A situation in which the ordinary processes of criminal justice have failed to secure compliance, presumably because the profit to be secured is high and/or the penal sanction is low, may be considered 'extraordinary' for this purpose. With the loss of a licence, the costs imposed on the offender invariably exceed the profit from the illegal act, and the fact that there has been a previous conviction should mean that the probability of apprehension is relatively high. The sanction will, presumably, be rarely invoked, but the threat should be sufficient to render it an effective deterrent. It should be noted, too, that the same effect can be achieved, in the absence of a licensing system, by penalties prohibiting the exercise of a given activity (sometimes referred to as 'negative licensing': Ogus, 1994, p. 222).

We should, however, be sceptical of the appropriateness of loss of the licence (or gainful activity) as a sanction if it is the only deterrence option, or

it is not consequent on the criminal justice process. The problem here is that the understandable and presumably widely known reluctance to use the device robs the threat of its credibility (Ayres and Braithwaite, 1992, p. 36). In these circumstances, the perceived low probability of the sanction will lead most potential offenders to apply a very high discount to the costs they will incur.

A final point about licences should not escape our notice. Given the high financial and non-financial costs associated with the loss of a licence, we can assume that errors of the agency involving the false imposition of this sanction lead to high wrongful conviction costs, even though the stigma of a criminal conviction is absent. As such one would expect there to be, on analogy with the criminal process, a system of procedures – and an increased administrative expenditure – designed to reduce the errors. In most jurisdictions, the anomaly exists that the procedural safeguards for a relatively minor criminal offence are higher than those for the removal of a licence, which is considered an administrative, rather than a penal, decision.

Private Legal Actions

This is not the place to consider more generally the role of civil liability in dealing with negative externalities,[9] but we ought briefly to note how its use might facilitate regulatory enforcement. Legal systems differ in the extent to which regulatory contraventions enable victims to sue for compensation (Jolowicz, 1972, pp. 4–15). For example, in France, tort liability is automatically established by proof of a regulatory offence, while in England this follows only if the courts assume that the legislature intended to create a private right and in general they are reluctant to find such an intention. Without addressing the normative issue as to which approach is appropriate (on which see Burrows, 1999), we may nevertheless acknowledge that the adjunct of the private law sanction can usefully reinforce regulatory enforcement at relatively low additional cost, particularly if, as in France, the victim may bring an *action civile* for damages in the criminal courts, riding on the back of the prosecuting authority's accumulation of evidence. By such means, the costs imposed on the offender are raised without significantly reducing the probability of apprehension.

CONCLUSION

In this chapter I have reviewed the literature, legal, sociological and economic, on the role of criminal law in the enforcement of regulation. I have attempted both to map regulatory enforcement systems and to indicate how the issue of optimizing different forms of intervention might be addressed. My focus has

been on economic deterrence theory and, on this basis, my analysis suggests that the routine use of administrative charges should provide sufficient incentives for compliance with much regulation, particularly where the social costs of contravention are low. Where they are high, the threat of criminal sanctions may be necessary, but consideration ought to be given to: reducing the procedural protection given by the criminal process to those accused of regulatory contraventions; making greater use of the deprivation of the right lawfully to undertake a profitable activity as a sanction; and facilitating the power of the victim of the contravention to join a private claim for compensation to the public enforcement procedure.

NOTES

1. For a valuable overview in the Australian context, see Australian Law Reform Commission (2002). Between jurisdictions there are, of course, many procedural differences; within a European context, see Van Waarden (1999).
2. A charge confirmed by the tribunal may then be regarded as a 'penalty'.
3. Notably the rules as to what may be admitted by way of evidence of the contravention. See further Autralian Law Reform Commission (2002, pp. 60–64).
4. Not the least because of the widespread use of strict liability.
5. See particularly Article 6-1 of the European Convention of Human Rights and the case law on it (for example *J.J.* v *The Netherlands*, 9/1997/793/994). I am grateful to Erling Eide for bringing this point to my attention.
6. See also, to similar, effect, Fenn and Veljanovski (1988).
7. In an interesting recent paper, it is justified as an effort rather to constrain the costs associated with abuses of prosecutorial or government authority (Hylton and Khanna, 2001).
8. They assume the 'beyond reasonable doubt' test to imply a probability of accuracy of 95 per cent.
9. On which see, for example, Shavell (1987).

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5. Law and economics of environmental crime

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INTRODUCTION

In the economic analysis of law, much attention has been paid to the instruments to be used for the control of environmental pollution. However, lawyers seem to focus mainly on environmental standards (emission standards and quality standards) and on the question of how these standards should be set, whereas economists (mostly interested in environmental economics) focus mainly on 'economic instruments' (emission trading and taxes). Environmental law is often categorized as administrative law for an integrated approach (Faure and Skogh, 2003). However, in practice the whole body of environmental law is, to a large extent, also criminal law. The usual way in which environmental law is structured consists of the imposition on industry of specific administrative requirements, specifying the permissible amounts and quality of polluting emissions, and the punishment, as environmental crimes, of violations of these requirements. In legal literature, much attention has been paid to the way in which the law should use penal sanctions to deter environmental pollution, but environmental criminal law has not, so far, been very often subjected to an economic analysis.

The goal of this chapter is to provide an overview of the way in which traditional theories on the economics of crime have been applied to environmental criminal law. We will therefore begin by addressing the question of why, according to the economist literature, criminal law should be used at all to deter environmental pollution. An inevitable question in that respect, obviously, is whether other instruments, such as civil liability, would not suffice for the deterrence of environmental pollution. In addition, we will address the manner in which the literature on the economics of crime relates to environmental pollution. The chapter also looks at what the optimal penalties for environmental pollution would be. Moreover, in practice it can be observed that there is an increasing interest in administrative penal law. Hence the question arises as to why, in some cases, administrative law might provide better results than criminal law. In addition, given that environmental

crimes are committed mostly within the corporate sphere, it is necessary to ask whether criminal law should be applied to companies and/or to individual actors.

Thus our chapter attempts to provide a survey of the literature concerning the way in which criminal law has been, and can be, used in the fight against environmental pollution.

WHY CRIMINAL LAW?

Prices or Sanctions?

Several reasons have been put forward in literature as to why criminal law should be used for controlling certain types of externalities. One reason that is often put forward is that the internalization of harm via civil law will not be perfect. Civil law and, more particularly, tort law, will indeed never be able to guarantee the victim full compensation. A full compensation of the victim would mean that he would be indifferent. This would only be possible if civil law were able to completely compensate the victim for the harm caused to him. However, it is well known that even if the victim receives substantial financial compensation, for example for the loss of an arm, this compensation will never put him in the position he was in before the accident occurred. The same is the case with pain and suffering. Traditional tort law often compensates, for example when a child dies as a result of an accident. In these cases there is often no material loss, but the non-pecuniary losses can be substantial. However, the amount that will be awarded under civil law is often too low to guarantee effective deterrence from an economic point of view (Faure, 2000, pp. 143–59). Hence some have argued that the goal of criminal law in these types of cases is not to compensate, but primarily to deter. Cooter (1984) has articulated this viewpoint by claiming that in civil law, individuals have the right, in principle, to cause damage to someone else, on the condition that they are willing to pay the price for that damage, that is, to compensate the victim. Criminal law, however, aims to prohibit certain antisocial behaviour even if the offender is willing to pay the price in the form of compensation to the victim. Therefore Cooter has argued that whereas civil law fixes a price for behaviour in the form of a sanction, criminal law simply wishes to deter by imposing sanctions (ibid., p. 1523).

Low Probability of Detection

Another reason that has been advanced in economic literature in favour of the use of criminal law is that in some cases there may be a relatively high degree

of damage and a relatively low chance of catching the offender (Posner, 1985, pp. 1193–209). The economic theory of crime and punishment is grounded on the deterrence viewpoint. According to this, threatening a potential polluter with serious punishment, such as imprisonment or high fines, would deter him from his intended pollution. The question obviously arises as to why this justifies the use of criminal law. The argument is that a similar deterrent effect could not be achieved through the use of other legal instruments such as tort law. This is because while liability rules, for example, do indeed also have a deterrent effect, the problem is that the only risk that a potential polluter runs under liability rules is that he will have to pay compensation equal to the amount of damage caused. With environmental pollution, the probability of being caught for violation of a regulatory norm is often much lower than 100 per cent. As a consequence, deterrence only works if the sanction to which the potential polluter is exposed is much higher than the amount of damage he might be causing.

In many cases of environmental pollution, the probability of being caught may not be 10 per cent, but in fact much lower. This means that the efficient sanction for deterring the potential polluter should be correspondingly higher. In general, this effect cannot be achieved with tort law, since tort law in principle only forces the injurer to compensate the victim the amount of damage he caused, and no more. The only way of imposing a much higher sanction than the actual harm caused, in order to compensate for the low detection rate, is through the use of criminal law. To summarize, the fact that the probability of detection is less than one is therefore a powerful argument in favour of using the criminal law to deter environmental pollution (Skogh and Stuart, 1982, pp. 171–9 and Skogh, 1973, pp. 305–11).

Protection of Values and Interests

One of the other (non-economic) arguments made in favour of the use of criminal law for the purpose of environmental protection is that the severe types of sanction under criminal law are also used to protect classical interests such as health, property and honour. These were the interests that were protected by most of the penal codes that were enacted in the twentieth century. Under environmental legal doctrine, it is argued that given the deteriorating state of the environment in many industrialized countries, a clean environment is nowadays at least as important as the above interests are. Hence, if criminal law is used to protect these traditional individual interests, it should also be used to protect collective interests, such as environmental ones. This, it is argued, is because most of these individual interests (such as health and property) cannot be enjoyed if the basic requirements for a clean environment have not been met.

This argument is particularly strong in environmental legal doctrine, where it is held that the goal of criminal law is to protect rights, interests and values. It is argued that in industrialized societies nowadays it is as important to protect the right to a clean environment as it is to protect the interests (health, property and honour) traditionally protected by criminal law. It is argued that whereas traditional criminal law only protected individual rights and values, in the course of the last century the protection of collective interests and values has increasingly become as important a task of criminal law. Hence, it is argued, the criminal law should be used in the protection of the environment.

To summarize, both economic and legal arguments are advanced in the literature in favour of using criminal law to protect the environment, namely, that civil law is an insufficient or inadequate tool of deterrence and/or that criminal law ought to protect ecological values and interests. The insufficiency of civil law can also be understood: environmental crimes often cause damage that is so widespread that there is no individual claimant. The other elements (low probability of detection and the insolvency risk) equally point to the necessity of the criminal law.

HOW TO DETER?

Since the first publications of Gary Becker (1962, p. 13 and 1968, pp. 169–217) and George Stigler (1970, pp. 526–36) a rich and abundant literature on the economics of crime and punishment has emerged, while economic notions have been introduced into the criminological literature on crime and punishment (Otto, 1982). The bottom line of the economic theory is relatively simple: it is assumed that the offender weighs the costs and the benefits in deciding whether or not to commit a crime. The rational prospective offender is assumed to be a profit maximizer who weighs the costs and the benefits of committing a crime and does not undertake illegal action unless the expected benefits of the crime exceed the expected costs. From this point of view, it can be said that the function of criminal law is simply to increase the expected costs in order to deter the prospective offender (Bowles, 1982, pp. 54–105).

In calculating the expected costs two important factors should be taken into account:

One is the authorities' ability to catch and convict the offender (p); the other is the expected maximum punishment (S). The multiplication of these factors then constitutes the expected costs of the crime to the offender. By raising either the probability of getting caught or the expected maximum punishment, the expected costs for the criminal can increase. However, it is not equally easy to achieve either of these two changes. Increasing the expected maximum punishment might demand less effort from the government than increasing

and subsequently stabilizing the probability of catching the offender. Therefore the point has been made in the literature that increasing the punishment rather than the probability of catching offenders inflicts less costs on society (Posner, 1998, pp. 238–50; Polinsky and Shavell, 1991, p. 618 and Adams and Shavell, 1990, p. 337). Although one could formulate criticisms with respect to this point of view, it is important to note that, from an economic perspective, the costs of crime control should also be taken into account when deciding how much to invest in the deterrence of environmental pollution through criminal law. Given the relationship between the detection rate and the optimal sanction, a reduction of the detection rate should, other things remaining equal, be compensated by a higher expected sanction in order to retain the same expected costs for the potential offender (Polinsky and Shavell, 1979, pp. 880–91).

Empirical (criminological) studies with respect to the impact of criminal sanctions on environmental pollution usually show that the deterrent effect can be low. This, however, is not because criminals do not act as rational utility maximizers and are therefore not deterred. Environmental pollution is in most cases a result of corporate behaviour. 'White-collar' criminals can certainly be considered to be rational in their choice as to whether to commit a crime, and therefore fit in Becker's model. In many cases where the potential polluter balances the expected costs of a crime against the gain that may be obtained by committing it, he may find that the potential benefits are higher. In some cases, a lot of money can be earned by behaving in a manner that pollutes the environment, for example postponing an investment in water-cleaning equipment. Assume that the water-cleaning equipment that is necessary for compliance with the conditions of a licence costs millions of euros. If criminal law is the only legal instrument available to force a potential polluter to make this investment, he will only do so (and thus avoid the crime) if the fine that will eventually be imposed multiplied by the probability of detection and conviction is higher than the money he can save by not investing in the equipment. In some cases, the gains for his company might simply be higher. This is due to the relatively low detection rate of environmental pollution and to the fact that the maximum punishments provided for in legislation are almost never imposed by judges in western European countries.

The low probability of detection, combined with the relatively low sanctions, gives rise to pessimism about the effectiveness of criminal law in deterring environmental pollution. In fact, some of these studies show that the probability of detection is so low – as are the fines actually imposed by judges – that one may well ask why potential polluters comply with legislation at all. The potential gains of violating environmental legislation usually by far outweigh the expected costs. However, there are a few reasons why potential polluters may nevertheless abstain from committing environmental crime.

One reason is that we have thus far assumed risk neutrality on the part of the potential criminal. However, potential criminals may well be risk averse. Although the probability of detection is relatively low, the expected sanction may theoretically be high. Indeed, in some jurisdictions, for example in the USA, environmental crime is punishable by imprisonment. Corporate directors may well be highly averse to the risk of being put in prison, even if the probability of ending up there is relatively low. Hence the risk aversion of the potential criminal may to some extent contribute to deterrence (Bowles, 1982, p. 59).

Second, factors other than the actual sanction may serve to deter environmental crimes. For example, in legal systems where individuals can be prosecuted, members of, for example, a board of directors might have to appear as defendants before a criminal court over a period of several weeks. This could be a very unpleasant experience, even if the sanction that is ultimately imposed (say a fine) is relatively low. The time spent and the loss of reputation involved in having pictures of directors on trial appear in the newspapers may also be a serious cost to the firm.

This is linked to a third argument as to why there may be a greater deterring effect even if the probability of detection and the imposed sanctions are relatively low. This has to do with the fact that in addition to the sanction imposed, the criminal prosecution itself (and certainly a conviction) may lead to a (significant) loss of reputation for the firm in question, because it will now have been branded as a polluter. Such a loss of reputation can entail considerable costs for firms, for example through loss of business and, hence, may provide additional deterrence.

Furthermore, depending on the legal system, environmental crime could be deterred by possible substantial legal costs and the risk of obtaining a criminal record and the associated consequences. Possible consequences are: licences will become more difficult to obtain, exclusion from new contracts and/or work, problems when starting a new legal entity, more and thorough inspections, higher legal costs and higher insurance rates.

To summarize: the fact that many firms abstain from committing environmental crime cannot be reduced to mere irrationality (given the low expected sanction) but may actually be efficient behaviour, based on the arguments just presented.

OPTIMAL SANCTIONS

Trade-off between Probability of Detection and Magnitude of the Fine

In presenting Becker's social loss function we have already reached one

conclusion concerning the optimal sanction, taking into account the costs of both detection and punishment. This conclusion assumes that there is a trade-off between optimal deterrence and enforcement costs, since an increase in the detection rate requires an increase in policing costs (Easterbrook, 1983, p. 293). This, in turn, leads to a number of conclusions (Faure and Heine, 1991, pp. 39–58).

1. When optimal deterrence can be achieved equally by fines and prison sanctions, fines are to be preferred since they are less costly to impose than prison sanctions.
2. A higher punishment will be preferred over a higher detection rate because it reduces enforcement costs. However, if offenders are risk averse, heavy punishment may also result in a welfare loss due to risk aversion (Skogh, 1982, pp. 67–80). On the other hand, as mentioned above, such risk aversion has the potential advantage of providing additional deterrence where the expected sanction is low.
3. In addition, the costs of imposing sanctions must be taken into account. Therefore many economists, following Becker, have shown themselves to be opponents of prison sanctions, simply because the costs for the implementation of those sanction ares much higher than in the case of fines, which can be administered relatively easily. Also, Posner has argued that in cases of economic crime in particular, a high fine would act as a much better deterrent than a costly prison sanction (Posner, 1980, pp. 400–418). This, however, has been criticized by Coffee (1980, pp. 419–76), as well as Shavell (1985, pp. 1232–62). Shavell has powerfully argued that the Becker/Posner point of view, which assumes that fines are an effective deterrent, only works when the potential polluter has money at stake to pay these fines.
4. In the event that there is a risk of insolvency, the fine will inevitably not have enough of a deterrent effect. In this respect we should recall the point that the probability of detection of environmental pollution is often very low. This therefore means that the optimal sanction to deter pollution becomes relatively high. The likelihood that this optimal sanction might outweigh the individual wealth of an offender is relatively high in the environmental context. Environmental polluters are often organized as corporate entities that benefit from limited liability (Haummann and Kraakman, 1991, p. 1879 and Cortenraad, 1999). Hence there is always a risk that environmental harm may cause costs that are higher than the assets of the firm or, in the criminal law context, that the optimal fine (to outweigh a low detection rate) will be much higher than the assets of the firm. Indeed, the optimal monetary sanction required for deterrence so frequently exceeds the offender's assets that non-monetary sanctions,

> such as imprisonment, are necessary. The major advantage of the fine (lower administrative costs) therefore only leads to favouring this type of sanction when the risk of insolvency can be controlled.

It should be recalled that the fact that the detection rate of environmental pollution is often less than 100 per cent was one of the reasons for introducing criminal law in the first place. This insolvency problem explains why increasing the amount of compensation due by a tortfeasor, for instance by introducing punitive damages (as in American tort law) will not eliminate the need for criminal sanctions. Indeed, the insolvency problem that arises if monetary sanctions are imposed would make the injurer judgement proof. Thus non-monetary sanctions will often be needed to achieve deterrence.

However, the imposition of non-monetary sanctions remains costly. Therefore, it has been argued in the literature that it is sometimes more effective to increase the probability of detection than just to combine a low probability of detection with a high sanction (Ehrlich, 1973, pp. 521–52). Therefore the literature has indicated that a combination of a low probability of detection with a high sanction is efficient only as long as (relatively cheap) monetary sanctions can be used. Therefore monetary sanctions should be used as long as the optimal fine can be imposed, given the available assets of the potential polluter. When an insolvency risk emerges, it may be cheaper to raise the probability of detection than to move to costly non-monetary sanctions (Polinsky and Shavell, 1979, pp. 880–91 and Posner, 1980, pp. 400–418).

Flexibility versus Sentencing Guidelines

A result of this is that the optimal sanctions in the case of environmental crimes depend upon many factors, for example, the probability of detection, the harm caused, available assets, the risk of insolvency and the costs of the sanctions to be imposed. The bottom line is that an optimal policy would consist of applying fines for as long as possible (given the insolvency risk) and combining them in a differentiated manner (given the insolvency risk) with non-monetary sanctions (Cooter and Ulen, 2000, pp. 449–51). Of course, from an *ex ante* perspective one could argue that the policy maker might have to invest more in raising the probability of detection when he is aware of a possible insolvency risk. However, the problem for the judge is that he will only be able to apply the sanction from an *ex post* perspective, when obviously the probability of detection can no longer be influenced. These detailed criteria for an optimal sanction for environmental crime show, as indicated by Easterbrook, that there is no correct price for crime in the same way that there is no correct price for apples. The price of environmental crime depends on a variety of elements, indicated above, which enable the judge to apply the

optimal sanction (Easterbrook, 1983, pp. 295 and 325). It is for exactly the same reason that Easterbrook is a great supporter of the discretionary sanctioning powers of the judge, since these will allow him to differentiate the sanctions in a more precise manner, taking into account the relevant economic criteria. Easterbrook therefore opposes sentencing guidelines e.g. mandatory sanctions that must be applied by the judge in all cases (Easterbrook, 1983, pp. 325–30). This is a relevant criticism since such sentencing guidelines are applied, for instance, in the USA, in respect of both environmental crimes and other types of crime. At first blush, one may consider them to be efficient because they clearly signal to potential offenders what sanctions will apply in the event of a violation. However, Easterbrook has shown that the lack of flexibility of these guidelines leads to inefficient sanctions since they do not allow judges to take into account the relevant economic criteria when determining the optimal sanction.

Complementary Sanctions

Although the most common non-monetary sanction is probably imprisonment, one should note that in modern environmental statutes, judges are also given the power to impose direct measures upon the convicted polluter, such as a duty to restore the harm committed, for example by cleaning up polluted soil. In some cases these direct measures can even go as far as an order to shut down a plant, or the damages are restored by the local authorities at the expense of the polluter. In some cases, legislation also gives judges the power to order the publication of judgments through the mass media. Although the application of these special sanctions still varies between the different European legal systems, one can certainly note an increase in their use. For instance, if a polluter is prosecuted for illegally depositing waste, he will often be convicted or ordered to clean up the waste he has discharged. In some legal systems, it is even possible to enforce such orders by means of a severe penalty payment that will be due if the duties are not fulfilled within the time limit laid down in the judgment. One can understand that these specific duties can have a highly deterrent effect. The costs of a soil clean-up can be quite high and the stigmatizing effect connected with the publication of a judgment in a national newspaper can be disastrous for a company's reputation. In many cases, one can see that board members of a company who are prosecuted for environmental crime consider the publicity that is given to a major criminal case as the most serious consequence of the whole affair. For multinational companies, particularly those with a clean environmental image, their prosecution in a criminal case that attracts a lot of attention from the mass media can cause a major loss of reputation and thus have a significant deterrent effect as well.

Therefore, one can say that although the sanctions that are used in practice are, in and of themselves, probably not always that much of a deterrent, the prospect of criminal prosecution and conviction does have a preventive effect, certainly for well-known companies that have a reputation to defend within the community.

ADMINISTRATIVE OR CRIMINAL LAW?

Non-monetary Sanctions Need Criminal Law

The issues discussed above have important consequences for determining the best enforcement system to induce compliance with administrative regulations. Monetary sanctions can in principle be both criminal and administrative in nature. An administrative agency, however, cannot impose non-monetary sanctions such as imprisonment. Under the European Convention for the Protection of Human Rights and Fundamental Freedoms, only an impartial judge following a legal procedure prescribed by law can impose non-monetary sanctions, such as imprisonment. Consequently, imprisonment is almost always only available as a criminal sanction, not as an administrative sanction. Therefore, the exposé above, which indicates that environmental pollution cannot be deterred only through monetary sanctions, implies – again – that an enforcement system, backing up administrative environmental law, cannot rely solely on administrative sanctions and that criminal law is needed to enforce environmental regulations (Faure et al., 1996, pp. 529–69).

There is also an economic argument as to why society does not want very stringent sanctions, such as imprisonment, to be imposed in administrative proceedings. The reason, as Easterbrook has pointed out, is that the goal of criminal and administrative proceedings is simply to find out all the appropriate information about the facts at the lowest cost possible, and to provide the necessary information for the judge to apply the optimal sanctions as described above (Easterbrook, 1983, p. 338). Obviously the cost of administrative proceedings may be lower than that of criminal proceedings, but the accuracy of the latter (where the investigations are often undertaken by professional lawyers) may be much higher. This aspect is important because the task of criminal law is not only to apply optimal sanctions to the guilty, but also to avoid punishing the innocent. This is referred to as the goal of reduction of error costs (Miceli, 1990, pp. 189–201). The error cost is obviously much higher when very serious sanctions, like imprisonment, may be imposed, rather than monetary sanctions only. It is therefore understandable that less costly administrative proceedings are chosen in all

cases where the consequences (and thus the error cost) will not be too high (Ogus and Abott, 2001) in the event of wrongful conviction.

Cooperation versus Deterrence

Another argument is also made in the literature in favour of criminal law enforcement. It is argued that administrative authorities often follow a compliance strategy by which they seek to achieve voluntary compliance of the offender through a cooperation strategy. Although these compliance strategies of administrative authorities can sometimes be quite effective, they have obvious disadvantages as well. One problem is that this does not *ex ante* give enough incentives to potential polluters to follow the requirements of the law in the first place. If all a polluter risks after detection is having to make the investments he was supposed to make anyway, deterrence will, of course, fail. Moreover, problems often arise when attempts at voluntary compliance finally fail following a period during which administrative agencies have been cooperating with offenders to this end. In such cases, administrative authorities often find themselves with 'their hands tied', so that they are unable to act effectively as enforcers against the offenders with which they initially cooperated.

In this respect, one can note a remarkable difference in approach between public prosecutors in some Western European countries like Belgium and The Netherlands, on the one hand, and in the USA, on the other. In Europe, prosecutors seem to focus primarily on the result of the criminal act, that is, that the investments should be made and the environmental pollution stopped, rather than on deterrence. By contrast, public prosecutors in the USA, especially those from the specialized Environmental Protection Agency, seem to aim primarily at deterrence through high criminal sanctions. The discretionary powers of US judges are also limited by federal sentencing guidelines that set minimum sanctions for specific offences and have to be followed by the judge.

One should, however, be careful about making a generalized judgement to the effect that administrative proceedings would be inefficient because of the risk of collusion between industry and agencies. Of course, proponents of public choice theory have argued that, especially where badly informed administrative officials try to control powerful and well-informed enterprises, there is a serious 'capturing risk', that is, a danger that compliance will not follow and deterrence will fail. However, it is too simple to reject administrative proceedings and the resulting cooperative strategies altogether based on this capturing risk. Indeed, Fenn and Veljanovski (1988) have demonstrated that it is precisely this model of cooperation followed by administrative agencies that may well lead to compliance by the regulated

enterprises (Fenn and Veljanovski, 1988, p. 1055). Indeed, the results may even be better than in a pure deterrence model in which no account is taken, for example, of particular difficulties that enterprises may be facing in following environmental law. Especially in cases in which administrative authorities are better informed and (smaller) enterprises not, the cooperative strategy may result in a situation in which the former assist the latter in complying with environmental legislation. According to this hypothesis, the cooperative strategy could lead to better results than the pure deterrence model (which would only lead to the imposition of a small fine by the judge). Hence the cooperative model followed by administrative agencies should not be totally rejected because of 'capturing risk' and the risk of collusion. Indeed, in many countries there is now a tendency towards the increasing use of administrative penal law, also for the prosecution of environmental offences. The argument given is that the costs will always be lower than in the case of expensive criminal proceedings. However, administrative lawyers too will demand the protection of the regulated enterprises as well as administrative review and appellate proceedings and hence administrative penal proceedings may, in practice, become as complicated (and as costly) as criminal proceedings. Obviously this cannot be generalized and depends very much on how administrative penal law, on the one hand, and criminal law, on the other, is organized in particular countries. Which of the two systems is less costly is therefore often an empirical matter.

Criminal Law as *Ultimum Remedium*

Several scholars of criminal law have argued that criminal law is an *ultimum remedium*, a last resort that should not be used too quickly. The *ultimum remedium* theory is of particular interest in light of the existence of other legal instruments that can deter environmental pollution, such as administrative or civil sanctions. The *ultimum remedium* doctrine can be interpreted as meaning that criminal law should only be resorted to if the other legal instruments do not work. It could indeed be argued that, although the theoretical arguments in favour of criminal sanctions are convincing, certain minor violations of licence conditions committed in good faith by a company could easily be dealt with by means of an administrative fine or sanctions under civil law. However, even when only administrative sanctions are used, it should be borne in mind that the authorities in question will have more power in their negotiations concerning the measures to be taken to comply with the conditions of a licence if they know that they are backed by a public prosecutor, who can initiate criminal proceedings if the company is not willing to follow the proposals made by the administrative authorities. Thus criminal law also has a very useful role in backing up the enforcement of administrative law.

COMPANIES OR INDIVIDUAL ACTORS?

In cases of environmental pollution, the crime in question is often committed not by individual actors, but by persons acting on behalf of a company. Many of the serious cases of environmental pollution have been committed by corporations. In such cases, the question arises as to whether the corporation, the employee or both should be criminally liable. There are obviously three ways that laws can impose criminal liability for environmental corporate crime. Criminal law can hold liable (i) only the corporation, (ii) only the individual employee involved in the violation of the law, or (iii) both the corporation and the individual employee.

From an economic point of view, designating the liable party is unimportant so long as the sanctions are freely transferable and the parties are fully informed. With transferable sanctions, either the corporation charges to the liable employee the fine that it paid, or the employee asks the corporation for reimbursement of the fine that he paid. According to this line of reasoning, it is unimportant whether the fine is imposed on the corporation or the individual because the contractual relationship between the individual and the corporation governs these matters. This, obviously, is an application of the Coase theorem (Coase, 1960, pp. 1–44).

Nevertheless, in the literature arguments are put forward in favour of holding both the corporation as well as the individual(s) liable. One argument is that even monetary sanctions are not always freely transferable between the employer (the corporation) and the employee in a contractual relationship, because sometimes the law prohibits this practice. For instance section 2679(d) of the United States Code provides that tort recovery from the employee is specifically foreclosed (28 USCA § 2679(d)). Paying someone else's fines constitutes a criminal offence in Germany (Jescheck and Weigend, 1996 and Faure and Heine, 1991, pp. 43–4). Another argument is made to argue why sanctions should be imposed on corporations as well. This is related to an important principle in tort law, that of *respondeat superior*. *Respondeat superior* means that an employer is strictly liable for the torts of its employees committed in furtherance of the employment (*Black's Law Dictionary*, 1990, p. 1311). The employer, however, is strictly liable only for damages that result from negligence on the part of his employees. In economic literature, this *respondeat superior* enquiry focuses on the problem of insolvency. For example, because the employee is unable to pay for the damage he caused, liability imposed on him alone is ineffective. Holding the employer strictly liable for damage caused by the employee's negligent behaviour provides adequate incentives to force the corporation to exert effective control over its employees. The employer can threaten termination, or refuse to promote the employee, as an inducement to careful conduct (Landes and Posner, 1981,

p. 914). In the context of environmental corporate crime and from an economic point of view, one can therefore argue that, given the limited funds of the employee, corporate criminal liability may be an efficient instrument to urge the corporation to issue prudent guidelines and exert effective control over its employees.

Given the higher assets at stake within the corporation, it might be more effective to impose monetary sanctions on the corporation rather than on the individual. However, we have shown that non-monetary sanctions may have to be applied as well. Indeed, corporate entities may also be equally unable to pay for the damage caused by their pollution. A polluting corporation may escape a liability suit because the damage to the environment is widely dispersed and therefore difficult to trace. Monetary sanctions may exceed the corporation's assets and thus not be an effective deterrent. Because non-monetary sanctions are hard to apply to corporations (this is obvious for incarceration), they must also be applied to individual employees. Polinsky and Shavell have made a strong economic argument in favour of the individual criminal liability of the employee. One of the arguments they make is that monitoring by firms may often be imperfect; another problem is that if employees only face fines they may not be induced to exercise socially optimal levels of care. Therefore they argue that non-monetary sanctions on employees (imprisonment) should be used in addition to fines applied on the corporations (Polinsky and Shavell, 1993, pp. 239–57 and Kornhauser, 1982, pp. 1345–92). Also legal authors argue in favour of the individual liability of employees. The level of control decreases when corporate liability totally replaces individual liability. The employee who must either pay damages (in tort) out of his own pocket or risks personal criminal liability is less likely to act wrongfully than one who knows that he will be protected by the immunity caused through corporate liability.

This leads to the conclusion that corporate liability (leading to fines and non-monetary sanctions applicable to corporations) should be combined with the individual criminal liability of employees. However, some criticism has been formulated against corporate criminal liability, stressing even more the need to have individual liability on the part of the employee. Wheeler has argued that, in general, criminal statutes should not be used to regulate product safety (Wheeler, 1984, pp. 593–622). His arguments against criminal law are mainly arguments against punishing the corporation and are, to a certain extent, interesting for environmental law as well. One of his points is that a civil lawsuit may be as much of a deterrent as criminal sanctions (Shavell, 1984, pp. 357–74). Another is that criminal law may lead to costly overdeterrence and that the costs of detecting, investigating, prosecuting and sentencing are much higher than the benefits of marginal deterrence. His argument that the existing market forces in place, such as private tort actions

and civil regulatory systems, can better regulate product safety than criminal law might hold true for the field of product liability. However, it is obviously less convincing with regard to the area of environmental law, precisely because this area requires *ex ante* regulation, without which potential polluters might otherwise escape liability.

Another criticism of the use of corporate criminal liability has been formulated by Jennifer Arlen. She argues that the traditional argument in favour of what is referred to as vicarious liability[1] is seen as an indirect means of sanctioning wrongful employees, assuming that corporations subject to criminal liability will in turn sanction the wrongful agency. This regime can, however, according to Arlen lead to potentially perverse incentives for the following reason: if a corporation is able to monitor its employees optimally, it will have to increase its level of corporate enforcement expenditures. This might reduce the number of agents who commit crime by increasing the probability of detection and thus reducing the costs of crime. On the other hand, the increased enforcement expenditures may also increase the probability that the government will detect those crimes, whereby the corporations' expected criminal liability for those crimes is increased. This means that additional enforcement by the firm only increases the firms' expected criminal liability. Thus vicarious liability could lead to the perverse incentive that the corporation will reduce the monitoring of its employees in order to avoid the detection of corporate (environmental) crime (Arlen, 1994, pp. 833–67).

CONCLUDING REMARKS

In writing this chapter, we had only a modest ambition: to provide a survey of the legal and the economic literature on crime and applying it to environmental pollution. Indeed, economists have traditionally paid a great deal of attention to the optimal instruments to be used in environmental policy (Gunningham and Grabosky, 1998), but much belief was apparently attached to traditional economic instruments, such as emission trading and taxes. The reality of environmental law in many countries was and still is, however, very different. Command and control systems still determine the behaviour of environmental actors and the violation of environmental regulations is backed up by criminal sanctions. With a few exceptions (Cohen, 1987, pp. 23–51; 1992a, pp. 1054–108; 1992b, pp. 75–108 and 2001, pp. 198–216) environmental criminal law has rarely been subjected to an economic analysis. The least one can say is that there seems to be a striking gap between, on the one hand, the (modest) economic research into environmental crime (Dewees et al., 1996, pp. 323–4)[2] and, on the other hand, environmental

criminal law, which is heavily influenced by criminal legal dogmatics.

In this survey chapter, we have merely tried to show, first of all, that the basic insights of economic theory on the use of criminal law can also be applied to environmental pollution. Thus one can easily come to the conclusion that, given the relatively low probabilities of detection, other means than the civil law should be used to deter environmental pollution. Also the basic insights of Becker and Stigler on deterrence and optimal sanctions can easily be applied to environmental crime as well. Given the potentially available assets of corporate actors, the primary sanction to be applied on environmental crime should be the fine, which should be used until the insolvency limit is reached. In case of insolvency either the probability of detection should be increased or non-monetary sanctions should be applied, although they can be costly. However, we also indicated that precisely in this domain of environmental criminal law, many new complementary sanctions apply as an alternative to the classic non-monetary sanction, being imprisonment. Obviously this can also be understood from an economic perspective. Since environmental polluters are usually organized as legal entities and since therefore they will also have a limit to their solvency, the traditional non-monetary sanction, imprisonment, can obviously not be applied to the legal entity itself. Hence sanctions containing specific duties, for example to clean up polluted soils, may have a substantial additional deterrent effect. Moreover, corrective justice arguments could also be made that these complementary sanctions, for example imposing a duty to restore the harm done, are more appropriate than traditional sanctions which in fact leave the offender with the advantages of the crime committed or leave the environmental pollution caused unsolved. A sanction which is becoming more popular nowadays is publication of the judgment, which may be quite important particularly for firms which have a reputation to uphold. More generally, this approach of 'naming and shaming' can also contribute to, notwithstanding the relatively low detection rate and low sanctions, compliance with environmental regulations. A criminal prosecution may amount to serious negative publicity, of which the costs should not be underestimated.

Indeed, the modest empirical evidence available makes one wonder why the criminal law is used at all since it hardly seems able to provide an efficient deterrence, at least if one just considers the relatively low fines and low detection rates. However, actual practice shows that there may be other reasons for companies to comply with environmental regulations than merely the fear of being convicted to pay a fine. The same perspective could also explain the relative success of administrative enforcement. One could be critical of such a model of administrative enforcement of environmental law, arguing that this can hardly be effective given the cooperative strategy

followed by administrative authorities. However, in practice such a cooperative strategy may well direct actors towards compliance with environmental regulation, for example as a result of an informative strategy followed by administrative authorities. Still, one should always be careful and realize that this cooperative strategy ends where the ties between the regulated and the controlling agency become so close that sufficient distance is lacking to prosecute in case the cooperative strategy does not lead to effective compliance. The cooperative strategy always holds the risk of collusion, but as such should not therefore be rejected immediately.

Obviously, in this overview we could not discuss every detail of environmental criminal law; we just wanted to show that the combination of environmental legal doctrine and law and economics has a huge potential. Neither could we discuss the results of the empirical studies into environmental criminal law, but as we indicated, not that many are available. However, the historic evolution clearly shows an increasing reliance on criminal law as an instrument of environmental policy. Hence there is all the more reason to pay more attention to this fascinating area of the law and economics of environmental crime in the future.

NOTES

1. This refers to the corporate liability for criminal acts of senior officers and directors.
2. See the survey book by Dewees et al., who equally indicate that although the use of criminal sanctions for deterrence of environmental offenders is becoming an increasingly important part of environmental policy, the number of empirical studies into the deterrent effect of environmental criminal prosecutions remains modest.

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6. Corporate governance and financial distress

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INTRODUCTION

How can providers of capital to corporations make sure that managers return some of the firm's profits? Once the investors have parted with their money, they have little more to contribute to the firm. What then prevents managers from expropriating the funds provided by investors? As a matter of fact corporate insiders have access to an elaborate expropriation technology. For example, managers can sell the firm's output or assets at below-market prices to an independent firm they own, get subsidized loans, issue underpriced securities to themselves or their relatives or pay themselves excessive compensation.

Corporate governance is the set of mechanisms that regulate the actions of corporate insiders (managers and large shareholders) in order to protect the interests of outside investors (dispersed shareholders and creditors). Adequate protection of investor rights is necessary to induce outside investors to provide financing to the firm.

As reviewed in Shleifer and Vishny (1997), Bradley et al. (1999) and La Porta et al. (2000), the past decade has seen an explosion of academic research in corporate governance, most of it empirical. Topics covered include the value of the right to vote, the market for corporate control, agency issues, optimal financial and compensation contracts, accounting transparency, insider trading, optimal board structure, and so on. This chapter reviews some of the issues and evidence specific to so-called corporate 'tunnelling' and other fraudulent activities by corporate insiders. There is an emphasis on financial distress and I try to review issues of particular relevance to Sweden.

All available evidence is subject to a general econometric problem in terms of detecting the true relationship between corporate governance and firm performance, which is the ultimate variable of interest. It is precisely because of these econometric problems that the second-generation research requires better econometric procedures. Rather than discussing what these econometric improvements ought to be, this chapter focuses on the issues that need to be

subject to additional research before firm conclusions can be drawn about the real impact of governance practices as well as the nature of an optimal governance system.

The chapter is organized as follows. The next section provides a general overview of corporate governance. Then I discuss tunnelling and fraudulent transfers. A further section deals with the relationship between corporate governance and fraud, and a final section concludes.

CORPORATE GOVERNANCE AND INVESTOR PROTECTION

In this section I discuss different corporate governance mechanisms designed to ensure that the firm returns some of its cash flow to investors. I first review key features of the regulatory framework and then turn to the internal governance system set up by the firm itself.

The Regulatory Framework

Most advanced market economies provide a legal and regulatory system that protects the rights of outside investors reasonably well. From a legal perspective the corporate governance system consists of non-contractible laws, such as corporate, bankruptcy and securities laws that describe some of the rights of corporate insiders and outside investors, as well as contract law dealing with privately negotiated arrangements. Moreover, regulation concerning disclosure and accounting rules is important to grant investors the information they need to exercise their rights.

In addition to the laws directly protecting investor rights, there is further regulation that defines the external governance forces on the firm provided by the market for corporate control, the managerial labor market and product-market competition.

Of equal importance to the regulation and laws themselves is their enforcement. An effective governance system requires these laws and contracts to be well enforced by regulators and courts as well as by the market participants.

Shareholder rights

The most important legal right of shareholders is their right to elect the firm's board of directors and to vote on important corporate matters, such as mergers and liquidations. However, while most common stock carries some voting rights, these rights may be expensive to exercise and to enforce. In many countries shareholders cannot vote by mail and have to show up in person at

the shareholder meeting to vote. Also, management controls information and often interferes in the voting process.

Some countries have restrictions which specify that minority shareholders must be treated equally well as large controlling shareholders. Moreover, most OECD countries accept principles of managerial duty to act in shareholders' interest, placing legal restrictions on managerial self-dealing. The strictness with which courts enforce this duty of loyalty, however, varies substantially across countries.

When control rights are concentrated with a small number of large investors, concerted action is much easier than when control rights are split between many small investors. In effect, concentration of ownership facilitates legal protection and therefore corporate governance is often exercised by large investors. However, since large investors represent their own interest, which need not coincide with the interests of other investors in the firm, concentrated ownership has its own costs. There is a chance that large investors expropriate other investors and stakeholders in the firm, particularly if their control rights are significantly in excess of their cash flow rights. They may do so by paying themselves special dividends or by exploiting other business relationships with the companies that they control. With the exception of the USA and the UK, large shareholdings are the norm in most countries (see, for example, La Porta et al., 1999).

Corporate governance systems vary greatly across countries. In the USA, both small and large shareholders are protected through an extensive system of rules that protects minority rights, allows for easy transfer of shares and keeps elections of directors relatively uninhibited by managers. Moreover, shareholders have extensive powers to sue directors for violations of fiduciary duty, including through class action suits to get around the free-rider problem of dispersed share ownership.

In much of the rest of the world investors have unsatisfactory legal protection, either because laws provide poor protection or because courts do not enforce these laws. As a consequence, firms remain family controlled and, even in some of the richest countries, have difficulty raising outside funds. La Porta et al. (1998) show that companies in countries with poor investor protection have more concentrated ownership of their shares, perhaps because equity is less attractive to small investors in countries where their rights are poorly protected.

Creditor rights

Since default is a reasonably straightforward violation of a debt contract that can be verified in court, legal protection of creditors is often more effective than that of shareholders. Creditors' legal rights include, for example, the right to seize assets that serve as collateral for loans and the right to force the firm

into bankruptcy when it fails to service its debts. In contrast to the enforcement of shareholder rights, creditors can act on their own against a failing debtor without taking coordinated action by multiple creditors.

The severity of the bankruptcy threat for the firm's owners and managers depends on the specific provisions of the bankruptcy code. Creditors in the USA have few rights relative to creditors in Germany and Japan. In US bankruptcy, managers and equity holders receive substantial protection from creditors. As with shareholder rights, the extent to which courts are willing to enforce the law is ultimately what determines the degree of creditor protection.

Sweden

In an international comparison of legal systems presented by La Porta et al. (1998) Sweden scores relatively low on the protection of shareholder rights. In Sweden, voting rights are not required to be tightly linked to cash flow rights and the law endorses shares with different voting rights. For example, the investment companies Investor and Industrivärden together control 67 per cent of the votes in the telecom giant Ericsson although they own only 7 per cent of the total shares outstanding.[1]

Swedish law provides relatively poor protection of minority shareholders against managers and dominant shareholders in the corporate decision-making process. That is, shareholders cannot proxy vote by mail; and there are no procedures for proportional representation on the board and no provisions for cumulative voting for directors to grant minority shareholders representation on the board.

Moreover, there are no legal mechanisms for minority shareholders against perceived dominance by directors, including the right to challenge directors' decisions in court. Minority shareholders who object to certain fundamental decisions of management or the shareholder meeting, such as mergers or assets sales, lack the right to force the firm to repurchase their shares. On the other hand, in Sweden shares cannot be blocked before a shareholder meeting and shareholders have a pre-emptive right to buy new issues of stock. Perhaps as a result of the generally weak protection of minority shareholders, Swedish firms tend to be dominated by large shareholders.

In contrast to the relatively poor protection of small shareholders, creditor rights are well protected in Sweden. There is a legal reserve constraint, which requires the firm to maintain a minimum level of capital to avoid being forced into liquidation. In bankruptcy secured creditors are assured the right to collateral; and management has to hand over the control rights to a trustee with no option to seek protection from creditors in a reorganization procedure such as the US Chapter 11.

Importantly, according to La Porta et al. (1998), Sweden scores high in the enforcement of investors' legal rights in terms of an efficient judicial system,

the rule of law, low corruption and little risk of expropriation by the government. Sweden also comes out on top with high quality of accounting standards, intended to grant investors reliable and transparent disclosures.

The Firm's Internal Governance System

The regulatory framework alone is not sufficient to grant adequate protection to outside investors. As a complement to the legal framework, firms set up an internal structure for corporate governance. The three main components of the firm-specific governance system are board oversight, executive compensation and financial contract design.

Board oversight

Shareholders' main instrument for monitoring the manager's activities is an efficient board of directors. The company's board hires, monitors and fires management, and sets executive compensation. However, even though shareholders elect the board, directors need not necessarily represent the owners' interests. Many countries, such as Germany and Norway, require boards to have significant employee representation. Other countries, such as Japan, allow corporate insiders to dominate the board. Without an external nomination committee proposing new directors to the board, the current insiders have substantial influence over the election of new directors. Jensen (1993) argues that corporate boards in the USA are often captured by the CEO. The directors of Enron, for instance, failed to adequately oversee the firm's off-balance-sheet transactions, to require arm's-length transactions by its corporate officers and to limit generous executive compensation contracts.[2]

There is a large body of literature examining the relationship between board characteristics and corporate performance. As alluded to in the introduction, it is difficult to empirically establish a relationship between firm performance and board characteristics due to endogeneity problems and lack of power to identify governance effects at the margin. Not surprisingly, in a survey article Hermalin and Weisbach (2001) fail to find a systematic link between board composition and firm performance. Board size, however, tends to be negatively related to firm performance. Nevertheless, attempts to show a link between governance characteristics and specific events have generally proven more successful. Hermalin and Weisbach (2001) summarize evidence showing that both the composition and size of the board are correlated with its decisions regarding CEO replacement and executive compensation.

Executive compensation

The second element of the internal governance system is the level and design of the compensation package provided to corporate officers. Optimal incentive

contracts are designed to induce managers to act in shareholders' interests. To make incentive contracts work in practice, however, the performance measure determining managerial compensation must be highly correlated with the quality of the manager's decisions and his/her effort. If this correlation is weak, compensation programmes have little incentive effect. Over the last decade, an increasing portion of managerial compensation has been in the form of stock and options awards.

While the intention of stock-based compensation is to increase managers' focus on shareholder value by tying a substantial part of their personal wealth to the firm's stock price, there is a flipside as well. One problem is that stock-based programmes create opportunities for managerial self-dealing, allowing allocation of stock option grants shortly before good news about the firm is made public. See, for example, Murphy (1998) for a review of the literature on executive compensation. Moreover, the recent demise of, for example, Enron, WorldCom and Tyco has prompted allegations that sizeable stock and option awards to top executives may generate an emphasis on short-term earnings and sway mangers to manipulate the earnings statement.

Financial contract design

The third component in the internal governance system is the design of the firm's different financial contracts. For instance, firms often choose to issue only one class of common stock, even if the law allows shares with different voting rights. Shareholders can refuse the adoption to the corporate charter of shareholder rights plans or 'poison pills', which delegate extensive power to management to block a hostile takeover attempt. Creditors may demand restrictive covenants that protect them from large leverage increases or govern how fast creditors can gain control over the firm's decisions, were it to fail to sustain required financial ratios or default on its debt.

Failure of one or more of the internal governance mechanisms – internal monitoring, the incentive effect of executive compensation packages or the design of the firm's financial contracts – increase the risk of expropriation of outside investors by corporate insiders. Below I focus in particular on fraudulent transfers of funds, fraudulent financial reporting, which makes outside investors overpay for the firm's financial securities, and customer fraud.

EXPROPRIATION THROUGH FRAUDULENT TRANSFERS

This section discusses fraudulent transfers of funds from the firm. I first discuss transfers by controlling shareholders at the expense of minority

shareholders, so-called tunnelling, and then turn to transfers that leave the firm insolvent, and thus reduce the assets left for creditors.

Tunnelling

One mechanism by which corporate insiders can expropriate wealth is by selling the firm's assets or output at below-market prices to a firm owned by the insider or his relatives, so-called tunnelling of assets. The market value of services, intangible assets and technological innovations such as a software code can be particularly difficult to verify in court and therefore onerous to uncover for corporate outsiders. The risk of tunnelling by controlling shareholders is higher in countries with poor minority shareholder protection and poor judicial efficiency.

Empirical evidence on tunnelling

Systematic empirical evidence on tunnelling is sparse. One exception is Bae et al. (2002), who examine the prevalence of tunnelling among acquiring firms in Korea. Many of the acquirers belong to large business groups, *chaebols*, where the ownership is concentrated with one individual who controls almost all firms within the group. The study shows positive abnormal announcement returns for non-*chaebol* bidders, while the returns are negative for *chaebol*-affiliated bidders that perform well prior to the acquisition. Interestingly, the acquisitions by *chaebol* bidders have a significantly positive effect on the market value of the other firms in the *chaebol*. The results indicate that *chaebol* firms make takeover decisions that are beneficial only to controlling shareholders and support the view that acquisitions provide controlling shareholders with an opportunity for tunnelling.

Similar results are found for business groups in India. In a study of the flow of resources between firms in the same group, Bertrand et al. (2000) suggest that a significant amount of tunnelling is taking place.

Interestingly, Johnson et al. (2000) show that tunnelling also occurs in countries with effective law enforcement and not just in emerging markets. They provide examples of judicial decisions in Belgium, France and Italy, in which the courts allowed substantial expropriation of minority shareholders. Johnson et al. (2000) posit that common law countries may prevent tunnelling better than civil law countries because of a broader application of the duty of loyalty, a lower standard of proof in conflict of interest situations, less emphasis on stakeholder interests and more reliance on fairness to regulate self-dealing.

The value of voting rights

The incentive to transfer resources out of the firm increases when the

controlling shareholder's voting rights substantially exceed his cash flow rights. This is because the large shareholder now controls corporate decision making while his cost in terms of lost cash flow is relatively low. Voting rights deviate from cash flow rights when control is exerted through pyramidal structures and when there are several classes of common stock with different voting rights. The value of voting rights varies across countries, probably with the protection of minority shareholder rights and large shareholders' opportunities to expropriate value. For a discussion of the value of voting rights of publicly traded firms see, for example, Lease et al. (1983) and Zingales (1994).

Fraudulent Transfers by Financially Distressed Firms

If a transfer reduces corporate assets so that the firm is left insolvent, some of the costs of the expropriation will be borne by creditors. With financial distress and corporate default imminent, such wealth transfers can take the form of servicing selected debt claims that have little chance of recovery in a formal restructuring, for example, the repayment of a subordinated loan to a firm owned by the controlling shareholder or preferential payments to suppliers that are of continued strategic importance to the corporate insider. These payments circumvent the priority order of the firm's debt and deprive senior and secured lenders of their source of repayment.

Fraudulent conveyance

When a fraudulent transfer leaves the firm insolvent, the transaction is typically legally voidable and the recipient can be forced to return the assets for satisfaction of the debt. In the USA the bankruptcy court can invalidate transfers made within 90 days prior to filing (within one year if the transfer involves corporate insiders). Fraudulent conveyance is a non-contractible legal rule which allows recovery from third-party transferees not parties to the debt contract. This law forbids all possible transactions where the borrower receives less than 'reasonably equivalent value' for the asset transfer and is insolvent after it occurs.

Heaton (2000) argues that the fraudulent conveyance rule is a complement to private contracting that increases firms' debt capacity. With private contracting only, the firm is unable to commit to not fraudulently transferring assets when such transfers are in the interest of corporate insiders and where proceeds can be shielded from the lender's contractual remedy. The inability to commit will severely limit the firm's ability to borrow, in particular when assets are highly liquid and therefore attractive for insiders to liquidate. This somewhat counter-intuitive result – that liquid assets may lower debt capacity – is referred to as the 'paradox of liquidity' by Myers and Rajan (1998). The

introduction of fraudulent conveyance law, however, allows the lender to recover fraudulently transferred assets and therefore dramatically increases debt capacity.

Nevertheless, there are limits to the efficiency of fraudulent conveyance law. Adequate enforcement requires that it be possible to identify the asset transfer and determine a market value. Moreover, the third-party transferee has to have sufficient assets to be able to repay the claim as well as be located in a jurisdiction where the court has judicial power. Failure of any of the above may prevent the bankruptcy estate from successfully recovering fraudulent transfers made by financially distressed firms.

Secured debt

Secured debt provides a protection against fraudulent asset transfers by allowing the secured creditor to seize the collateralized assets from a third-party buyer. This contrasts with fraudulent conveyance law, which protects unsecured creditors as a group and gives no lender rights in specific assets. While secured debt to some extent can substitute for fraudulent conveyance law, the latter provides lenders with an enhanced protection. For example, it is practically impossible to take a security interest in all of a borrower's assets. Moreover, secured debt contracts require continuous monitoring and are costlier to write.

Empirical evidence on fraudulent conveyance

It is possible that the threat of invalidating transactions under fraudulent conveyance law reduces buyers' willingness to acquire assets from firms in financial distress. There is, nevertheless, ample evidence of asset sales among distressed firms; see, for example, John et al. (1992) and DeAngelo et al. (2002).

Datta and Iskander-Datta (1995) examine asset sales for a sample of firms filing for US Chapter 11 bankruptcy and find that 65 per cent of firms divest assets over a two-year period prior to filing, while 63 per cent divest assets after filing. They conclude that financially distressed firms sell off assets to the same extent before and after bankruptcy filing, and suggest that the provision for recovering assets due to fraudulent conveyance does not pose a serious impediment to divestitures during financial distress.

Fraudulent Transfers in Sweden

As discussed above, in Sweden the protection of minority shareholder rights is relatively weak, deviations from the principle of one-share-one-vote are common and ownership is typically concentrated. There is hence a non-trivial risk of expropriation of corporate resources by dominant shareholders.

In this chapter I provide some simple univariate statistics based on the sample of 263 privately held small Swedish firms filing for bankruptcy during 1988–91, examined by Thorburn (2000). Over a two-year period prior to filing, 30 firms (11 per cent) transferred major assets to another firm owned by the controlling shareholder. There are, however, insufficient data in the bankruptcy file to assess whether the distressed firm was adequately compensated or if these transfers reduced the assets available to creditors.

Fraudulent transfers by financially distressed firms

In Swedish bankruptcy the invalidation period for fraudulently transferred funds that leave the firm insolvent is typically 90 days, with two years to recover preferential transfers to corporate insiders. Information on allegations of fraudulent conveyance is available for 235 of the filings in Thorburn (2000). Charges of fraudulent transfers were made in a total of 53 cases (23 per cent), of which the funds were successfully recovered in two-thirds (38) of the alleged cases.

In a majority of the allegations (86 per cent) the transfer had been made to a controlling shareholder. The remaining cases involved preferential payments to suppliers and banks that bypassed the priority order of debt claims. The average size of funds recovered based on a fraudulent conveyance charge was SEK 606000, which on average represented 7 per cent of the face value of total debt, with a maximum recovery of SEK 5.1 million, representing two-thirds of that firm's total debt claims.

Auction prepacks

Upon bankruptcy filing in Sweden the firm is sold in an auction, either piecemeal or as a going concern. Thorburn (2000) reports that one-quarter of the going concern sales are arranged just prior to filing, while the shareholders are still in control of the firm. In these transactions, which she labels auction prepacks, the incumbent owner–manager negotiates a sale of the firm's assets. The remaining corporate shell – with whatever assets are left, including the settlement for the going concern sale – subsequently files for bankruptcy.

The asset sale, which must be approved by the firm's secured creditors (typically banks) and afterwards by the trustee, shortcuts the bankruptcy auction process and eliminates competition among buyers. For the majority of prepack sales (58 per cent) the buyer was another firm owned by the controlling shareholder. Thus it is possible that controlling shareholders use auction prepacks to tunnel resources out of the firm prior to declaring bankruptcy, reducing the assets left for creditors.

In only one case, however, did the trustee object to the transfer price and declare the transaction invalid. Moreover, Thorburn (2000) reports similar creditor recovery rates across auction prepacks and regular going concern

sales, providing little support for the notion that prepacks are used by controlling shareholders as a mechanism to expropriate wealth.

Efficiency of the auction

If the liquidity in the bankruptcy auction is poor, buyers may purchase distressed assets at fire-sales price; see, for example, Shleifer and Vishny (1992) and Pulvino (1998). Moreover, as in Strömberg (2000), old owners may have an informational advantage about the value of assets and buy back the firm when the assets are undervalued. Eckbo and Thorburn (2002), in contrast, claim that the filing firm's bank often has an incentive to finance a bidder in order to increase the liquidity in the auction. When the bank has an impaired debt claim on the filing firm, its payoff is increasing in the auction price. As a result, the bank's optimal strategy is to provide liquidity and encourage overbidding.

Using a sample of Swedish bankruptcy auction cases, Eckbo and Thorburn (2002) show that the auction premium increases with a measure for the bank's incentive to overbid, consistent with their model. Also, they find no evidence in support of asset-fire sales arguments. Importantly, the premiums paid in the auction when an old owner repurchases the firm are not significantly different from premiums paid by external buyers, providing little evidence that shareholders of filing firms can use the bankruptcy auction to expropriate creditors.

Areas for Future Research

The above discussion of expropriation through fraudulent transfers generates several interesting questions with reference to Sweden. First, given the relatively poor legal protection of minority shareholders, it is natural to ask whether controlling shareholders in Sweden tend to expropriate funds through tunnelling. If this is not the case, what can explain a possibly low level of tunnelling in Sweden? Are certain institutional characteristics or social norms related to governance different from other countries where the existence of tunnelling has been confirmed? Or does the likelihood of tunnelling depend on specific characteristics of the firm's internal corporate governance system? If so, what measures can minority shareholders take to reduce the risk of expropriation?

A second issue is whether auction prepacks can be used by controlling shareholders to expropriate wealth from a financially distressed firm before creditors get to share whatever is left of the firm's assets. This has potentially important implications for bankruptcy law and for how trustees should treat going concern sales of the firm's assets that are executed just prior to filing.

Third, do firms undertaking fraudulent transfers that leave the firm

insolvent display certain characteristics? For example, are allegations of fraudulent conveyance more common for firms with certain corporate governance characteristics? The identification of such characteristics could help guide junior creditors, for example, trade creditors, in taking preventive measures to avoid lower recovery in bankruptcy resulting from fraudulent transfers. Furthermore, there is little evidence showing to what extent fraudulent transfers are successfully recovered and why it is sometimes impossible to recover the transferred funds.

A fourth set of issues relates to the possibility of substituting recovery based on fraudulent conveyance with the security provided by collateral. In particular, it is possible that fraudulent conveyance law plays a less prominent role in countries that allow floating-charge claims (for example, Sweden or the UK) and where basically all the firm's assets can be pledged as collateral, compared to countries where only fixed assets are used as collateral (for example, the USA).

CORPORATE GOVERNANCE AND FRAUD

The firm's corporate governance system and, in particular, the oversight of the board of directors may be important in preventing fraud. For example, outside directors are more likely to act independently of management and to be more efficient monitors than inside directors. Moreover, the level of stock ownership by outside directors is expected to align their incentives with shareholders, thereby improving their monitoring.

Evidence on Governance Characteristics and Fraud

In the USA, auditors are required to assess the risk of fraudulent financial reporting. The *Statement on Auditing Standards (SAS) No. 82 'Consideration of Fraud in a Financial Statement Audit'* identifies 25 risk factors (red flags) that should be considered by auditors when making a fraud risk assessment. These risk factors include characteristics of the firm's management, operating and financial stability as well as industry conditions.

Interestingly, auditors perceive management characteristics to be crucial in the evaluation of the probability of accounting fraud. Specifically, Apostolou et al. (2001) observe that auditors tend to give most weight in their fraud assessment to red flags, indicating that managerial compensation contracts are tied to aggressive accounting standards and managerial 'bad attitudes' to financial control.

Several studies show that board independence and incentives matter for the incidence of financial fraud. Beasley (1996) finds that the likelihood of

financial statement fraud decreases with the proportion of outside directors on the board and with the fraction of stock ownership of outside directors. Dechow et al. (1996) show that firms are more likely to be subject to accounting enforcement actions by the Securities and Exchange Commission (SEC) for alleged violations of Generally Accepted Accountancy Principles (GAAP) when the board is dominated by company insiders, the CEO is also chairman of the board and the CEO is the firm's founder. They also find a higher incidence of enforcement actions in the absence of an audit committee or external block holder that monitors management.

Examining whether multiple board assignments inhibit directors' ability to monitor, Ferris et al. (2002) find no relation between the number of directorships held by the board members and the likelihood of securities fraud litigation against the firm.

While large shareholders may expropriate small shareholders, they also have strong incentives to actively monitor the firm's management. Gerety and Lehn (1997) show that a higher level of equity ownership across directors, and specifically concentration of ownership in one individual board member, reduces the probability of accounting fraud. Moreover, fraud is more likely when the firm's assets are difficult to value, for example, due to high R&D or substantial intangible assets. Alexander and Cohen (1999) report that corporate crime occurs less frequently when management has a larger ownership stake in the firm. They further find that corporate crime is more likely the longer the tenure of the CEO, perhaps because tenure is a proxy for CEO entrenchment.

Firms disclosing alleged illegal corporate activities experience significant stock-price declines. Karpoff and Lott (1993) report an average two-day abnormal stock-price decline of −1.6 per cent when corporate fraud allegations are announced, with an average stock-price decline of −4.7 per cent for allegations of financial reporting fraud. These stock-price declines may reflect the present value of lost quasi-rents established through repeated contracting, for example, in the form of lower future prices on the firm's output or financial securities. See also, for example, Strachan et al. (1983) and Alexander (1999) for further evidence of negative announcement returns from the disclosure of potential fraud.

The impact of fraud revelation on turnover of top executives and directors of the board is studied by Agrawal et al. (1999) for a sample of US firms suspected of or charged with criminal fraud. Fraud scandals can create incentives to replace incumbent managers in an attempt to improve firm performance, restore reputation or limit the exposure to liabilities arising from the fraud. The revelation of fraud may also create incentives to change the composition of the firm's board in order to improve monitoring, or gain access to valuable reputation of new directors.

Controlling for performance and other firm characteristics, Agrawal et al. (1999) find little systematic evidence that fraud allegations lead to a higher turnover among senior managers or directors. Gerety and Lehn (1997), however, show a significant decline in the number of other directorships held by directors of firms charged with accounting fraud compared to directors of control firms, suggesting that the incidence of fraud may negatively affect directors' reputation for monitoring.

Fraud and Financial Distress

For a given level of monitoring, it is conceivable that fraud is more prevalent among poorly performing firms. Similar to the shareholder risk shifting incentives in Jensen and Meckling (1976), the threat of imminent failure may provide incentives for management to take excessive risks in an attempt to stay out of bankruptcy. That is, if managers face substantial personal cost as the firm fails, they may prefer short-sighted fraudulent actions – for example manipulation of the firm's financial statements – in order to delay or entirely avoid bankruptcy filing. As shown by Maksimovic and Titman (1991), shareholders of a distressed firm may have incentives to cut costs and reduce the quality of the firm's products to avoid immediate bankruptcy.

There is little empirical work examining how financial distress affects the incidence of corporate fraud. One notable exception is a study by Alexander and Cohen (1996), which fails to establish a relation between the probability of sentencing for US Federal crimes and the firm's preceding three-year industry-adjusted growth rate in earnings (EBIT).

Evidence on Sweden

Aghion et al. (1992), White (1996) and Hart (2000) warn that shareholder incentives to 'go for broke' by taking excessive risks are particularly prominent when the bankruptcy procedure treats management harshly; that is, when the firm is auctioned off. Eckbo and Thorburn (2003), on the other hand, argue that managers care about the chance of getting rehired by the buyer in the auction, allowing them to maintain private benefits of control. In their model the existence of private benefits may induce managerial conservatism, counteracting shareholder risk-shifting incentives. Based on a sample of firms filing for auction bankruptcy in Sweden, they present empirical evidence consistent with the notion that private control benefits mitigate risk-shifting incentives for financially distressed firms.

In Thorburn's (2000) sample of Swedish bankruptcies, 261 cases contain information on whether or not the trustee discovered fraudulent accounting practices or suspected economic criminal activities. Fraudulent accounting practices were found for a total of 61 firms (23 per cent) and allegations of

economic crime were made in 52 cases (20 per cent). The Pearson correlation between these two events is 0.52, which is statistically significant (p=0.000). While I lack comparable numbers for non-bankrupt firms in Sweden, the incidence of accounting fraud and economic crime for bankrupt firms appears relatively high.

Interestingly, the likelihood of piecemeal liquidation is somewhat higher for firms with fraudulent accounting practices, with 30 per cent of these firms sold piecemeal versus 20 per cent for non-fraud firms. Moreover, it is more common that a creditor files the bankruptcy petition when the firm was engaged in financial fraud (25 per cent versus 4 per cent for non-fraud firms), or alleged with economic crime (31 per cent versus 4 per cent for non-alleged firms).

The higher incidence of piecemeal liquidation and the lower tendency to 'voluntarily' file for bankruptcy both indicate that owners and managers of firms involved in fraudulent reporting or other criminal activities may be less inclined to rescue any remaining going concern value. Not surprisingly, these firms also report significantly lower creditor recovery rates, measured as the payoff to creditors divided by face value of total debt, than non-fraud and non-crime firms. The recovery rate of firms charged with fraudulent accounting practices averaged 25 per cent (median 21 per cent) compared to an average recovery rate of 38 per cent (median 37 per cent) for non-fraud firms. The corresponding rate for firms with alleged economic crime was an average of 27 per cent (median 26 per cent).

Areas for Future Research

As discussed above, a relationship between corporate governance characteristics, such as the monitoring efficiency of the board and the occurrence of fraud, has been demonstrated for publicly traded firms. However, evidence is sparse on the importance of different governance characteristics for small, privately held firms. For example, why would a dominant shareholder who basically owns the entire firm encourage accounting fraud? Whom is he fooling? Is the board of directors of a small, closely held firm sufficiently independent to actively monitor in order to prevent fraud?

In the absence of dispersed shareholders, the motivation for financial statement fraud may be to expropriate or hold off banks and other creditors, including tax claims. If so, it is possible that outside financial distress, small closely held firms are less likely to commit financial accounting fraud than large, widely held firms. However, it remains to establish whether the incidence of fraud indeed is higher for financially distressed firms compared to non-distressed firms, both among publicly traded and privately held firms.

Although the frequency of fraudulent accounting and economic crime allegations may seem high for firms in Swedish bankruptcy, it is possible that the probability of discovery simply is greater in bankruptcy since the firm's books are opened up to an outside independent trustee.

Given the generally lower recovery rate for creditors when the firm is alleged with fraudulent accounting or economic crime, these activities seem to impose substantial costs on creditors. One set of issues in need of further research relates to whether creditors can protect themselves from expropriation through fraud by monitoring certain firm and management characteristics. What characterizes firms charged with accounting fraud or economic crime, for example, in terms of governance characteristics and ownership structure? Does the structure of the firm's debt matter, for example, and does secured debt reduce the opportunity for management to expropriate assets?

CONCLUSIONS

Corporate governance is a set of mechanisms designed to ensure that corporations return some of their profits to outside investors. Shareholder and creditor rights are enforced through the different features of a country's laws and regulations. Moreover, firms design internal governance systems consisting of board oversight (monitoring management), executive compensation (providing incentives) and financial contracts (allocating rights between the firm's security holders). A transparent and stringent accounting practice helps provide investors with the information necessary to take actions. Finally, an effective governance system requires strict enforcement of contracts and regulation by regulators, courts and market participants. Failure of one or more of the governance mechanisms increases the risk of expropriation by corporate insiders.

Corporate insiders can expropriate wealth by selling assets or issuing securities at below-market prices to a firm controlled by the insider. The risk of tunnelling by controlling shareholders is higher in countries with poor protection of minority shareholders but seems to exist also in civil law countries with efficient court systems. When the transfer of assets leaves the firm insolvent, funds can be recovered through fraudulent conveyance law. Thus fraudulent conveyance law increases the firm's debt capacity, complementing the use of secured debt.

In one-quarter of the firms in Thorburn's (2000) sample of Swedish bankruptcy filings the trustee tried to recover funds based on fraudulent conveyance law. Moreover, there is a possibility that auction prepacks where the firm's assets are sold to another firm owned by the controlling shareholder

are used to expropriate creditors. Improved knowledge of the characteristics of the governance system of firms undertaking fraudulent transfers of assets could help creditors monitor more efficiently.

Extant research has established a relationship between board characteristics and the occurrence of fraud for publicly traded firms. The more independent the board of directors, the better monitoring it provides and the lower is the incidence of corporate fraud. It is conceivable that corporate fraud is more common for financially distressed firms. The firm and its manager–owners have much at stake in a bankruptcy filing, which increases the incentives to gamble in an attempt to stay out of bankruptcy, for example, by fraudulent reporting. However, the empirical evidence on this issue is sparse, creating demand for more research on fraud and financial distress.

NOTES

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1. The ownership information is per year-end 2001, and the source is SIS Ägarservice AB.
2. In 2000, Enron's board approved bonuses of $750 million to senior managers and officers, compared with total corporate profits of $975 million.

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7. Tax compliance by businesses

Paul Webley*

INTRODUCTION

The Meaning of 'Tax Compliance'

Tax compliance is a deceptively straightforward term. There are tax rules (for example VAT laws, regulations on corporation tax filing) and businesses that follow the rules are showing tax compliance. Those that don't are non-compliant. But there are some legal and conceptual distinctions that must be borne in mind at the outset. Social scientists tend to use the terms 'tax evasion', 'tax fraud' and 'tax (non-)compliance' interchangeably. A search through the literature shows that they favour the first (probably because the deliberate breaking of rules is more theoretically tractable) but this is inappropriate. Tax authorities and tax agencies very clearly prefer the term 'compliance'.

So it is appropriate to begin with some definitions. In the UK (and in most jurisdictions) there is a legal distinction between tax evasion and tax avoidance. Tax evasion is illegal. It involves deliberately breaking the law in order to reduce the amount of tax paid. It can involve acts of omission (for example failing to report certain assets to the tax authorities) or commission (for example, falsely reporting personal expenses as business expenses). Tax avoidance is not illegal. It involves 'every attempt by legal means to reduce tax liability which would otherwise be incurred by taking advantage of some provision or lack of provision in the law … it presupposes the existence of alternatives, one of which would result in less tax than the other (Royal Commission on Taxation, 1966, p. 538). Tax compliance is a more neutral term. A business may fail to comply with the tax rules for a multitude of reasons but this does not mean that the owners or managers have broken the law. A business owner may simply not understand a tax form or aspects of the tax paying procedure; he or she may miscalculate in working out how much earnings should be declared; or may genuinely forget some earnings and may not know that certain kinds of expenses are tax-deductible.

These distinctions are legalistic or commonsensical. Following McBarnet

(1992, 2001), one can draw a more psychological distinction between committed compliance, capitulative compliance and creative compliance. Committed compliance is willing compliance – business owners who pay their taxes with no complaint. Capitulative compliance is unwilling compliance – owners who grudgingly pay their taxes, complaining all the while. Creative compliance is rather different. This occurs when owners ask their lawyers to find ways of packaging their business activities to take advantage of particular laws and loopholes (in other words, engaging in what they hope will be seen by the authorities as tax avoidance).

Definitions may be tedious but they do matter. If one wants to explain compliance, it is necessary to investigate mistakes and errors as well as intentional fraud, and to acknowledge that non-compliance might actually, in some instances, involve the overpaying of tax. Creative compliance adds a further level of complexity: while tax compliance generally implies cooperation with the tax authorities, creative compliance is actually designed to frustrate the aims of the authorities – and so is also a behaviour that needs to be considered carefully.

What Taxes do Businesses Pay and Collect?

Most western tax systems rely on companies to pay income taxes (corporation tax), but also to pay and collect excise, payroll, property, and sales taxes, such as value added tax (VAT) and general sales tax (GST). This places a considerable burden on businesses and also creates scope for non-compliance in a wide variety of ways. Businesses have several different roles in the tax system. First, they are legal entities that are liable to certain taxes. They must pay corporate income tax, property taxes, payroll taxes and sales taxes. In Sweden, for example, limited companies pay 28 per cent of their taxable income in tax, pay a payroll tax of 8.04 per cent and pay VAT at three different rates (25 per cent, 12 per cent and 6 per cent) depending on the nature of the goods and services sold (Swedish Tax Administration, 1999). Second, businesses have tax collection responsibilities. So, in the USA, for example, businesses are responsible for collecting sales tax though the tax liability lies with the consumer. Third, businesses act as remittance agents for certain withholding taxes (personal income tax, employee payroll taxes). Here businesses withhold the money and then pass it on to the tax authorities, but if insufficient tax is withheld, it is the individual who is responsible for paying the difference. And finally, businesses report information to the tax authorities, for example on dividends paid to individuals. This makes businesses vitally important in the tax system: Christensen et al. (2001) show that in the USA, businesses either pay or collect 84 per cent of total taxes. What is perhaps surprising is that, in general, corporate income tax is not a

major source of revenue in the western world. It provided an average of 8.7 per cent of government revenue in the EU in 1998. In the UK it was rather more important (11 per cent), in Sweden (5.7 per cent) and Denmark (5.6 per cent) much less so (Riksskatteverket, 2002). To put it in context, Swedish employers' social security contributions are four times greater than their corporate income tax payments.

What this Chapter Aims to Do

The main aim of this chapter is to provide an overview of the area of tax compliance by businesses. The focus will be on economic crime (that is, crime committed for economic gain within a business environment) – non-compliance resulting from errors and misunderstandings will be mentioned where appropriate but not highlighted. Work on non-business tax compliance (which is far more extensive) will be drawn on when appropriate. A secondary aim of the chapter, but a very important one given the lack of research in certain areas, is to identify suitable topics for future investigations.

THEORETICAL APPROACHES TO TAX COMPLIANCE

There is a very extensive literature in this area, and it would be easy to devote an entire chapter to theories alone. Only those most relevant to businesses will be reviewed in the following section: good general accounts can be found in Andreoni et al. (1998) and Hasseldine and Li (1999).

Economic Theories

The earliest economic theory of tax evasion, that of Allingham and Sandmo (1972), is extremely simple and represents the decision to evade as a straightforward matter of maximizing expected utility. It treats people as rational and amoral and assumes that behaviour is influenced by factors such as the tax rate (which determines the benefits of evasion) and the penalties for fraud and the probability of detection (which determines the cost). Individuals have a straightforward choice – they may declare all of their income, some of it or none of it. The model predicts, unsurprisingly, that a decrease in the probability of detection and a decrease in the penalty rate lead to an increase in tax evasion. In its dynamic form, where discovery of tax evasion leads to past tax returns being audited, income declarations increase over the years.

This simple classical model predicts that both severity of penalties (the size of the fine) and the chance of being detected with have an impact on compliance. If the chances of being caught and the fines are high, businesses

(and individuals) will be more compliant. But the evidence suggests that penalties are less of a deterrent than the chance of being caught and that individuals are much more compliant that the classic model would predict. In many countries fines are roughly equal (or even less) than the amount of tax evaded and the chances of being audited are less than 5 per cent, but most people none the less pay their taxes in full. So the model has been extended in a variety of ways. Myles and Naylor (1996), for example, have included group conformity and social customs in their version. This assumes that there is a social custom utility when taxes are paid properly but which is lost when people evade, and that there is a utility of conformity which is dependent on the size of the population that is conforming. This model predicts that a critical proportion of evaders exists at which an individual will switch from being compliant to evading, and that if an individual evades, they do so at an optimum level. Eide (2001) takes a rather different approach, recognizing that there are serious problems with the expected utility model that lies at the heart of much economic theorizing. Unfortunately, his rank-dependent utility approach gives qualitative results that are similar to Allingham and Sandmo's.

More interesting are interactive models, which recognize that the taxpayer is not taking decisions in a vacuum and that there are other 'players' in the 'game'. There are the tax authorities, who can change the audit and penalty rates, and who can make these different for different taxpayers. Then there are the other taxpayers. If an individual is caught evading when most people comply, his or her reputation may suffer – on the other hand in a population made up of evaders one's reputation, if one evades, may even be enhanced.

A typical game-theoretic approach is that of Corchon, described by Cowell (1990). Here the situation is treated as a two-person game involving the tax authorities and the taxpayer. Each has only two choices: the taxpayer can comply or evade and the authorities can investigate or not. There is no equilibrium in this model (if the taxpayer is compliant there is no point in the authorities wasting money investigating and if the authorities are not investigating it is worthwhile for the taxpayer to evade). This model may seem absurdly simplistic but developments of it are not. In his model, Greenberg (1984) looks at the consequences of the tax authorities dividing the population into three groups. Group A (presumed to be honest) have a small probability of being investigated. Group B (known evaders) have – rather strangely – an even smaller chance of being audited. Group C (persistent and incorrigible evaders) are always audited. The tax authorities tell everyone about these groups and inform the population that people will be shifted from group to group according to a simple rule. If you are in group A and are caught evading, you will be moved into group B. If you are in group B, what happens to you depends on your behaviour. If you are caught evading you are moved to group C where you will stay forever – if you are audited and found to have made an

accurate declaration you are moved back to group A. It is worth reflecting for a moment on how you – the reader – would behave if this were the situation facing you.

The equilibrium position is that no one is in group C, most people are in group B (none of whom cheat because of the severe consequences if they do) and the others are in group A (all of whom cheat). The low audit probability for group B is counter-intuitive, but suffices because the cost of being detected (never being able to cheat again) is so high. What is important is that for the same overall number of audits there is less evasion than there would be if the population were all treated alike.

These economic models of compliance have the merit of being elegant and making clear predictions, but to an economic psychologist there are three major drawbacks to them. First, if the simpler models were accurate, most businesses (and most individuals) would be non-compliers. This does not seem to be the case. Second, and more important, they treat businesses as single units with one simple motivation, that of economic self-interest. There is no role for good citizenship, altruism and, in most economic models, reputation and social customs. Third, they assume that the population is homogeneous, that all businesses are alike. These problems suggest that an alternative approach to theorizing may be more successful.

Alternative Approaches

A very large number of alternative models of tax compliance have been proposed. It is not possible to provide an exhaustive account here (see Hessing et al., 1988 and Hasseldine and Li, 1999 for broad reviews). Three representative theories will be considered: Vogel's (1974) social psychological typology of taxpayers; Smith and Kinsey's (1987) tax decisions in a social context theory and Elffers (1999) WBAD (Willing – Being Able – Daring) model.

Vogel's work, based on a survey of Swedish taxpayers, has been widely cited as he proposes a persuasive typology of taxpayers. He used Kelman's (1965) distinction between compliance, identification and internalization. Compliance – in Kelman's term – is doing what an authority requires without actually believing in it. Identification is when you behave in a certain way to be like someone you admire. Internalization involves a real change in beliefs where ideas, values and behaviour are integrated. So a compliant taxpayer will pay their taxes not because they believe it is morally right to do so, but because they may suffer penalties if they do not, whereas a taxpayer who has internalized values pays taxes because he or she believes it is the right thing to do. Vogel combines these distinctions with two kinds of tax behaviour (cheating and paying taxes in full) to provide a six-fold classification of

taxpayers. Conforming internalizers pay their taxes because they are committed. They believe that this is the right thing for good citizens to do, whereas deviant internalizers cheat because they believe this is morally right: they are best considered tax protesters or resisters rather than tax evaders (some of those who refused to pay the poll tax in the UK in the early 1990s may have fallen in this category; Bowles and Jones, 1993). Conformist and deviant identifiers will pay (or evade) taxes dependent on the social norms of their reference group. Their anxiety is to be different, and they are concerned about social sanctions like ridicule. So – in the UK at least – those working in the building trade would regard 'cash-in-hand' working as normal, and simply acting 'like your mates' would lead to evasion. Finally conformist compliers pay because they fear punishment and deviant compliers evade because they believe the chances of being caught and punished are low.

This classification has considerable merit, although it is hard to verify empirically. It recognizes that people may evade or comply for a variety of reasons. It also recognizes that people differ in the extent to which they are internally or externally driven. So it may help us understand the behaviour of sole traders and the self-employed, if not more complex businesses.

Smith and Kinsey's (1987) approach gives different insights. Unlike most researchers, they do not see compliance as non-problematic, and recognize the importance of the costs of compliance.[1] From their perspective we need to understand what factors foster compliance and not just concentrate on what factors produce evasion. Smith and Kinsey also emphasize the importance of the social context (the different opportunities that people have, the social networks to which they belong and the significance of group processes). They also have a broad view of the factors motivating compliance and non-compliance and appreciate that, while legally tax evasion may be a single decision (signing a fraudulent tax declaration), in fact it is the end result of a series of actions. So they recognize that both compliance and non-compliance may be the result of inertia and mistakes (simple errors or errors resulting from an over-complex tax system). In their model, they have an unusual and helpful focus on the process of decision making which considers how people shift from their habitual response. Aspects of the social context (for example a downturn in the business cycle, changes in tax rules) will make taxes more salient and then people will move through three stages: diagnostic (defining the situation), action (the formation of intentions) and implementation (putting intentions into practice). At any point in this process individuals may return to their normal response. As far as intentions are concerned, four clusters of factors are seen as important: material consequences, normative expectations, socio-legal attitudes and expressive factors, but there is little novel here, other than an emphasis on the importance of celerity (the promptness with which consequences occur).

This approach is clearly very different from the kinds of economic models considered earlier. It does not help us predict behaviour or give a particularly clear account of it. But it does help us understand the complexity of tax compliance and give some insight into the processes involved.

The final model I'll describe is Elffers's (1999) WBAD (Willing – Being Able – Daring) or 'staircase' model. This assumes that most people are at the bottom of the 'staircase' and are compliant. For these good citizens, penalties, audits and other aspects of tax regimes are irrelevant. Some people will be willing to be non-compliant (they are on the first step of the staircase) but will not be able to evade. They may not have the opportunity or knowledge to enable them to do so. Still others will be willing and able, but may not dare to evade (they are on the second step). These individuals would be happy in principle to evade and know how to do so but fear the consequences (research by Webley et al., 2001 suggests that a substantial proportion of UK taxpayers fall in this category). Only for those who are willing and able to are economic calculations (the costs and benefits) relevant. Those who judge the risk acceptable may then dare to evade – the group of actual evaders. This is a simple model but has the advantage of recognizing the existence of different groups with different motivations to comply. This is helpful to the tax authorities (as they can then tailor their approaches to the different groups) but does not explain why people fall into these different categories initially, nor what might shift someone from one group to another.

Regulatory Models

The Australian Tax Office (ATO) compliance model comes from a rather different tradition, that of how to ensure business compliance with regulatory rules (whether concerned with taxation, health and safety, pricing or whatever). Ayres and Braithwaite (1992) proposed a new approach called 'Responsive regulation' and presented it in the form of a regulatory pyramid. The base is made up of cooperative strategies of self-regulation: the top is a 'big gun', which is usually kept in the background. The big gun consists of whatever severe sanctions are available, and there is a clear understanding that officials are willing to use it. The existence of the big gun helps to push enforcement towards the base of the pyramid. In between the top and bottom of the pyramid are intermediate layers, consisting of enforced self-regulation and command regulation with discretionary punishment.

The ATO tax compliance model is a development of this approach, which incorporates research on the different motivational sources of non-compliance and makes the model specific to taxation (Braithwaite, 2003). The ATO regulatory pyramid has three sides: regulatory strategies, enforcement strategies and motivational postures (see Figure 7.1). The regulatory strategies

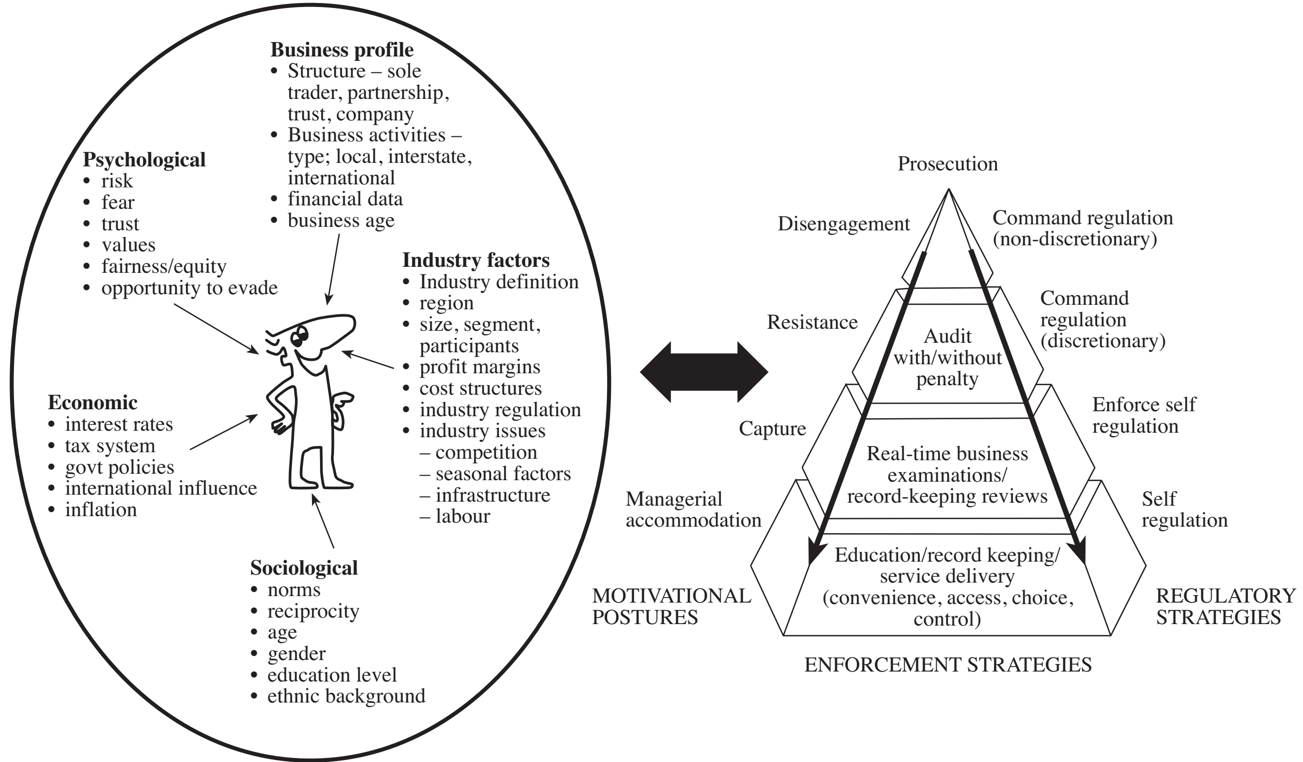

Figure 7.1 The ATO compliance model

are the same as in the responsive regulation pyramid. The enforcement strategies are specific to the tax situation. Thus, at the lowest level there is education and advice about tax regulations and record keeping. There is an assumption that the owners and managers of firms must be treated with respect and that those who are minded to comply will be encouraged to do so by officials who treat them as trustworthy citizens. At the next level, the ATO uses 'real time reviews'. These require less time than traditional audits and involve examining a firm's records for the previous three months. They have an educative focus and are used to foster an understanding of proper bookkeeping practices. If there are significant discrepancies between the records and the tax declaration, the businesses are invited to amend their previous tax returns and only in cases where there appears to be wilful evasion are cases referred upwards for audit and potential prosecution. The final side of the pyramid identifies four common motivational postures. In 'capture', a business accepts and identifies with the regulatory system, in 'resistance' it confronts and challenges the regulations and in 'disengagement' it withdraws from the regulatory process. Different mixtures of motivational postures will be found in different regions and industries and a constellation of factors (known as BISEPS – Business, Industry, Sociological, Economic, Psychological) affect the willingness and ability of firms to comply with tax rules. There are potentially a very large number of BISEPs: Shover et al. (2001) provide a list of 80 for small building and construction firms (a selection is given in Table 7.1 to give a flavour) and emphasize the importance of identifying industry-specific cultures and practices so as to devise appropriate regulatory strategies.

The merit of this approach is two-fold. First it is based on an understanding of businesses, unlike most tax compliance theorizing, which is based on individuals. Second, its focus is on the tax authority (or to be more accurate, the relationship between the regulator and the regulated) and so the policy implications are usually clear. It is, self-evidently, more concerned with those factors that motivate tax compliance that are under the control of the authorities, but it is none the worse for that. Essentially, the ATO model recognizes that non-compliance cannot be effectively dealt with through applying economic and legal sanctions alone and advocates education, persuasion and dialogue as first strategies for gaining compliance. Economic and legal sanctions come into play only if a business does not cooperate. One drawback is that whilst the ATO model assumes that the tax authorities can take a strategic approach (and hide an iron fist in a velvet glove), it ignores the fact that businesses may also do the same. They need not, as the top of the pyramid suggests, disengage, but may 'creatively comply' and frustrate tax policy.

Table 7.1 Building and construction BISEPS

Business	Industry	Sociological	Economic	Psychological
98% returns prepared by tax agents	Cash prevalent in some areas	Low levels of literacy	Currently in growth after long depression	Fear of the tax office
Low membership in industry associations	Low profit margins	Not paying tax is OK – generally	Inflation and interest rates	Folk hero 'Ned Kelly' if you cheat
Minimal written contracts	Highly unionized	Cultural distrust of government	Growth leads to complexities and costs	Peer pressure on apprentices upwards
Low set-up costs	Flexible working patterns	Work/pub mentality	Peaks and troughs	Paperwork overload
Variable record-keeping standards	Barter	Male does labour, wife keeps books	Industrial disputes	See themselves as victims

Source: Shover, et al. (2001), Table 1.

SOME ROBUST EMPIRICAL FINDINGS

Over the years there has been far more research into the area of individual tax compliance (principally concerning personal income tax) than into business tax compliance. The parallel area of corporate income tax compliance has, for example, as Rice (1992, p. 126) pointed out, 'attracted essentially no scholarly activity'. But despite the relative scarcity of research into tax compliance by businesses, some findings recur both in this area and that of individual tax. These are outlined here.

Equity

The perceived fairness of a tax system is important both to its general acceptability and to its smooth functioning. An example of how people may react to an unfair tax system is the reaction to the introduction of the poll tax in Britain (Cullis et al., 1993). Here there was a widespread refusal to pay a regressive tax followed by spreading refusals to pay as tax bills went up as the result of non-payment by others. A tax can be seen as unfair in a number of ways: if those of similar incomes are treated differently, there is 'horizontal inequity' (this was the case in the poll tax), whilst if the government is seen as

providing too little with the taxes it raises there is 'vertical inequity'. Both are associated with non-compliance: a person feeling hard done by because a friend with a similar income pays less tax may redress the balance by not declaring some income, as can someone who feels that the government is not fulfilling their side of the bargain. The survey and experimental evidence paint a pretty consistent picture (see Cowell, 1992). Wärneryd and Walerud (1982), for example, found in a telephone survey that those agreeing with the statement 'The Swedish tax system is unjust' and disagreeing with the statement 'Taking into consideration what the citizen gets from the state, our taxes are too high' were much more likely to admit evasion than those with opposite opinions. In an experiment Moser et al. (1995) found that participants declared less income as tax rates increased when they were inequitably treated relative to others, but not when they were equitably treated relative to others: here we see the impact of changes of tax rates being moderated by perceived inequity. Recent work by Adams (1996), using the 'Fiscal Monitor' (a regular survey of the attitudes and opinions of Dutch businesses regarding the tax system) showed that perceived inequity in the taxation system was the most important variable predicting non-compliance in those running small businesses in Holland. But a caveat is in order. Whilst there is a great deal of survey evidence linking inequity with non-compliance, this may be an after-the-fact rationalization rather than a factor which instigates evasion.

Opportunity

Taxpayers, whether individuals or business entities, differ in the opportunities they have to be non-compliant. An employee in the UK, for instance, pays his or her tax via a PAYE (Pay As You Earn) system, where the employer withholds the tax due each month, adjusting the amount withheld as necessary over the year. There is no opportunity to under-declare income and rather limited opportunities to overstate or invent deductions, since there are only a small number of allowable deductions for employees. In contrast, a self-employed individual has many more opportunities to conceal income or declare unwarranted or inflated deductions. This pattern – where greater opportunity is associated with self-employment – is true in most countries. And it is also true that, with almost no exceptions, surveys have shown that respondents who are self-employed are more likely to be non-compliant. An early example is Vogel's Swedish respondents, where 39 per cent of those who received income not taxable at source admitted evasion, compared to only 21 per cent for those whose tax was withheld.

Opportunity has been reported as the most important explanatory factor in non-compliance in several studies. In addition to data from surveys, there is support from other kind of evidence. For example, 43 per cent of

Wallschutsky's (1984) Australian sample of convicted evaders were self-employed compared to 13 per cent of his group of non-evaders. Cox and Plumley's (1988) analysis of 50000 US tax returns showed that the percentage of the total tax liability voluntarily reported was much higher for wage earners (95 per cent) than for individuals whose main source of income was business related (77 per cent). In a series of experiments, where participants had to 'run' a shop and take a wide variety of decisions, opportunity consistently emerged as an important factor (Webley et al., 1991). Here greater opportunity consisted simply of being able make more kinds of deductions for expenses. And perceived deduction opportunities are also associated with tax officials' classification of people as non-compliant (Elffers, 1991).

Whilst the evidence is overwhelmingly that opportunity matters, one issue is exactly when it has an impact. Put simply, do those who are predisposed to non-compliance seek to work where there are opportunities to evade? De Juan's (1989) finding (based on a survey of Swedish citizens aged 16–35) that self-reported opportunity to evade taxes was correlated with being male, self-employed and risk-prone suggests that this may be at least partly the case.

Individual Differences

Those who don't comply with tax rules tend to be younger, male, egotistical and have positive attitudes towards tax evasion (and negative attitudes about the tax authorities). That non-compliers tend to be younger may be a cohort effect or there may be a genuine change in people's behaviour as they become older. One might predict this on two grounds: first, people may become more integrated into society as they age (and therefore be more willing to contribute) and second, the consequences of being caught evading taxes may also become more severe (both in social and economic terms – back-auditing is obviously more threatening the more years one has been non-compliant). The fact that evaders are more likely to be male may reflect males' generally greater tendency across the board to engage in criminal acts or may be an experience effect. In the UK until fairly recently women had very limited interactions with the tax authorities as it was the husband's responsibility to complete a joint tax return. More interesting are individual differences in personality. Weigel et al. (1987) suggest that some individuals may be characterized by egoistic tendencies, while others may exhibit a strong identification with community responsibilities, and thus be less motivated to avoid taxes owed. In other words, the more egoistic an individual, the less likely he or she will be to comply with rules and laws when compliance conflicts with their interests. There is considerable evidence that egoism (Weigel et al., 1998) predicts rule and law breaking in a number of domains, including income tax evasion by individuals (Elffers, 1991; Kirchler, 2000;

Webley et al., 2001), social security fraud (Hessing et al., 1993), and VAT evasion by small businesses (Webley et al., 1999). Attitudes towards non-compliance predict non-compliance in just about all studies that have measured attitudes but it is possible that this is a result of attitudes being brought into line with behaviour, rather than attitudes playing a causal role. Eriksen and Fallan (1996) have shown that increases in tax knowledge have a direct impact on people's attitude to their own evasion (and on the perceived fairness of the tax system), which suggests that there is a role for education in reducing propensity to evade.

Social Norms

If a person believes that non-compliance is widespread he or she is much more likely not to comply. This effect has been demonstrated experimentally (for example by Bosco and Mittone, 1997 and by Webley et al., 1988) and in surveys (for example De Juan et al, 1994). Wenzel (2001a, 2001b; see also Wenzel, 2002) has taken this work on much further and demonstrated how it might be useful to the tax authorities. He points out that there is a distinction between personal norms (one's own taxpaying ethics) and social norms (the perceived taxpaying ethics of a group). He makes a further distinction between injunctive norms (what most people think one should do) and descriptive norms (what most people actually do). Survey evidence suggests that taxpayers suspect that whilst a lot of people evade tax and think this is appropriate behaviour (that is, their social norm is to evade), they also disapprove of such behaviour (their personal norm is not). This suggests that there might be a misperception of the social norms which may be exacerbating non-compliance.

Wenzel (2001b) carried out a field experiment on a random sample of 1999 Australian taxpayers. Respondents were randomly assigned to one of four groups: injunctive norm feedback, descriptive norm feedback, survey only with no feedback, control. All respondents (other than the control group) took part in a survey (called 'What you do and think') and three weeks after the survey, the first two groups received some feedback. In the injunctive norm condition respondents were told 'on average, respondents held the strong personal view that one should be honest in one's tax matters … [though most] … thought that most people would hold these views to a lesser degree … Most people actually agree that honesty, responsibility and truthfulness are important when paying our taxes'. In the descriptive norm condition, the text concentrated on the difference between the average taxpaying behaviour and the perceived taxpaying behaviour of the average person. At the end of the tax year it was possible to see if these manipulations had had an impact on actual taxpaying behaviour – which they had. There was a significant reduction in claims for non-work-related expenses among those in the injunctive norm

feedback condition. This suggests that not only do social norms play an important role in tax non-compliance but that they are amenable to manipulation, and that ensuring that taxpayers have an accurate understanding of the behaviour of others is important.

Dissatisfaction with the Tax Authorities

Dissatisfaction with the tax authorities (seeing them as inefficient, discourteous and/or unfriendly) has also been suggested by a number of investigators as a factor that encouraged people to be non-compliant (for example Elffers, 1991; Wallschutzky, 1984; Wärneryd and Walerud, 1982). The existing evidence suggests that believing the system to be inefficient correlates positively with a propensity to evade (Vogel, 1974; Wearing and Heady, 1995; Webley et al., 2001). This also applies to small businesses: if the tax authorities are seen as inefficient or unhelpful, non-compliance is more likely (Adams, 1996; Adams and Webley, 2001a). Like other factors that I've considered, this may – in some instances at least – be a *post hoc* rationalization that helps justify behaviour that the individual is uncomfortable with.

RESEARCH INTO TAX FRAUD BY BUSINESSES AND EMPLOYERS

Research in this area is patchy: there is far less research into business non-compliance than into individual non-compliance (which is odd considering its economic importance) and whilst some areas have received a reasonable amount of attention (for example small businesses), other areas (for example evasion of social security payments, corporate income tax evasion) have not. The review here does not claim to be comprehensive (much of the research cited has appeared as conference papers, so other studies have undoubtedly remained untraced) but does give a fair view of the important issues involved.

VAT Compliance

VAT compliance varies hugely from one country to another. Agha and Haughton (1996) report that in Italy, 40 per cent of revenue is uncollected, as much as two-thirds in some sectors. By way of contrast, in Holland, whilst there was a revenue loss of only 6 per cent, none the less 34 per cent of firms had evaded VAT. In France, whilst the revenue loss was estimated to be relatively low (only 3 per cent), 66 per cent of VAT payers had understated the value of taxable sales (though only a quarter of these under-declarations were judged to be fraudulent). Engel et al. (2001) claim that this is partly the result

of (lack of) spending on enforcement; and that in Chile spending $1 extra on enforcement would increase VAT revenues by $31. How far this can be generalized to other countries is debatable. In the UK, the internal studies carried out by Customs and Excise (the government body responsible for collecting VAT) have shown that only 3 per cent of under-declarations arise from suspected evasion. Carelessness (defined as lack of reasonable care) is by far and away the biggest cause, while mistakes (defined as reasonable care but genuine mistake or misunderstanding) are less important. But given the importance of VAT in revenue terms (about 13.6 per cent of total tax revenue in Sweden, 18.6 per cent in the UK), even low levels of non-compliance are economically significant.

Webley and his associates have carried out four studies to gain an understanding of the factors involved in VAT compliance by small business owners. In the first (Adams and Webley, 2001a), three groups of business owners with a turnover of less than £1 million were interviewed (restaurant owners, flooring retailers and builders). Five important factors emerged from these interviews: feelings of inequity, views of Customs and Excise, the significance of sanctions, morality and mental accounting (the 'ownership' of VAT monies). A major concern was that VAT was a heavier – and inequitable – burden on small businesses and there was a belief that large businesses can exploit legal loopholes to their advantage. Most respondents saw Customs and Excise staff as courteous, but some believed that inspectors have a strong agenda to catch people out. As one respondent put it, 'I have heard from a friend that they get commission on top, that is not right is it?' As far as sanctions were concerned, respondents mentioned that, as well as penalties, the effort required to be non-compliant was a deterrent: 'always looking over your shoulder, fiddling takes time and a lot of effort … no thank you'. Most people saw the need for taxation – 'I do not feel bothered about paying my share'. Some of the participants spoke of VAT monies collected from customers in terms of 'ownership' while others viewed themselves merely as collectors in the process. 'I can only speak for myself, it hurts very, very much to pay.' This last was the most intriguing finding (the other factors, while important, have been found in much previous research in income tax evasion) and so was followed up in the subsequent studies.

In the second and third studies (Webley et al., 1999; Adams and Webley, 2001b), the approach taken was to combine information from official records with questionnaire data. Customs and Excise supplied the names and addresses of 3200 VAT-registered small businesses in the Midlands and the South-West. These businesses came from two sectors, catering (identified by Customs as a rather non-compliant sector) and flooring/furnishing (identified as a sector with exemplary compliance). Customs and Excise rated each business into four compliance groups: group A (never visited); group B

(visited in last three years and found to be compliant); group C (mildly non-compliant, with an underpayment of VAT of less than £1000) and group D (seriously non-compliant, with an underpayment of greater than £1000). Colour-coded questionnaires (based on four compliance groups) were sent to 800 businesses in each group. Though the response rate was poor (13.5 per cent) the late responders were no different from the others, and the sample appeared representative of the population. Surprisingly there were many more responses from the catering sector.

Two dependent measures of non-compliance were used, first the Customs and Excise classification and second a self-report measure based on responses to the questionnaire. There were very few significant differences between the four Customs and Excise groups. The seriously non-compliant group had significantly more penalties for late payment and were less positive about the quality of service from Customs and Excise, but that was all. There were very many significant differences between the self-reported compliers and the self-reported non-compliers. Non-compliers were younger, believed VAT was unfair, were more egotistical, were less likely to believe that a business not paying VAT properly receive a penalty, were less likely to believe that VAT evasion was wrong, were less likely to believe that friends had a negative attitude towards VAT evasion, were less likely to believe that VAT was a general tax. The latter perhaps requires some explanation. Since VAT was introduced when the UK joined the European Union, a minority of the population still regard it as a European tax and believe that the tax receipts go Brussels. Those with this belief are more likely to be non-compliant!

The interesting question is why the objective and self-report measures do not correspond. Part of the explanation is to be found in the distinctions drawn at the outset of the chapter. The self-report measure is an indication of who has committed and who is likely to commit deliberate acts of non-compliance. In other words, it measures actual and potential evasion. The objective measure is an indicator of who has been detected by Customs and Excise non-complying, for whatever reason, and the extent of that non-compliance. Certain (clever) evaders will not be defined as objectively non-compliant and those who have been (unintentionally) careless will be so defined. Which measure is more appropriate depends on your aims, but the self-report measure is a more interesting indicator of tax fraud.

In the third study only two compliance groups were used: a group that had been visited in the last three years and found to be compliant, and another group found to be non-compliant. One thousand businesses were sampled in each group. Questions were added on guilt, morality and mental accounting and the questionnaire was redesigned to focus on people's views on official bodies, so as to diminish emphasis on tax compliance and increase response rate. Again there was no difference between late and early responders, and the

response rate was better (18 per cent). As in the previous study, there were few significant differences between the two Customs and Excise groups (only that the non-compliant group were younger and had been in business for a shorter time). There were many significant differences between the self-reported compliers versus self-reported non-compliers. Compliers were more likely to feel guilty if they underpaid VAT, tended to believe that paying taxes is a social and moral responsibility (and that tax evasion – even of small amounts – was morally wrong), thought of VAT money as belonging to Customs and Excise (appropriate mental accounting) and felt that small businesses were treated fairly (equity).

The final study was an experimental one (Adams and Webley, 2001b). This took the form of a restaurant role-play set up on a computer (on the Web). Participants had to take a series of decisions including pricing menus, advertising, revising menus and staffing decisions across a 'two-year' period. Pricing and other decisions were taken each month, VAT returns made each quarter and income tax returns made each year. The role-play was set up to be involving (it was certainly rather complex!) and the purpose of it (to investigate tax compliance) was not apparent to the participants. These were 23 restaurant owners (who took part using a portable computer taken to their premises), 46 catering and management students and a group of participants (n=90) recruited over the Web.

The average income tax due for both years was £32240 and the actual average amount paid was £25960. About twice as much income tax was underpaid in year two than in year one. The situation with regard to VAT was rather different. Here the total average amount paid was slightly in excess of the average amount due: in other words people overall overpaid their VAT. The reason for this appears to be error (for example decimal points put in the wrong places). All cases that featured clear errors were removed from the sample. Of those remaining, 44 per cent paid all their VAT properly, 32 per cent were mildly non-compliant (1–19 per cent of VAT underpaid) and the rest were seriously non-compliant. The participants were dichotomized into non-evaders (all VAT owed duly paid) and evaders (any VAT underpaid) and three important differences between them emerged as significant. The evaders were more egoistic, saw VAT as unfair and tended to see VAT as coming from their business funds. This confirms the qualitative and survey findings and suggests that, in addition to the common factors fostering non-compliance, the role of mental accounting in the compliance process for those taxes where businesses collect the tax on behalf of the government needs to be investigated further.

Corporate Income Tax Non-compliance

In many countries there is a common belief that corporate income tax evasion

is widespread. But, as we saw with Wenzel's (2001b) research on social norms, such beliefs are not always accurate. Unfortunately the published literature in this area derives entirely from one American source: it is good-quality research, however, and gives some valuable insights.

Rice (1992) carried out the only published empirical study in this area. He used what Slemrod (1992, p. 3) describes as 'perhaps the best data set in the world' – that of the Taxpayer Compliance Measurement Program (TCMP). These data are used by the US Internal Revenue Service (IRS) to construct the formula it uses to select tax returns to be audited. The data set consists of a random sample (a new one is drawn every three years) of tens of thousands of tax returns, each of which is subjected to an intensive line-by-line audit. The TCMP data set contains, for each line, both what the taxpayer reported and what the auditor believed to be appropriate. The data Rice used were derived from 30000 small corporations (those with assets of between $1 million and $10 million).

The first thing to note is that non-compliance was widespread: 68 per cent of corporations were found to have under-reported their income (7 per cent over-reported it, though not by large amount). For the smaller corporations (those with assets between $1 million and $5 million), the median taxable income was $82252 and the median amount of unreported income $9875 – for the larger corporations ($5–10 million assets) median taxable income was $205441 and median amount of unreported income $20000. So the revenue loss is substantial.

Rice reports three main findings. First, compliance is associated with being a publicly traded company and belonging to a highly regulated industry (such as banking, insurance and communications). This suggests that factors that encourage transparency and disclosure also foster compliance. Second, deviations from an industry's average rate of profit are linked with non-compliance: in other words both those companies performing much better and much worse than average are less compliant. There seem to be two effects here: companies doing poorly may be non-compliant in order to reduce costs – companies doing well may be taking advantage of the fact that they have more opportunities to under-declare. Finally, the marginal tax rate is negatively correlated with compliance.

These results are helpful but a cautionary note should be sounded. The TCMP data set may be the best in the world, but it also has its limitations. Intelligent non-compliance will certainly escape TCMP detection and the IRS itself estimates that TCMP only picks up about half of corporate non-compliance. This means the figures given above are a lower-bound estimate of the amount of non-compliance. More serious, of course, is the problem that the TCMP may be giving a distorted view of non-compliance, as in this case the conclusions themselves may be wrong.

Employer Evasion of Unemployment Insurance Taxes

Blakemore et al. (1996) used a unique American data set to analyse employer compliance with unemployment insurance (UI) contributions (a kind of payroll tax). The data consisted of information about non-compliance and firm characteristics from a stratified sample of 875 Illinois firms. Comprehensive auditing and data verification procedures were used to ensure that the data were of good quality. The data showed substantial non-compliance. Around 45 per cent of all employers made some underreporting errors and grossing up the Illinois estimates suggests that employers probably underreported some $700 million of UI taxes nationally in the USA in 1987. The most common form of non-compliance involved employers (wrongly) classifying employees as independent contractors. About half of the underreported workers were classified incorrectly. Those so classified aren't included in the payroll reports that employers have to make to the authorities. Other forms of non-compliance include not reporting casual or part-time workers, not filing reports and not reporting irregular forms of payments like bonuses. Blakemore et al. explored this non-compliance by developing a theoretical model of payroll tax evasion. This showed that increasing payroll tax rates would increase non-compliance by risk-neutral firms, a prediction that was supported by analysis of the empirical data. UI tax evasion was related to size (smaller firms were the least compliant) and the effective tax rate that each firm faced (the higher the marginal tax rate, the greater the non-compliance).

This study is important. It is the only one of its kind but also identifies how some of the features of the unemployment insurance system (designed to minimize layoffs by firms) also provide an (unintended) incentive for firms to be non-compliant. What is missing is the view of the companies themselves: my guess is that many of these companies would consider themselves to be acting in a reasonable way by avoiding taxes.

Tax Compliance by Small Businesses

Small businesses have been the focus of research into non-compliance in a number of countries. These studies have often involved contrasting the compliance of small businesses with other related groups (for example sole traders, or employees operating in the same line of business) and have generally used survey data. Fairly typical is the research of Van Meer and Webley (2000). They studied sole traders, one group consisting of professionals (dentists and architects), the other not (photographers, driving instructors). In line with previous research, they found that personality (egoism) and feelings of inequity both predicted self-reported non-

compliance. Kirchler and Maciejovsky (2001) took a more novel approach and compared the tax evasion of the self-employed with business entrepreneurs. The self-employed were better educated (most had a university education, and were self-employed doctors, lawyers and the like) and had a higher income. The respondents were asked to put themselves in the position of a hypothetical 'Mr L' (either a self-employed lawyer or a shop owner), who received an expected (or unexpected) refund or had to make an (expected or unexpected) additional payment. Previous research has suggested that when taxpayers see themselves as in a gain situation (for example receiving an unanticipated refund) they are more likely to comply and pay their taxes in full (Webley et al., 1991), but here the concern was what reference point people used in assessing tax situations. The results showed that the self-employed based their decisions on their current asset position. For them, expected tax payments and refunds have no effect on compliance – only when a payment or refund is unexpected does it have an impact. But the entrepreneurs based their decisions on their expected asset position. So an expected tax payment leads to lower compliance and an expected tax refund to higher compliance. For this group both unanticipated tax payments and refunds led to a high level of compliance. Kirchler and Maciejovsky relate this difference to the habitual decision-making frameworks of the two groups, that is, that because of the differences in the relevant tax laws, the self-employed are present-oriented and static, whereas entrepreneurs take decisions on a long-term basis. Whilst this is an interesting notion, it is uncertain how generalizable these results would be outside Austria, where the legal constraints may be rather different.

More generalizable is Kirchler's (1999) study of small business people's reactance to taxation. Reactance involves people's reaction to attempts by others to restrict their independence and freedom of action, and a considerable body of social psychological evidence has demonstrated the importance of this. Those experiencing reactance will tend to choose the opposite behaviour to the one desired by the restricting other or will increase their preference for behaviours or choices that they cannot have. Kirchler hypothesized that new entrepreneurs, who have taken the risk of setting up their own enterprise under their own control, will be particularly susceptible to reactance: as they accumulate experience and adapt to the tax system this should dissipate. His evidence – gathered from 128 individuals who ran shops and firms with at least one employee – showed that this was indeed the case. The longer an individual had run his or her business, the less perceived loss of freedom was shown, and this was associated with actions taken against paying taxes.

American research on small businesses' tax compliance gives us different insights. Hite (1991) carried out a medium-sized (n=427) national survey of small businesses, with an average number of employees of 16. Of these

companies, 38 per cent admitted non-compliance over the past five years (which is comparable to the figure Rice arrives at) – more companies admitted claiming more deductions than underreporting income. Non-compliers were better educated and younger. Retailers were far more likely to admit to under-declaring income than those in other sectors. Those which were sole proprietors had a different pattern of non-compliance to the corporations: the latter were more likely to under-declare income, the former to overstate deductions. Roberts and McGill's (1991) smaller survey of small business people from the South found three things of interest. First, that attitudes towards non-compliance were very similar among their business respondents to those of the general population; second, that non-compliant attitudes were a function of admitted non-compliance; and third, that small businesses with fewer employees were more likely to be non-compliant. In contrast to the studies reported above, which relied on survey responses, Joulfaian and Rider (1998) examined the compliance pattern of small businesses in America, using Taxpayer Compliance Measurement Program (TCMP) data. They compared non-compliance for three sources of self-employment income: proprietorship, farm, and the rental of property. These are treated differently by the authorities – for example, proprietorship income is subject to self-employment tax whereas rental income is not. The average amount income was understated was 26.6 per cent for proprietorship income, 30.2 per cent for farm income and 11.9 per cent for rental income. There was a very clear pattern in the data: the probability of tax evasion is positively correlated with the tax rate, independent of the level of income. So their conclusion was that the tax system itself was important: differential taxation played an important role in explaining compliance.

Ahmed and Sakurai (2001) provide a thorough review of what we know about small-business individuals. Taxpaying is a low priority for them (Sigala et al. 1999), they lack tax knowledge and confidence in keeping financial records, they desire autonomy and independence (and so can experience reactance) and they see themselves as honest, ethical and decent. Using a large survey of over 2000 respondents, Ahmed and Sakurai contrasted a sample of Australian small-business people (who were self-employed, in partnership or owning a business) with those employed by private companies and those employed by a non-profit or government organization. The small-business individuals placed a greater value on achievement and success and opposed government spending on minorities. With regard to tax issues, they were more likely to owe money to the tax office, to be incompetent in doing tax returns, to acknowledge paying less tax themselves and to believe that others are dishonest in paying tax. This work suggests that if there is reason to believe that small businesses are incompetent, education and persuasion should be given priority. If this fails, then the tax authorities should use negotiation as a

strategy: after this point, enforcement (the big stick) will be necessary. The argument that some small businesses are incompetent and so are non-compliant clearly has some force. In an unusual paper, Reynolds (1991) reported four case studies of small businesses that had got into tax difficulties; in all cases inadequate cash flow was a problem – in one a prime cause was lack of bookkeeping skills.

High-wealth Individuals

One of the less-than-ideal features of the research described above is that it looks at different kinds of tax compliance separately. So while we may gain some indication of factors influencing VAT evasion or corporate income tax evasion, we do not understand the interdependencies between them. This is obviously a problem: an individual may opt to be scrupulously honest in some domains while simultaneously exploiting loopholes and worse in others. Tax authorities do the same thing: that is, they treat individuals and corporate entities quite separately. So the Australian Tax Office took the pioneering step in 1996 of creating a High Wealth Individual (HWI) taskforce. This treats the individual tax return of an individual and the tax returns of all the business entities he or she controls as a single case. Indeed, this has been developed over recent years so that the wealthy individuals thought to be most at risk of being non-compliant complete expanded returns for all of their associated trusts, partnerships, companies and so on. Braithwaite (2001) provides a report using the risk ratings (given by tax officials) of over 200 issues for 235 high-wealth individuals. These ratings are just estimates and an audit (and perhaps litigation) would be needed to decide if the issue was really important. None the less, the ratings indicate what factors give a strong indication of non-compliance. The ratings were used in logistic regression analyses to see which factors best predicted the high overall likelihood of non-compliance (again, as estimated by tax officials). Five factors were identified as important. Two involve playing the game of creating, buying or using real losses and then avoiding tax by shifting them around different entities. These are ‘capital loss creation via asset sales’ and ‘the use of revenue losses via transfers within the group controlled by the HWI’. Two others, namely ‘trust distributions – capital distributions in cash to the HWI’ and ‘the use of offshore entities’, involve making creative use of the law. The final factor was ‘other’ – these being indicators of new ploys.

This research may seem very driven by the concerns of the tax authorities but two things are notable. One is the integrated approach (a point that will be taken up below), the second is the use of particular behaviours (for example the use of tax havens) as indicators, something that could be usefully extended to other groups of taxpayers.

RESEARCH INTO THE BLACK ECONOMY

Since the concept of the hidden (subterranean, underground, irregular, shadow, or black) economy was first introduced in the 1970s (Guttman, 1977; Feige, 1979), there has been a considerable amount of research in this area and a representative bibliography would run to hundreds of titles. The idea is simply that a proportion of the economic activity in the country is missing from official records and, in particular, hidden from the tax authorities. This includes some activities that are very difficult to measure directly (criminal activities like fencing and drug dealing, certain forms of tax evasion by companies) and others that are rather easier (the hidden labour market covering such activities as car repairs, hairdressing, home repairs). The vast bulk of this literature has been concerned with providing estimates of the extent of the hidden economy, using a wide variety of neat techniques (monetary methods, discrepancy methods, direct measurement). Cowell (1990) gives a summary listing and good description of these.

This work gives us an idea how significant the hidden economy is (so it identifies the scale of the problem), but gives us little or no insight into the processes involved. The second strand of work is more sociological (for example Henry, 1978; Macdonald, 1994; Williams, 2001) and more helpful.

Henry (1978) discusses the norms and motives involved in 'part-time' trading which distinguish it from normal trading and from normal crime. In his view part-time trading is more social than economic. There are two kinds of rewards: 'competitive play' and 'reciprocal favours'. The former contains the idea of 'beating the system', the latter an idea common to all friendship. This theme is echoed, but refined, by Williams and Windebank (2001). Based on a study of lower- and higher-income neighbourhoods in two English cities, they conclude that paid informal exchange in affluent areas is essentially economic whereas in poorer areas it is social, and undertaken by friends, neighbours and relatives. Williams' (2001) interviews with the unemployed who take paid informal work reinforces this point, as it appears that such work aims to help out others and forge social links.

Macdonald's (1994) work is perhaps the most instructive. He explored why men took on informal work and points out that they generally held a rather 'conservative' morality. They worked (illegally) partly to maintain an involvement with work culture and partly for material benefit. Now one might have some reservations about taking at face value people's accounts of engaging in fiddling, part-time trading and informal exchange. And post conviction, justifications for economic crime do seem mainly to be economic in nature (Willot and Griffin, 1999; Willot et al., 2001), with a stress on the 'breadwinning' role. None the less, the hidden economy work does indicate the need to try to understand business non-compliance within its social and

cultural context and that we should not assume that the primary motive for non-compliance is economic in nature.

CONCLUSIONS

In this chapter I have selectively surveyed a wide and disparate literature. Now it is time to draw some of the threads together. I have four main conclusions.

The Importance of Fairness, Legitimacy and Treatment by the Tax Authorities

A theme that recurs across studies using many different methods is the importance of fairness. People, whether involved in business or not, want to be treated fairly by the government and the tax authorities and, if they are not, may redress the balance by engaging in various forms of non-compliance or creative compliance. Colloquially, if individuals feel hard done by, they look for ways to 'get even'. Part of the problem here is that what is seen by an individual may not be seen as fair by the authorities – what is seen as reasonable and legitimate by the latter (for example harsh penalties for evasion) may be seen by many members of the society as punitive, unreasonable, disproportionate and unfair. There are certainly some indications that the introduction of new compliance and penalty rules in New Zealand in 1996 – widely seen as harsh – may have been counterproductive (James, 1999).

This all suggests that it is vital that the tax authorities treat businesses in an efficient and helpful manner, and that they are treated as responsible. This will help establish a cooperative taxpaying culture. This means taking business complaints about the tax system seriously. For example, a common complaint by businesses (and one that certainly seems justified by the evidence) is that they are 'unpaid tax collectors'. So one possibility would be to pay a fee for collecting taxes, or provide a discount if taxes are forwarded promptly and correctly.

The Potential of the ATO Compliance Model

The ATO model, briefly described here, is a very different approach to understanding compliance. Economists do include the tax authorities in their models, but these are, inevitably, caricatures, and the range of behaviours open to the authorities is typically very limited (for example different patterns of audit rates and fines). The sociological and psychological models do a reasonable job of identifying some of the important factors involved in

compliance but, being in the main 'bottom-up' approaches, are generally non-predictive. They also concentrate on the individual and focus on what makes him or her evade – as opposed to giving the authorities 'equal billing' and focusing on what makes people comply. The ATO model, on the other hand, provides a rich structured account of what is available to the tax authorities: its limitations are that it – like a nine stone weakling – needs more development of its BISEPS. It doesn't really have a theory or model of individuals or taxpaying culture. But there is clear potential here.

The Importance of the Political and Cultural Context

Even in an economy with a relatively well-developed tax and legal system, with a generally reasonable level of tax mentality and with a clear penalty system, one cannot take tax compliance for granted. Anyone doubting this has only to consider the saga of the poll tax in the UK. It is possible for whole systems to break down – and to be replaced (for example a VAT system was introduced in Malta in 1995 and then dismantled in 1997 – Galea-Seychell, 1997). What this suggests is that changes in tax procedures and penalties need to be very carefully thought through before they are introduced.

The Limitations of our Current Knowledge

Over the last 30 years there has been an enormous amount of research into tax compliance. A bibliography compiled by the US Office of Tax Policy research in 1990 contained almost 400 papers and there must have been at least as many written since then. But despite this effort, there are still a number of important limitations to our current knowledge. First there is a problem with the samples used. Much tax research has been conducted in the USA and so policy approaches suggested by this research may therefore have limited applicability in other countries. There have been very few cross-cultural studies of tax compliance (a couple of exceptions are Robben et al., 1990 and Cummings et al., 2001). Only a limited range of businesses and countries has been sampled and within-sector differences are often ignored. Second, there has been lack of collaboration between social scientists from different disciplines. So tax compliance has sometimes been approached as only a social psychology issue or only an economic one. Given its nature, it is clearly necessary to involve economists, lawyers, psychologists and other social scientists. Third, there has been a restricted range of methods used. There has been an over-reliance on self-report and surveys and, in certain circles, an over-reliance on the TCMP. And finally, whilst there are numerous models of tax compliance (there are at least ten different social psychological models), there has been very limited theorizing about business compliance. There has been no recognition of the

different theoretical dynamic involved, and the need to deal with the whole range of businesses (for example sole traders, partners, limited companies, multinationals).

SUGGESTIONS FOR FUTURE RESEARCH

There are some obvious gaps in the current literature, but it is also possible to get some hints about the most promising avenues to explore. The best tax research has always involved cooperation between the tax authorities and researchers. Examples of this are those studies which use the American TCMP, the work carried out with the assistance of the Dutch Ministry of Finance (Elffers, 1991; Weigel et al., 1987) and the work being carried out in Australia in association with the Australian Tax Office (for example Wenzel, 2001a). This is partly because measurement issues (which have not been considered here) bedevil the field, but also because it is only when tax authorities are involved that one can get access to tax declarations and large samples.

So what is needed, first of all, is a friendly tax authority that can provide access to tax records. Next, the focus should be on all aspects of business non-compliance (indeed if possible, this should be combined with a consideration of individual non-compliance). The strategy adapted by Braithwaite (2001) of looking at tax compliance across the whole range of an individual's activities need to be adopted. But Braithwaite was limited to using data provided by tax officials, whereas ideally one wants to combine information provided by the authorities with information gathered directly from the individual (as in Weigel et al., 1987 and Webley et al., 1999).

As far as topics for investigation are concerned, four issues seem particularly important. One is the issue of how people learn to become compliant (or non-compliant). Research to date has been very static (it has been a snapshot rather than a movie), so we don't understand the processes by which the novice taxpayer turns into an experienced follower (or breaker or bender) of the rules. Taxpaying is unusual in that it is something we only start engaging in when we are adults. Whilst we may have developed views about authority in general and have notions about society and our place in it, we know very little about the tax system until we start paying. So a study that followed a panel of new businesses over their first three years would be very instructive. Another issue is the role of tax adviser and agents. Though their role differs considerably from one country to the next, probably most businesses in most western countries will use a tax adviser or accountant to help prepare their tax returns. Research to date (nearly all in the USA, for example Hite and McGill, 1992) is somewhat contradictory: some studies

suggest that professionally prepared returns are less compliant, while others suggest that clients want their agents to prepare accurate returns and be cautious. This is probably a result of sampling rather different groups of clients, but either way, it is clear that tax advisers play an important role in compliance. So a study that investigated businesses *and* their advisers would also be helpful. Third, there is the issue of how different taxpaying cultures emerge and how they are maintained. It is evident that different sectors have very different traditions. In the UK, for example, 'cash in hand' is very common in tradesmen in the construction industry (Sigala, 1999). But we need an understanding of how these traditions are sustained. So studying new businesses in a couple of very different sectors might shed some light on this issue. Finally, there is a great need for the development of evidence-based practice by the tax authorities. What I mean by this is that tax authorities need to devise interventions and test them in a controlled way (Wenzel's 2001b report on the impact on tax compliance of feedback stressing different kinds of norms is a good example of this).

It is important to recognize that businesses are heterogeneous. Not only do they have very different kinds of legal status (sole traders, small businesses, partnerships, limited companies) but they also vary considerably in size, the kind of employees they have, and in the nature of the business they pursue. This suggests either sampling widely (to ensure that one has a good range of business) or focusing on a narrow range of businesses.

To date, the theoretical approach taken to tax non-compliance has been very individual and rational. There has been little acknowledgement in the economic or psychological literature that businesses are organizations and need to be understood differently to individuals. As Braithwaite (1989, p. 141) put it, 'much thinking about corporate crime … adopts an overly economically rational conception of the organisation; it excessively downplays the corporation's role as a choosing collective agent with organisational policies and values about social responsibility'. That businesses are organizations and need to be understood as such is recognized by those with a specific interest in business crime (for example Braithwaite, 1989; Clarke, 1990; Delaney, 1994) but researchers working in this area have produced little in the way of theory.[2] So we need to develop a more social social psychological approach to business non-compliance. Perhaps a good starting-point would be social identity theory, which has been applied recently to organizations to great effect (see Haslam, 2001).

NOTES

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1. Since the early work of Sandford (1973), there has probably been more work on the compliance costs of various taxes to business than on any other topic in small-business taxation. The thrust of recent work (in the UK, e.g., Chittenden et al., 1999; the USA, e.g. Slemrod and Blumenthal, 1996; Australia, e.g. Tran-Nam et al., 2000) is that small businesses suffer disproportionately high compliance costs (which has an impact on their growth and development), that compliance costs are higher for firms that pay weekly rather than monthly and that have more casual workers but that as a fraction of revenue raised, the compliance costs for larger businesses are lower than for individual income tax.
2. Their empirical contribution in the area of tax compliance has also been extremely limited. Clarke (1990) devotes a whole chapter to 'Taxation: enforcement, equity and effectiveness' but the emperical base consists of accounts of court cases (particularly those where well-known companies or individuals were prosecuted), and government reports (e.g. on how cases of VAT non-compliance are dealt with by local offices).

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8. Historical perspectives: Swedish and international examples

Dag Lindström

INTRODUCTION

Economic crime is usually discussed as a modern problem concerning the present society and its economy. It is in fact obvious that recent techno-logical innovations, for example computer technology and new information tech-nology, have changed the conditions and possibilities concerning economic crime. Many typical examples of economic crime are not even possible to imagine during earlier periods of history. Such offences as VAT-related frauds, insider trading and illegal cartels are all created by modern legislation. Fraud related to VAT is on the other hand not a new phenomenon, in the sense that it represents a certain variety of fraud and cheating against the public revenue system. As long as taxes, customs duties and similar levies have existed, the economic incentives to evade such levies have also been present. Laws against insider trade and cartels can in a similar way be seen as a part of a long history of restrictions regulating the behaviour of different market agents.

Economic crime is a field characterized by rapid changes. It is also a field with many unclear, conflicting and changeable norms. These circumstances make it even more important to study the changes and continuities of economic crime in a long historical perspective. As the economy rapidly becomes more international, so does economic crime. Different national systems of regulations, control and norms meet and maybe even clash. Attempts are made to create common international regulations. This makes it all the more important to understand the origins and the characteristics of the different national systems. The historical approach will also promote a discussion concerning concepts, definitions and explanations, which otherwise might be taken more or less for granted in the present context. I will concentrate on the problems of economic crime before the twentieth century and I will focus on Swedish history.

DEFINING ECONOMIC CRIME

Any discussion on the historical dimensions of economic crime has to deal with the question of how to define it. No absolute agreement exists on this. In fact many different approaches can be identified. A common definition says that economic crime is to be understood as illegal acts committed within businesses in order to gain economic advantages (Appelgren and Sjögren, 2001, p. 11). Economic crime is often identified by a number of specific examples such as tax crimes, offences against account regulations, offences against creditors, bribes, frauds, embezzlement and so on. White-collar crime is another concept frequently used in this context. Introduced by Edwin H. Sutherland as early as 1949, it refers to crimes committed in connection with professional life by persons highly respected in society (Sutherland, 1949). This concept thus has a social dimension otherwise not common when economic crime is defined. Sutherland has been criticized for emphasizing too much the social status of the criminal at the expense of an analysis of the crime itself. White-collar crime has been given slightly different meanings in different contexts, even by Sutherland. Sometimes the emphasis is on social status, sometimes on the profession and sometimes it is rather the fact that the crime is committed in connection with an organization, usually a company, that is important. Concepts such as corporate crime and occupational crime are also frequently used in these discussions. Occupational crime is a wider concept than white-collar crime as it does not require the offender's high social status. Corporate crime differs from white-collar crime in another sense. The crime is committed for the benefit of the company, whether it is committed by an employee, by the owner of the company or by the company itself as a legal entity. During the 1990s the concept of commercial crime has been introduced, often including not only actual crimes, in the true meaning of the word, but also other forms of violations against norms or bad behaviour within legal business activities. In both French and German research different operational definitions have frequently been used. *Wirtschaftskriminalität*, for instance, has been defined in accordance with certain sections of the German criminal law (Weisburd and Waring, 2001, pp. 7–11; Lindgren, 2000, pp. 97–112; Lindgren and Theandersson, 2001, pp. 13–34).

Sutherland noticed that white-collar crime can often be described as deliberate and organized, as it is commonly related to some kind of formal or informal cooperation. White-collar crime and economic crime sometimes also touch upon another complicated issue – organized crime. This concept is usually associated with drugs traffic, illegal trading in arms, smuggling, procuring, illegal gambling and similar offences. These crimes cannot, like economic crime, be described as illegal acts within regular businesses. It is rather the business itself that is illegal and usually a distinction is made

between economic crime and organized crime. But sometimes organized crime is defined as a specific type of economic crime. Organized crime is often part of a co-ordinated economic activity and it has been argued that it is not possible to make a strict distinction and that it would even be misleading, theoretically and empirically. The Italian criminologist Vincenzo Ruggiero argues that white-collar crime and corporate crime should rather be considered as variations of organized crime. According to Ruggiero it is empirically often difficult to distinguish between organized crime and crime within legal corporations (Lindgren, 2000, pp. 108f; Lindgren and Theandersson, 2001, pp. 23f; Ruggiero, 1996).

Another important question which sometimes arises within the political debate is whether or not private tax evasion and tax fraud are to be labelled as economic crime. Fraud in connection with the social insurance system and other public allowances may also be discussed in this context. Thefts committed at work are another example (Lindgren, 2000, pp. 98–100). But the definition mentioned above actually excludes such offences unless they are directly connected with a private firm.

Nevertheless, a certain obscurity characterizes the meaning of economic crime and other related concepts. It is not always easy to distinguish economic crime from other kinds of criminal behaviour. But all definitions more or less explicitly presuppose economic reasons behind the unlawful acts and the connection with a business, or at least an occupation (Lindgren, 2000, p. 110). Economic crimes can be committed not only against the state, but also against other businesses and against individuals. In a more abstract way, these crimes can also be interpreted as crimes against the economic order, distorting or even destroying the regular mechanisms of the economy and the market (Appelgren and Sjögren, 2001, p. 11).

All the different concepts and definitions discussed above are based on modern conditions. This can lead to problems if they are to be applied in historical studies. White-collar crime, for instance, is obviously derived from a modern social and economic context which makes this concept less suitable for historical studies, at least if a long-term perspective is intended. Many other concepts, like corporate crime and occupational crime, would for similar reasons be difficult to use in historical studies. The same may be said of definitions based on a number of specified crimes. They are usually tied to modern conditions and are only applicable within a limited context.

In order to study economic crime as a historical phenomenom a wide definition must be used where economic crime is connected in a very broad sense to offences committed within trade and businesses in order to gain economic advantages. But even such a definition can be complicated to apply as it is not always easy in history to identify trades and businesses. Before the nineteenth century at least it is also often difficult or even impossible to make

a clearcut distinction between business activities and private economic matters.

HISTORICAL RESEARCH ON ECONOMIC CRIME AND RELATED THEMES

Since the 1980s the history of crime and justice has been an expanding field of research. A large number of studies have been published and a number of different theoretical models describing the fundamental historical changes in norms, criminal behaviour and judicial systems have been presented. When these matters have been discussed most attention has been paid to violence, slander, theft and sexual offences. A long-term shift from violence to theft has been observed. The changes concerning sexual offences are also apparent and they are probably the most obvious example of changing criminality being caused by changing social norms and changing legislation. From the sixteenth century the importance of regulations and interventions from the state also becomes more significant. The social and cultural context in which modern law evolved has been discussed in connection with such theoretical concepts as the early modern state, the civilizing process and social discipline.[1] The 'judicial revolution' is another important concept dealing with the fundamental changes in law and justice in early modern Europe. The local communities and the local courts gradually lost their importance and their independence as a more centralized 'state law' evolved. In many cases the older judicial institutions were being replaced by new state institutions but there are also examples of older institutions being transformed and integrated into the new state law. The courts became more professional as the influence of educated legal experts increased. Reconciliation further on became less important whilst punitive activities became more prominent (Lenman and Parker, 1980; Sundin, 1992; Sjöberg, 1996).

Economic Crime as a Main Theme of Research

Until now, economic crime has not attracted much attention when the general patterns of the history of crime have been discussed. Only a few historical studies actually pay any significant attention at all to economic crime. An attempt to develop a historical definition of economic crime was made by Maria Ågren and Kenneth Johansson in a contribution to the 22nd Nordic History Congress in Oslo 1994. Instead of applying a modern concept of economic crime, they base their definition on an older meaning of the word 'economy'. Using Otto Brunner's discussion on 'das ganze Haus', they connect an early modern meaning of economy with the basic ideas about

housekeeping, the house and its particular notion of order. Thus economy could in an older meaning be defined as house order and economic crime would consequently be identified as violations against the house or housekeeping order. That further implies that any act that violated the social relations of the house, especially its patriarchal order, were economic crimes. This particular approach means that they actually do not discuss the historical dimensions of phenomena nowadays identified as economic crimes. They rather analyse violations against a specific set of social regulations and norms associated with another meaning of the word economy than the modern one (Ågren and Johansson, 1994; cf. Brunner [1950] 1956).

One of very few remarks on the historical development of economic crime has been made by Eva Österberg. She notices a rising number of violations against economic regulations in Sweden from the later sixteenth century. This was caused by increasing state intervention on the economic field (Österberg, 1991, pp. 77f; 1993, pp. 210f.; Österberg and Lindström, 1988, pp. 52f, 116–20; cf. Sundin, 1992, pp. 121–7, 383–402). Economic crimes are usually not treated as a specific category in historical studies. Violations against tax, customs or trade regulations are often included in other categories as 'crimes against the authorities', 'violations against state regulations' or 'property crimes' (for example Løyland, 1992, pp. 39–42; Sundin, 1992, p. 26; Furuhagen, 1996, pp. 55–62). Jørn Sandnes represents one of the exceptions. In his study of crime in sixteenth- and seventeenth-century Norway, economic crime is treated as a category of its own. By the mid-sixteenth century about 4.5 per cent of the crimes registered in the detailed payment rolls were economic crimes. In the largest town, Bergen, the rate was significantly higher (14 per cent) than in the rest of Norway. Economic crime is never explicitly defined in Sandnes's study. He also admits that there is no clear-cut distinction between economic crimes and the category 'opposition against the authority' (Sandnes, 1990, pp. 45–50). Another example is my study of crime in Stockholm, 1475–1625. Anyone looking for an extensive discussion on the matter of economic crime in that study will be disappointed. Economic crime is simply identified as violations against economic regulations and the category is composed of several different types of violations. Most of them concern different trade regulation, which may include acts as different as cheating customers (by forgery, by using false measures and weights, by selling goods already bargained for and so on), non-payment of customs and toll duties, violations against a ban on exports and different types of unlawful trading (such as trading in the rural areas against town privileges, unlawful retail trading and violations against market regulations). Only a small number of these economic crimes concerned craft regulations. During the later fifteenth and early sixteenth centuries these crimes were not particularly frequent among the registered crimes (less than 10 per cent). From the 1530s

the number of such crimes rose in the detailed payment rolls and made up about 30 per cent of the total amount of registered crimes. The exact number of crimes fluctuates heavily from year to year. In Österberg's study of crime in the smaller towns of Arboga and Vadstena from the mid-fifteenth to the early seventeenth century, illegal trading and similar crimes are treated as a specific category of crime. The same general trend can be observed as in Stockholm. During the second half of the fifteenth century only a few per cent of the total amount of registered crimes were of this kind. During the sixteenth century they rose to nearly 10 per cent and in the early seventeenth century they represented well over 10 per cent of the registered criminality in those towns (Österberg and Lindström, 1988, pp. 42–54, 77–87, 116–20).

Illegal Trades

Most economic crimes before the nineteenth century were probably related to the trade regulations. The body of ideas and practices dominating government economic policies of early modern Europe are commonly labelled as mercantilism.[2] In medieval Europe control and regulations concerning production and trade were usually undertaken by municipal authorities and the guilds. From the late sixteenth century on, more systematic state intervention appears. The central authorities intervened in order to strengthen the state finances and to build up military power. The main object was to capture a larger share of international trade. But the whole economy became regulated by the central authorities and its representatives. Control and restrictions on production, trade and establishment of businesses were fundamental parts of this policy. Older local institutions such as craft guilds could also be used as instruments of this policy and its system of control and regulations.

Accordingly, different forms of illegal trading were among the most common forms of economic crime before the old trade regulations and restrictions on the establishment of businesses were finally abolished. These changes were gradually carried through in Sweden by the mid nineteenth century. The same fundamental transition from a regulated economy to a system where freedom of trade was a widely recognized principle took place in most parts of Europe during the eighteenth and nineteenth centuries. This was part of the the social, political and economic upheavals that brought an end to the order of *l'ancien régime*. A fundamental part of the older regulations was the principle that some trades were strictly monopolized by the burghers of the towns. Markets and commercial activities outside the towns should be prohibited or at least restricted. Handicraft was regulated in a similar way and artisans were to be burghers and put under the obligation to belong to a guild. Artisans outside the towns and beyond the control of the craft guilds were tolerated only to a limited extent. Such restrictions on the

right for others than the townspeople to trade are included in the first town charter known in Sweden (Jönköping 1284; see Herlitz, 1927, pp. 6f).

This principle was consolidated and developed in later charters, in Swedish municipal law from the mid-fourteenth century and in a number of royal decrees. During the seventeenth century, following the principles of mercantilism, new regulations were carried through. The system was tightened and state control over the different trades became stricter. According to the new trade legislation (the Trade Ordinances of 1614 and 1617 and the Navigation Act of 1636), the towns were strictly divided into two different groups and only merchants from the staple towns were allowed to be directly involved in foreign trade. Commercial activities of the staple town burghers in other parts of Sweden, on the other hand, were carefully restricted. The burghers of every town were supposed to keep their activities within their own trading district and not violate the charters of other towns. Foreign merchants who visited the staple towns were not allowed any retail trading whatsoever (Stiernman, 1750, pp. 57–65; Heckscher, 1936, pp. 672–5; Sleman, 1964, pp. 68–82, 235–59; Sandström, 1990, pp. 44–52). The craft guilds were also strengthened during the seventeenth century and the prohibitions against artisans outside the towns were extended. The guild system became more thoroughly regulated in general charters of 1621, 1669 and 1720 (Lindström, 1923, pp. 21–7; Heckscher, 1936, pp. 524–6; Söderlund, 1949, pp. 135–97; Lindström, 2000, pp. 189–93). A new general commercial code was issued as a part of the new Code of 1734 (*Sveriges rikes lag 1734*, Handelsbalken). The expanding Swedish iron industry had its own set of regulations, including strict control over the establishment of new works, production quotas and price regulations. The early manufactures were, of course, also based on strict regulations and charters. General charters were issued in 1668 and 1739 (Lindström, 1923, pp. 33–8; Heckscher, 1936, pp. 477–90, 679f; Heckscher 1949, pp. 386–99; Nyström [1955] 1983, pp. 99–127, 188–257; Anderson, 1985; Hildebrand, 1987, pp. 111–20; Karlsson, 1990, pp. 37–59; Magnusson, 1996, pp.131–48, 231–7).

This system of trade regulations was maintained and in many ways expanded during the eighteenth century (Lindström, 1923, pp. 1–85). But, on the other hand, there were also a great number of exceptions to these regulations. It was in fact impossible to uphold the prohibitions against country artisans and certain craftsmen were consequently allowed to have their business outside the towns. But they were not allowed to escape regulations and control. The nobility, of course, was allowed to have its own artisans and to trade without burghership. A total prohibition of commercial activities among the country people was not possible to uphold and exceptions were allowed in many charters. The system of trade regulations and control was based not only on general codes. A substantial part was played by

individual regulations, decrees, ordinances and letters, of which many were issued by the administrative body, especially by the Swedish Board of Commerce (*Kommerskollegium*).

Illegal trading thus could take many different forms. For a person without burghership many trades were *per se* not permitted. But even those who were permitted to trade were put under several restrictions. Many proprietors of iron works, for instance, were allowed to buy grain and salt to supply their workers, but in order to avoid illegal trading they were not allowed to buy more than a certain amount of goods. Some products like tobacco were monopolized at times by trading companies excluding other merchants from this trade. Even the burghers trading with legal merchandise had to stick to the authorized markets and to follow price regulations and other restrictions.

Behind the trade regulations two different motives can be found. First of all, these regulations were closely connected to the ideas concerning the household, its functions and its traditional rights.[3] The support of each established burgher family and household should as far as possible be provided for. Artisans within a craft guild were not supposed to enter into competition with each other. The means of support were rather expected to be divided fairly among the members at least until every household was guaranteed a reasonable living. As the possible scope of the trade was understood as limited, there was room only for a limited number of artisans within each trade. Every newcomer would cause an immediate loss for the established households and all competition from outside was regarded as a direct threat against the support of the guild members. For the town and its burghers the trade regulations were a necessary protection against those who might threaten their trade and their survival. Second, the state had its own interest in the trade regulations. The regulations made the trades possible to control and to survey, and consequently easier to tax. But just as important was the idea that strict regulations was the right way to reach prosperity. Trades could not develop and flourish without being regulated in charters and protected by privileges. From the mid-eighteenth century at least there was a change in the way the role of the state was understood and the idea of trade regulation as the only way to accomplish economic development was gradually called in question (Lindström, 1923, pp. 47–103; Söderlund, 1949, pp. 204–31; Heckscher, 1949, pp. 857–90).[4]

Most of the earlier trade regulations were abolished around the mid-nineteenth century. This meant that some of the fundamental conditions for economic crime changed. Nowadays economic crime is usually associated either with criminal acts in connection with regular business activities or with organized illegal business activities. A substantial part of the earlier economic crimes might be interpreted in a somewhat different context. Modern economic crime often combines a regular and accepted business organization

with activities that are concealed and unlawful. Older forms of economic crime often meant that the business itself was illegal and it was the bussines activity as such that had to be kept secret. There are of course a lot of illegal businesses in the modern society as well, many of them associated with organized crime. These businesses are usually of a very different kind from the legal ones. Before the nineteenth century illegal businesses didn't differ so much from the legal ones in respect of their content. They provided the same kind of commodities and services but it was done by the wrong persons, in the wrong places or at wrong times. These activities often appear to be part of a strategy to secure immediate survival rather than a means to enrich oneself. These remarks do not indicate a total shift in meaning of economic crime in the sense that we are actually dealing with fundamentally different sorts of crimes. They rather indicate that the reasons behind economic crime and the context in which they were committed might have changed substantially. They also indicates that the criminals (and those around them) might have interpreted their deeds in a quite different way from the way in which modern economic crime is usually understood.

As appears above, illegal trade was not unknown in early modern Swedish towns like Stockholm, Arboga and Vadstena. Jan Sundin has studied the amount of revealed illegal trade in two quite small Swedish towns, Härnösand and Linköping. During the end of the seventeenth and the early eighteenth centuries only a few cases appear every year. From the later eighteenth century, however, an increasing number of such cases can be observed in Linköping. Sundin also notices that very few cases of illegal trading are to be found in the countryside. The difference between town and countryside is easy to explain. Trade was mostly located in the towns and, furthermore, the means of control were limited outside the towns. The number of artisans convicted for illegal businesses in Linköping also increased during the last decades of the craft guilds. Most of them were poor people, which confirms the impression that a substantial number of economic crimes were committed as part of a survival strategy among marginal groups in society (Sundin, 1992, pp. 398–402).

Erik Lindberg (2001) has studied trading monopolies, privileges and burgher institutions in Stockholm from 1820 to 1846. The number of registered violations against monopolies and other trade regulations were quite few. Between 1825–1834 only 79 cases of breaches of burgher privileges were brought before the special court dealing with such cases (*handelskollegium*). Almost every other offence concerned handicraft, most commonly illegal shoemakers. In about a quarter of the cases the defendant was found not guilty by the court. Lindberg admits that there may be a substantial hidden figure but the number of offences must still be regarded as very low. The main reason, according to Lindberg, was the extensive and very active control by the

governor (*överståthållare*), by local authorities and officers (*handelskollegium* and *stadsfiskal*) and above all by the burghers themselves. Usually it was the burghers, as individuals or together as craft guilds or trading societies, who discovered and reported illegal traders and artisans. They were reported to local officers (*stadsfiskal*), who often also had an arrangement with the trading societies to watch over their rights. The officers were paid extra for this and they even received part of the fines when someone was found guilty of illegal trading. The control was furthermore facilitated by the demand that all goods traded with had to be marked and that every shop had to have a sign showing that the business was run by a burgher (Lindberg, 2001, pp. 90–102).

Several historians have noticed the fact that women were quite often found guilty of violating trade regulations. Hans Andersson (1998) has examined 142 cases of violations against economic regulations in Stockholm around 1700. Men were usually guilty of cheating with customs and excise duties. They also cheated with weights and prices. Women on the other hand were mainly convicted for unlawful baking, brewery, butchering and illegal trading. The convicted women were, contrary to the men, almost solely poor people (Andersson, 1998, p. 78). Chistine Bladh (1991) has studied female hawkers in early nineteenth century Stockholm. Like other businesses, this one was also strictly regulated by special charters and ordinances. Authorized hawkers were to carry a metal plate showing their permission number. This made them easier to supervise but also made it easier for the hawkers themselves to reveal unauthorized intruders. The number of accusations for illegal hawkery between 1820 and 1856 ranged between one and 46 annually. These variations, according to Bladh, reflect the varying intensity of police work. The most common violations were hawkery during the time of church services, trading with illegal goods (like vodka), trading in forbidden places and the selling of poor goods, for example rotten fruit (Bladh, 1991, pp. 150–69).

A substantial section of the urban trade regulations was supervised by the burghers themselves. Those who held monopolies and privileges were to a great extent in control, and had themselves to deal with possible intruders violating the monopoly. One of the most obvious examples of this is the organized prosecutions of illegal artisans led by the craft guilds (*bönhasjakt*). The suspects were hunted down by the guild masters in their dwellings or in other places where they could perhaps be caught in the act of illegal handicraft. These measures could be quite violent. Private houses were intruded, locks were forced and potential customers were searched. Before the ‘hunting’ started the guild master, at least in Stockholm, had to hand in a list with names and addresses of the suspects to the local authorities. After that permission could be given to start the ‘hunt’. The artisans in many cases failed to do this, arguing that they didn’t want to jeopardize the advantage of surprise (Söderlund, 1943, pp. 74–7; 1949, pp. 107ff.).

Illegal trade has also been observed in connection with mining and with the copper and iron industries. Those branches were also thoroughly regulated until the nineteenth century, and trade with copper, iron and charcoal was restricted in many ways. At times the copper trade was completely monopolized. However, it is well known that quite a lot of illicit trade occurred in the mining districts during the sixteenth and seventeenth centuries. The trade monopolies and the compulsory weighing of copper (which also meant that certain duties had to be paid) were avoided. The exact size of this illicit trade is unknown but several measures were taken to put an end to it. Merchants with the privilege to trade in copper also had the right to search and confiscate illegal copper. From time to time the trade routes were even watched by soldiers, and special officials were appointed with orders to intervene against illicit trade. The state also encouraged informers to report offenders. Special inquisitions were held with miners and merchants who had violated the trade regulations. Those who were found guilty ran the risk of high fines, imprisonment and even the loss of possible shares in the mines (Kristiansson, 1992).

According to Kristiansson (1992), illicit copper trade came about not only because of the different fees applicable to this trade but also because of the monopoly and the price regulations, which encouraged the growth of illegal markets. The charcoal trade was also regulated so that charcoal could be legally traded only within a certain district, with specified buyers and according to fixed prices. Illicit charcoal trade was regarded as a serious problem in Sweden during the eighteenth century, especially by the Mines Authority (*Bergskollegium*). Between 1721 and 1770 no less than 34 different ordinances mentioned illicit charcoal trade as a problem. A particular problem was that iron works were suspected of buying charcoal meant for the copper and silver works. However, it was difficult to discover and prosecute illicit charcoal trade as the mining authorities had few assets of their own to control the charcoal trade. Instead they had to rely on officials within other parts of the administration to exercise control (Karlsson, 1990, pp. 68–71).

Taxations and Tolls

Beside trade regulations, taxations and tolls seem to have been the most important areas for economic crime. But there is no systematic historical research on these matters. The ways in which tax, toll and customs systems are modelled are of decisive importance for the possibilities and the incentives to escape these particular levies. The older tax systems, at least in Sweden, have been the subject of extensive historical research, not in order to study crime but rather to study the level of taxation and the organization of state revenues, and to analyse how the life of the common people was affected by the

demands of the early modern state. European development has often been described as a transition from a domain state to a tax state, indicating that state finances became more dependent on taxes and tolls since the revenues from the royal domain no longer sufficed to cover state expenditure. Sweden provides one of the best examples of the growing fiscal power of the early modern European state.[5]

It is often difficult in historical studies to make a clear distinction between economic crime within business activities and private tax evasion. Private or family economy was in most cases not separated from the economy of business or trade. One reason for this is that the family or the household was the most common production unit. This was the case among artisans, merchants and many peasants. The idea of the family and the business being separate entities was not particularly widespread before the nineteenth century and the tax system did not recognize such a distinction.

The older Swedish tax system was based on levies on the possession of land. The system was established during the thirteenth century and extended and made more efficient during the sixteenth and seventeenth centuries. Taxation was composed of a great number of different duties of which most were related to the size and the assumed yield of the property. As taxation was based on the possession of land rather than on the actual production or the real incomes and assets of the household, this system didn't allow many opportunities for tax evasion, at least not by concealing economic resources. However, taxes could be evaded by delaying payment or by claiming poverty. But this was a hazardous strategy as it could result in the loss of ownership of the land (Dovring, 1951; Herlitz, 1974; Lindkvist, 1982, 1988; Dahlgren, 1982, 1991; Nilsson, 1990; Magnusson, 1996, pp. 95ff.). The real value of these taxes was gradually eroded from the eighteenth century on, but the system remained until 1902 when the old land taxes were abolished and a progressive income taxation combined with compulsory income returns was introduced (Herlitz, 1974; Gårestad, 1987, pp. 29–66). Beside the land taxes a capitation tax (*mantalspenning*) was paid as well. A fixed sum was to be paid by all taxable adults listed in the capitation registers (Lext, 1968; Herlitz, 1991). A number of extra taxes, agreed by the Swedish National Diet (*Riksdag*), were added as well. Some of them became more or less permanent during the early eighteenth century in the form of the so-called *allmänna bevillningen* (the general appropriation), but they still had to be formally granted every year. The general appropriation was composed of a number of different levies, but the system was gradually simplified during the nineteenth century and after 1861 it was composed of only three different parts – a real-estate tax, an income tax and a taxation of capital (Löwnertz, 1983, p. 16, 20; Gårestad, 1987, pp. 37–40; Grosskopf et al., 1996, p. 24). In this way the general appropriation can be described as an important element in the

development of the modern tax system.

The people in the towns also paid land taxes if they possessed land. They also paid capitation tax. But most important were the different appropriations. In the seventeenth century the towns still paid a prescribed sum decided by the National Diet. It was different for each town and it was the burghers' own business to decide how the payment was to be divided among themselves. During the eighteenth century the general appropriation became the most important tax in the towns. This meant that taxation changed from a collective to an individual levy. Thus the possibilities for tax evasion also changed as taxation became more closely related to real incomes and assets instead of being a question of how the payment of a fixed sum was to be divided among the burghers. Both assessments and the collection of taxes were administered by the burghers themselves and the ultimate responsibility lay with the town council (Herlitz, 1924, pp. 38f, 187–90).

The old tax system was normally not based on any kind of individual self-assessment. Such a system was tried in Sweden in 1713 for the first time as an extra property tax was raised. Simultaneously a number of other new principles were introduced as well. Taxation was supposed to correspond to the real value of the taxpayers property and the tax was to be paid equally by all estates and classes no matter what privileges they might have. It was furthermore to be based on the taxpayers' own estimations of the value of their property. Control was to be carried out by taxation sessions in which the taxpayers reported their own estimations. Neighbours were expected to control each other and to correct any estimation that was too low. Understandably, self-assessment was looked upon with scepticism. Some authorities, particularly the Swedish Board of Commerce, feared that many subjects would try to conceal their assets. The problem could not be easily solved by requiring that the taxpayers take an oath on their reports, as they could then be enticed to commit perjury, either deliberately or unintentionally. The subjects were also suspected of making mutual agreements to keep taxation lower than it should be (Karlsson, 1994). Self-assessments were tried in 1715–16 as well but do not seem to have been a great success. They were not introduced again until the property tax experiment of 1800. This seemed to have been a failure as well, and tax returns didn't become a regular element in the system of taxation until the tax reforms of 1902 (Dahlgren, 1970. pp. 482–93).

In the towns a number of levies were collected besides the state taxes. Some of them directly taxed merchant activities. Goods transported into the towns were always controlled, weighed or measured. These activities usually involved special charges. Many of them were of medieval origin, and they differed from town to town. Most of these levies were gradually repealed during the nineteenth century. In medieval and early modern times they were

important sources of income for the towns. These levies mainly affected foreign burghers, peasants and owners of iron industries, not the population of the town itself. The control as well as the collection of the duties was administered by special officials appointed by the town (Herlitz, 1924, pp. 212–25). These levies naturally caused a great many protests and disputes concerning their level and sometimes even the right to charge them at all. The incitement to evade them must have been considerable, but we still lack systematic research on this matter.

The Swedish iron and copper works were of a tremendous economic importance in the seventeenth and eighteenth centuries, bringing considerable revenues to the state. Many charters were issued to support them, often including tax relief or even tax exemption. Among the privileges was also the right to trade in necessary supplies for the workers, which led to many conflicts with the merchants of the towns, who accused the owners of iron works of illegal trade. Though the iron works were in many ways favoured by the state, iron production was also the object of special taxes. The production of pig-iron was already taxed in the later Middle Ages and this tax (*tackjärnstionde*) was not repealed until 1871. Bar-iron production was introduced by the mid-sixteenth century and was made an object of a special tax (*hammarskatt*) as well. In 1695 it was set at 1 per cent of the value of production. The amount to be paid was based not on any estimation of the actual production volume but instead on an allocated production quota that was not to be exceeded. A production tax on sawmills was introduced as well in 1633. The bar-iron production tax was repealed in 1860, as was that on sawmills in 1863. During the seventeenth and eighteenth centuries a number of manufactures were also established as well. They also needed special charters and were in many cases supported by tax reliefs and import prohibitions. There were no corresponding general production taxes on the manufactures, but like many other production units, the manufactures often paid many of the different appropriations. A special appropriation was introduced for shipyards in 1762, for instance (Heckscher, 1949, pp. 386–99; Stadin, 1982; 1990).

Company taxation, the different methods to evade those taxes and the possibilities of discovering and taking legal action against such measures, when illegal, are central themes when it comes to the question of economic crime. Company taxation in its modern sense was not introduced in Sweden until the twentieth century. Until 1902 there was no real difference between the taxation of companies and the taxation of individuals. Through a number of tax reforms (1910, 1919 and 1938) company taxation developed. It was made proportional to profit, and full depreciations were possible (Bergström 1969, pp. 64–6; Grosskopf et al., 1996, pp. 24–6) Before the nineteenth century it is often difficult to make a clear distinction between personal

incomes and assets on the one hand and the incomes and assets of a company or a business on the other. Companies and businesses seldom had to pay land taxes but they usually had to pay both general appropriation and different special appropriations in the same way as individuals or (more correctly) hoseholds did. They also had to pay the customs and tolls mentioned below. Businesses and companies sometimes also had to pay specific production taxes or appropriations of the kind mentioned above (Stadin, 1982, 1990).

Especially in the towns a number of production and purchase taxes – excises – were of substantial importance as well. Bakers, brewers, butchers, fishermen and small shopkeepers were among those who had to pay such excises. Most of these levies were of medieval origin. From the later seventeenth century special toll and excise courts were introduced in many towns. The records from these courts have still not been systematically studied, even though a substantial number have been preserved in the archives. The excise courts were abolished in 1811 and the excises were gradually phased out and finally repealed in 1862 (Herlitz, 1924, p. 186).

Toll and customs duties have already been mentioned in this chapter. Such duties were demanded in Sweden at least from the thirteenth century on. But it wasn't until the early modern Age that they made up a really substantial part of state revenues (Smith, 1934; Linge, 1969, pp. 218–32, 261–4, 323–61). Especially during the seventeenth century there was a deliberate state policy to increase these incomes. The system was based on levies on both domestic and foreign trade. There was a border tax on goods, but more important was the customs paid on shiploads (*Stora sjötullen*) which was better organized in 1636. Furthermore, supervision was made easier as all foreign trade was directed over a restricted number of staple towns (Heckscher, 1936, pp. 285f., 675–87; Sandström, 1990, pp. 65–108).

There were various domestic tolls as well. Most important was that of 1622 (*lilla tullen*), which charged all goods transported into the towns for sale. Fences were built around the towns, which could be entered only through the toll gates. All merchandise had to be controlled and taxed in special toll houses that were built in every town. During the seventeenth century the toll collection was often leased out to private persons at a specified fee. This meant that any toll evasions were a problem for the leaseholder and not for the state. The domestic toll was a frequent cause of conflicts and disputes and by 1810 it had been abolished (Bodell, 1970, pp. 66–83; Jansson, 1982, pp. 365–8; Sandström, 1990, pp. 75f.; Fridén, 1991, pp. 329–38).

Smuggling, Poaching, Embezzlement and Organized Crime

A number of crimes cannot necessarily be labelled as economic crimes but still touch upon that specific field of criminality. Among such crimes are

smuggling, poaching and fish-poaching. Embezzlement, cheating and different forms of fraudulent proceedings against customers may also be mentioned here. The same can be said about specific aspects of the so-called 'informal' economy and the black market (cf. Andersson, 2001; Sund, 2001; Holmgren, 2001).

Within British historical research 'social crime' has been a concept frequently used in connection with smuggling, poaching, wood-theft and similar offences during the seventeenth to nineteenth centuries, indicating an interpretation focusing on social protest, resistance and a 'history from below' approach. It also emphasizes the differences in attitudes between social classes. Illegal acts such as poaching were among large groups regarded as a righteous activity (for example Hay et al., 1975; Thompson, 1975; Sharpe, 1984, pp. 12f, 121–42). Social crime is a concept that obviously runs the risk of romanticizing crime and the criminal and it has also been criticized as being too vague, and simplifying a much more complicated historical context. The German historian Josef Mooser (1984), for instance, notes that wood-theft in the nineteenth century can sometimes be described as a necessity crime committed by poor people according to older notions of rights. But sometimes it was rather part of a better-organized profit-aimed criminal activity.

Criminal gangs have been the subject of quite a number of studies. Florike Egmond (1993) has described a number of organized criminal gangs and networks in the Netherlands from 1650 to 1800. A number of German historians have studied the gangs of smugglers and robbers in eighteenth- and nineteenth-century Germany. According to Carsten Küther, it was very difficult for the judicial system to deal with these gangs. Many of them developed a specific subculture with a secret language and their own ethical standards and a wide net of informal contacts. The robbers often identified themselves in contrast to both the 'rulers' and the 'honest' people (Küther, 1976, 1984). Eckhard Formella and Uwe Danker have also studied the organization and the norms of the robber gangs. Danker criticizes Küther for exaggerating the failures of the state and the sub- and counterculture character of those gangs (Formella, 1985, pp. 19–26; Danker, 1988). Küther on his side argues that it wasn't until after the Napoleonic Wars that the judicial system became more effective. The reason was that the possibilities of taking advantage of the lack of territorial unity in Germany were by then reduced (Küther, 1976, pp. 121–44, 148f.). Volker Jarren (1992) argues in a similar direction when he stresses the fact that Prussia during the early nineteenth century introduced a new toll system and built up a more effective organization for searching and prosecuting smugglers. But smuggling was still widely regarded as a legitimate means of support, and it is significant that toll officers, toll houses and boundary-marks were commonly attacked during the

revolution of 1848. Jarren also notices that smuggling was sometimes a method of support used by the poor but sometimes it was rather a part of the commercial activities of wealthy merchants. Those merchants were often able to reach a settlement and escape with paying the customs duties if they were caught (Jarren, 1992).

Smuggling was evidently extensive in other parts of Europe as well. It has been estimated that almost one-third of the tea consumed in England during the eighteenth century was smuggled into the country. The reality was very different from the stories often told about smugglers. The typical smuggler was not the romantic type often described in literature, who defended the poor and fought against the authorities. According to Robert Jütte (1994, pp. 153–6), those who got caught were often children or pregnant women, but the smuggling itself was often a big, well-organized business run by wealthy merchants. The goods, however, were usually transported by professional gangs while the merchant stayed in the background. According to Julius Ruff (2001, pp. 239–46), the nobility was also represented among those organizing smuggling in France. Studies of early modern English smuggling also indicate a well-organized activity. But British historians often emphasize the widespread popular support, including the idea of smuggling as something that wasn't actually wrong (Sharpe, 1984, pp. 105f.). The toll regulations were an integrated part of the economic policy of mercantilism and special 'riding officers' were appointed in England during the seventeenth century. These officers watched the coast areas in order to stop smuggling, mainly the illegal export of wool and illegal import of tea, tobacco and wine. These and other measures to control smuggling and to take legal action against the smugglers actually seem to have promoted a trend towards even better-organized smuggling. It is on the other hand often difficult to make a clear distinction between legal and illicit trade. According to Peter Linebaugh, this was the case in the tobacco trade. Bribery, corruption, fraud, embezzlement and so on were really nothing more than the normal elements of business activities (Linebaugh, 1991, pp. 159–62).

Smuggling and many other offences described as social crimes were not necessarily regarded as real crimes by everyone. Many of these activities were seen as legitimate according to traditional rights or as acts of protest or defence against unjust laws and authorities. During the eighteenth and nineteenth centuries traditional popular views on economic matters, sometimes described in terms of a 'moral' economy, often clashed with a new, more market-oriented view (Thompson, 1971). Sometimes embezzlement or fiddling among artisans and workers in early manufactures is interpreted as a defence of customary rights. According to the artisans, this was an accepted and legitimate part of their earnings, while customers and employers increasingly came to look upon them as criminal acts that had to be stopped. Artisans

traditionally kept any 'left-overs', but that could very well be open to interpretation. Sometimes even finished goods were expropriated and sometimes raw materials supplied by the customer were substituted with cheaper materials. A number of new laws and ordinances were issued in order to control fiddling. Industrialization also led to a change in the definition of these activities. As the employer became the owner of raw materials and finished goods, fiddling changed into workplace theft. Clive Emsley (1987) argues against the view that workplace theft is best understood as a defence of customary rights and that the new legislation criminalized what had formerly been legal and accepted. According to Emsley's view, there is definitely a connection between traditional fiddling and some modern white-collar crimes. The old practices had not always been accepted and workplace theft was not only a problem concerning workers. As businesses and the financial world developed during the nineteenth century new opportunities for fraud and fiddling developed and the values of potential embezzlements rose. Fraud and embezzlement occurred at all levels of businesses but legislation definitely did not keep pace with the new opportunities that developed (Sharpe, 1984, p. 124; Styles, 1983; Emsley, 1987, pp. 103–24).

Social crime is a concept that has not often been used in Swedish historical research on crime. Nor have the specific crimes associated with this concept been frequently studied. But there are a few examples. Andres Florén has studied embezzlement and illegal purchase of goods among blacksmiths at an iron works during the seventeenth and eighteenth centuries, and Lars Magnusson has studied embezzlement among artisans in Eskilstuna during the nineteenth century (Florén, 1987, pp. 122–35; Magnusson, 1986, 1988, pp. 287–311). Criminal gangs and robbers represent a phenomenon almost unknown in the older Swedish society. Smuggling on the other hand is a well-known offence in Sweden even though it has not been the subject of any more extensive studies. According to Åke Sandström, smuggling was probably extensive in Stockholm during the beginning of the seventeenth century but it is impossible to estimate its more precise level. Illegal ports and marketplaces seem to have been a major problem. A number of decrees were issued in order to stop these activities. Similar control systems in other parts of Europe were also introduced in Sweden. The coastal areas were controlled in many ways. Foreign vessels had to pass two different toll stations before entering Stockholm. A special official (*generaltullförvaltare*) was appointed in 1636 to watch over shipping and customs. By 1649, 48 men were employed in the customs control around Stockholm. Small sailing-ships were also strategically sent out to ensure that the coastal population didn't trade with foreign ships from their own boats, and during the seventeenth and eighteenth centuries riding officers (*strandridare*) were appointed to watch the coastal areas. During the eighteenth and at the beginning of the nineteenth centuries customs

were periodically leased out. Burghers were promoted to subscribe for shares in the societies holding the right to collect customs. The reason behind this was that the authorities expected the burghers to avoid smuggling and also to supervise and report it if they had their own economic interests in the payment of customs. The older Swedish customs supervision has produced a significant amount of records and reports usable for more systematic studies of smuggling and the control system (Smith, 1950–55; *Tullverket 1636–1986*; Sandström, 1990, pp. 109–18; Wikberg, 1993; Hult, 1994). There are also a few Swedish studies dealing with the history of smuggling and the black market during the twentieth century (Wijk, 1992; Andersson, 2001).

INSTITUTIONAL BUSINESS SETTINGS

Historically a number of institutional changes and innovations have significantly influenced the field of potential economic crime. Changes in business organization and legislation are of course among the fundamental issues. Up to the nineteenth century most trades were carefully regulated through charters, privileges, monopolies and other restraints. There was on the other hand usually not much homogeneous legislation regulating how the business itself was organized before the nineteenth century. Within small-scale production, like the workshop of an artisan, there was no clear distinction between the household and the business. The obligations of the artisan and the rules guiding his trade were stipulated by the semi-official and partly informal rules of the craft guild, including a strict code of honour. An honourable artisan was, for instance, not expected to compromise the quality of his products and he should not behave disloyally towards his guild brothers (for example Wissell, [1929] 1971; Grießinger, 1981; Farr, 1988; Simon-Muscheid, 1991; Lindström, 1993). The activities of larger production units like manufactures and iron works and larger trade organizations like trading companies were regulated in special charters. But there was no general business legislation regulating these business organizations.

For obvious reasons different forms of cooperation have existed within many trades long before they were regulated by law. Several medieval Swedish law-books contain regulations concerning partnerships within agriculture. Two parties could join their land possessions for a limited time and then divide their possessions again. Any increase or loss of property that might arise during the time of partnership was to be shared between the two parties. But cooperation and partnerships seem to have been most common among merchants. The medieval Swedish municipal law from the mid-fourthteenth century also includes paragraphs indicating the existence of partnerships between merchants (Holmbäck and Wessén, 1966, p. 119). The

family was the usual business unit among merchants of medieval and early modern Europe. They also depended heavily on personal networks often based on kinship. Different forms of partnerships also developed among merchants of medieval Europe, as for example among the merchants of the Hanseatic league. Two or more merchants could finance a joint voyage. A common arrangement was that one or maybe several better-established merchants financed the ship and the cargo, while a younger merchant provided the freight, sold the cargo and possibly purchased new goods. Gains and losses were divided between the parties in accordance with their previous agreements. There was no regulation of joint responsibilities in relation to a third party and the partnership was not a long-term arrangement. The partnership was usually dissolved after each voyage and the shares were then divided. Partnership was accordingly not yet a permanent business arrangement (see Postan, 1973; Dollinger, [1964] 1989, pp. 219–22; Müller, 1998; Hunt and Murray, 1999, pp. 52–63; Dalhede, 2001).

The need for a functional system for credits is also very old. The commercial revolution of the High Middle Ages is not possible to imagine without it. The strong capacity to grant credits is also an important reason for the mercantile dominance of the Hanseatic league (see Bernard, 1972; Postan, 1973; van der Wee, 1978; Dollinger, 1989, pp. 267–74; Cipolla, [1976] 1993, pp. 160–64; Hunt and Murray, 1999, pp. 63–7, 204–25). The medieval Swedish municipal law also contains sections regulating the proceedings when someone was unable to pay his debts (Holmbäck and Wessén, 1966, pp. 173, 176f.). In Swedish court records from the seventeenth century cases concerning debts appear quite often and it was not uncommon that a debt was reduced because of the debtor's inability to pay. A regular legislation of bankruptcy began to evolve during the seventeenth and eighteenth centuries. Certain creditors were given priority and rules for composition with creditors were introduced. Guiding principles for proceedings in bankruptcy were being laid down during the eighteenth century but a systematic Bankruptcy Act was not introduced until 1818. It was replaced by new legislation 1830 and 1862 (Agge, 1934; Welamsson, 1961, pp. 10–17; Jägerskiöld, 1967, pp. 305–84; Ågren, 1992, pp. 55–9).

The Swedish iron works were an important and expanding sector of the Swedish economy during the seventeenth and eighteenth centuries. But it was not an industry characterized by organizational innovation. Most of the iron works were run as family businesses managed by individual owners or leaseholders. The business was financed through credits and the usual creditors were the merchants buying products from the iron works. There are some examples of participants forming a kind of company in order to arrange mutual financing and organizing the management, but this never led to any kind of more advanced company structures. They were rather based on fairly

simple personal agreements (Heckscher, 1936, pp. 581–92; 1949, pp. 495–507; Bredefeldt, 1994). Among manufactures some examples of companies can also be found where a number of participants made private agreements. But it was rather within commerce that company organizations began to evolve. It is true that many of the early business houses were family businesses or quite simple partnerships based on private agreements. It is usually hard to distinguish between the family economy and the business economy, but in order to reduce or spread the risks many merchants began to engage in a number of different partnerships. During the seventeenth and eighteenth centuries these partnerships tended to become more permanent than they had traditionally been. The trading companies are a significant example of this development. In the chartered trading companies the merchants' efforts to obtain financing and to reduce the economic risk were compatible with the early modern mercantilist state and its policies of economic regulations and control. Business organizations based on limited liability and joint stock companies also began to evolve in this context (Heckscher, 1936, pp. 592–9; 1949, pp. 678–704; Glamann, 1974, 1978; Blussé and Gaastra, 1981; Braudel, 1982; Nováky, 1990, pp. 34–64).

A systematic legislation regulating business organizations did not evolve in Europe until the nineteenth century. The French *Code de commerce*, issued in 1807, was of utmost importance, generally regulating a number of different forms of business organizations. The Swedish development was in many ways typical and was also clearly influenced by international development. At the end of the seventeenth century the idea of the company as a legal entity with its own assets began to evolve among merchants in Stockholm. In 1673 it was confirmed in an ordinance that the participants of a company were mutually responsible for any debts which the company might have. The responsibilities of the participants of the company and its obligations was incorporated in the new Code of 1734. It was still unclear whether the economic responsibilities only included the assets of the company or if they also included the personal assets of the participants. It was likewise uncertain whether or not companies were actually regarded as full legal entities or not. Another uncertain point is whether the regulations in the Code of 1734 applied to all kind of companies or only to trading companies. These uncertainties in legislation did not come to an end until the new law of trading companies and simple partnerships was issued in 1895 (Nial, [1955] 1992, pp. 31–3; Nial and Johansson, [1975] 1998, pp. 21–4).

Some trades, especially mining, have a long tradition of an organization based on shares. The Swedish Stora Kopparberget has been called the oldest joint stock company, which of course is not altogether correct. The holding of shares certainly was an important aspect of medieval Swedish mining but the development of the modern limited joint stock company rather took place

within the early modern trading companies. During the seventeenth and eighteenth centuries an organizational and financial structure based on shares open for passive investors became common among the large trading companies. In contrast to earlier forms of merchant cooperations, these trading companies became permanent trading organizations with a board appointed by the shareholders. Companies organized in ways resembling the joint stock company with limited personal liability for the shareholders actually began to evolve long before any regulating legislation existed (Heckscher, 1949, pp. 378–85, 692–701; Braudel, 1982, pp. 433–55; Nováky, 1990). For example, the first Swedish Companies Act regulating the joint stock companies with limited liability was not issued until 1848 (Nial, 1992, pp. 31–3; Nial and Johansson, 1998, pp. 21–4).

The older institutional settings of businesses and companies have not really been systematically studied in Sweden. The right to pursue a trade was strictly regulated and based on privileges, charters and licences, but the organizational forms in which businesses were run were to a great extent not regulated by law. It was not until the nineteenth century that a number of new legislations systematically regulated the organizational forms of companies and it wasn't until then that many important commercial institutions like bankruptcy were decisively regulated by law.

POSSIBLE FIELDS OF HISTORICAL RESEARCH ON ECONOMIC CRIME

In Swedish history two eras appear as important periods of transition in relation to economic crime. The first is related to the development of the early modern state, especially during the seventeenth century, when more uniform and systematic organization of trade regulations emerged. The fiscal system was made more efficient and new forms of state revenues were introduced. A control system emerged that was based partly on different central and regional authorities and state officials and partly on the control exercised by those individuals, corporations or communities who were themselves in possession of specific privileges and rights. The other important period of transition is the nineteenth century. The fiscal system once again changed. The old regulations and restrictions on trade were abolished and new forms of business organization emerged and a new business legislation was gradually introduced.

Economic crime has not been systematically studied by historians, and our knowledge is still very fragmentary. Nevertheless, it is obvious that economic crime as an historical phenomenon includes very different forms of unlawful activities, such as illegal trades, tax evasion and fraud against customers and

against other companies. It is also obvious that the history of economic crime must be studied as a history of changing institutions, changing legislation, changing control systems and changing ethical norms. At least four important fields of potential historical research on economic crime can be identified.

1. *The scale and importance of economic crime*. It is not possible today to give a clear historical survey of the scale, the structure and the quantitative changes in economic crime. In Sweden there is a large number of court records from the seventeenth century on. These sources have only to a very limited extent been used for studies concerning economic crime and the records from the special toll and excise courts have hardly been used at all. If the importance of economic crime is to be discussed it is also necessary to establish if such crimes were recognized at all, and if they were regarded as a problem by contemporaries, especially within the authorities. That was obviously the case with illicit charcoal trade in eighteenth century Sweden. Customs, tolls, tax collection and trade regulations were often discussed in the boards of the Swedish authorities and in different political assemblies, such as the National Diet (*Riksdag*) and the Council of the Realm (*Riksråd*). But we still lack more systematic analyses of the extent to which economic crime was noticed and identified as a problem.
2. *Control systems*. The Swedish control systems can at least in part be reconstructed from available historical studies. Before the emergence of a modern police organization and public prosecutor offices the control system was based on a combination of activities of the central authorities, a number of specialized local state officials, informers and, perhaps most important, the supervision managed by individuals or communities in possession of privileges and monopolies. But the details concerning how this control system actually worked are still to be investigated.
3. *Institutional conditions and institutional change*. Potential economic crime is, as well as the shape of the control systems, highly dependent on institutional conditions. The general features of the Swedish revenue system are well known and the regulations governing trade and business have been studied at least in part. But neither the formal nor the informal rules governing trades, businesses and tax collection have been systematically analysed in connection with questions concerning economic crime. There are a considerable number of charters, ordinances, decrees, laws and so on, that could be used for a more systematic study of the institutional conditions and the institutional changes in relation economic crime.
4. *Value systems and ethical norms*. A historical perspective clearly

indicates that economic crime is a changing phenomenon. Accordingly, a systematic analysis of the value systems and the ethical norms governing economic activities and economic regulations would be of great importance. By what rationale have certain acts been identified as improper, forbidden or even criminal? What kind of conflicts can be identified concerning what was to be regarded as just or unjust behaviour in trades and businesses? What kind of control systems and what kind of actions against economic crime were regarded as efficient, feasible and just during different historical epochs?

NOTES

1. A number of studies have been published dealing with the fundamental historical changes in crime and criminal behaviour. These include, for example, Beattie (1986), Blasius (1981, 1988), Briggs et al. (1996), Cockburn (1977), Gaskill (2000), Gatrell et al. (1980), Jarrick and Söderberg (1998), Johnson and Monkkonen (1996), Lindström (1995), Österberg (1991, 1993), Österberg and Sogner (2000), Schwerhoff (1992), Sharpe (1982, 1984), Sjöberg (1996), Stone (1983), Sundin (1992), Tønnesson (1994), Weisser (1979), Ylikangas et al. (1998).
2. The classic study on mercantilism is still Heckscher ([1935] 1994). For more recent contributions on this topic see Magnusson (1994 and 1995).
3. On the household as a fundamental social and economic entity with certain rights and obligations, see for instance Brunner ([1950] 1956), Mitterauer and Sieder (1982, pp. 71–92), Dülmen (1990, pp. 11–78), Gottlieb (1993, pp. 1–46). For some Swedish contributions on this issue see Gaunt (1983, pp. 85–116), Rydén (1991, pp. 28–40). Ågren (1992, pp. 23–7).
4. For a detailed discussion on the élite concepts of trade regulations and the role of the state from the sixteenth century to the early nineteenth century see Melkersson (1997, pp. 151–206).
5. The transition from a domain state to a tax state and the development of the early modern tax and revenue systems are thoroughly described in Bonney (1995).

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