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Criminalisation of Cartel Behaviour

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Abstract

This paper considers the case for criminalisation of hard-core cartel behaviour. Two frameworks are applied for considering the issue: retributive justice and deterrence (so as to minimise the social loss). The conclusion is reached that hard-core cartel behaviour has a serious moral dimension and that criminalisation of the offence is justifiable when a retributive approach is taken. It is also concluded that criminalisation is likely to be optimal from a deterrence perspective; this is due to the disutility created by stigma and loss of liberty and to the problems with alternatives such as corporate and individual fines, leniency programmes, and rewards to whistleblowers. Arguments against criminalisation relating to judicial processes and incentives on business are found to be unpersuasive. Achieving broad community support is critical, however. An addendum brings the paper up to date with developments in Australia.
Executive Summary

Hard-core cartels are anti-competitive agreements between competitors to limit output and raise prices in order to maximise profits. This results in a (potentially small) reduction in allocative efficiency and a (usually large) transfer from consumers to producers. Both the reduction and transfer are widely seen (by economists and non-economists alike) as a harm that the law needs to address. Empirical work over the past two decades has established cartels are not just theoretical; they exist and do significant harm.

There are several possible approaches to addressing the harm: retribution, deterrence, compensation, protection and rehabilitation. Two frameworks are deployed in this paper: retribution, because cartel behaviour is widely seen as having the serious moral component associated with such a framework; and deterrence (as developed by Becker to minimise the social loss) because it is a widely used economic framework applied to cartel behaviour.

I conclude that cartel behaviour does have a serious moral dimension and that criminalisation of the offence (including jail terms) is justifiable when a retributive approach is taken.

While evidence problems abound, I also conclude that criminalisation is likely to be optimal from a social loss deterrence perspective. There are significant problems with establishing optimal alternatives. Higher corporate and individual fines have to be set too high to be effective; leniency programmes have to offer leniency to ringleaders and offer significant rewards to whistleblowers to deter optimally, raising major moral concerns. Criminalisation overcomes many of these problems by introducing a significant disutility (stigma and loss of liberty) for cartel members that should more effectively deter cartel formation and stability.

I find a number of the arguments against criminalisation unpersuasive, in particular those relating to judicial processes (eg the difficulty of defining the offence and the higher standard of proof) and the impact on incentives for innovative business behaviour. Subject to further analysis of the definitional issues involved, it should be possible to design a hard-core offence with sufficient clarity to avoid impacts on innovation. However, achieving broad community (in particular, judicial and regulatory) support for the use of criminal sanctions is critical to achieving credible deterrence.
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1. Introduction

Over the past decade there has been a significant international trend toward criminalising cartel behaviour (criminal fines and jail sentences). The issue is currently the subject of consideration in Australia. In New Zealand, however, cartel behaviour is only subject to civil penalties. Given these international trends and the potential significance of cartel behaviour, it is important that New Zealand policymakers assess the arguments for and against criminalisation in order to make a judgement about whether it too should take that step.

This paper attempts to meet this purpose by reviewing the theory of cartel behaviour and its treatment, and by examining the evidence on the performance of different treatments (with a particular focus on the literature of the last two decades since the widespread application of leniency programmes). The paper is structured as follows. Part 2 reviews the theory of cartels and looks at the evidence for how significant cartel behaviour is. Part 3 reviews the different frameworks for responding to cartel behaviour. Part 4 briefly applies a retributive justice framework to the issue. Part 5 considers the deterrence framework (in particular Becker’s development of it aiming at minimising net social cost), while Part 6 reviews the evidence on the performance of different penalties for cartel behaviour in the context of that framework. Part 7 draws preliminary conclusions based on theory and evidence for the extent to which New Zealand should adopt criminalisation.

This paper was substantively completed in mid-2008. The situation in Australia has moved on from the circumstances described in this paper. An addendum based on information provided by Caron Beaton-Wells provides a brief update.

2. Cartels and their significance

2.1. Defining cartels and cartel behaviour

There is little disagreement among economists on the nature of cartels. A cartel is a group of competitors who instead of competing work together to secure profits.

A distinction is then usually made between hard-core and soft-core cartel behaviour. Hard-core cartel behaviour is that which is specifically directed at using the market power competitors can exercise by working together to raise prices above competitive levels and so earn supernormal profits\(^1\). Hard-core behaviours include agreements to fix prices, limit output, divide markets and rig bids. All have the same intention of raising prices to limit output to the point where profit is maximised. This profit results in a deadweight loss and a transfer from consumers to producers.

\(^1\) The OECD (in Department of Trade and Industry 2001) defines a hard-core cartel as being: “an anti-competitive agreement, anti-competitive concerted practice or anti-competitive arrangement by competitors to fix prices, make rigged bids (collusive tenders) establish output restrictions or quotas, or share or divide markets by allocating customers, suppliers, territories, or lines of commerce.”
Soft-core cartel behaviours are those where competitors work together to secure profits which may not have deadweight losses or transfers or where any losses and transfers are offset by other benefits. Examples might be sharing of transport systems in order to economise on costs (resulting in profits which translate into lower prices for consumers) or sharing of research and development activity (which may result in more innovative products for consumers). In addition, a number of attempts to fix prices are undertaken naively and without intent to defraud (this often happens in the professions). Because of the existence of soft-core cartels and naive cartels most jurisdictions retain a civil cartel offence. We shall consider later in this paper (Parts 5 and 6) the challenges of defining the boundary between soft- and hard-core cartels.

2.2. The significance of cartels: theory

Concern about cartels has a long history with cases recorded in Ancient Athens and Rome. Among the parents of modern economics, Adam Smith’s statement that business people will take every opportunity to meet together to conspire against customers by raising prices is well known\(^2\). Among modern economists, Stigler’s theory of oligopoly (Stigler 1964) is considered seminal.

Among contemporary economists there is near universal agreement that hard-core cartels reduce welfare and should be illegal under competition law. For this reason hard-core cartel behaviour is illegal per se in many jurisdictions, while soft-core cartel behaviour is subject to public interest or rule of reason tests (see Kaplow and Shapiro 2007). For this reason also, criminalisation is only considered for hard-core behaviours since price-fixing clearly damages welfare and there is no grey zone, unlike in other areas of competition law, where reasonable people might differ about the extent of offsetting benefits.

Some caveats need to be placed around the condemnation of hard-core cartel behaviour by economists. First, it is important to note that from a positive viewpoint economists see only the deadweight loss as an economic harm (or reduction in welfare): the transfer from consumers to producers is a normative issue (see Begg and Wilkinson 2003 and Whelan 2007). Second, some economists do see some offsetting benefits from hard-core behaviour through the opportunity created by supernormal rents to drive innovation (see Levenstein and Suslow 2006; Cseres et al 2006); however, this application of a Schumpeterian perspective is more commonly a defence of oligopoly rather than hard-core behaviour per se. In this paper I take it as given that hard-core behaviour should be subject to per se prohibitions in New Zealand.

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\(^2\) Little known is what Smith said next, that there is nothing that can be done about it!
It is one thing to say that hard-core behaviour is welfare-destroying, it is another to say that it is widespread and that the losses involved are significant. Stigler (1964) pointed to the inherent instability of cartels owing to the temptation to cheat (through moving to a lower price and capturing market share); the application here was based on game theory (the prisoner’s dilemma). This view has been influential for many years (Skillbeck 2003 may be a recent example, arguing that cartels are ineffective and do less harm than monopoly pricing and exclusive behaviour; see also Begg and Wilkinson 2006).

However, recent theory (derived principally from Axelrod’s work on cooperation) has demonstrated that with sufficient patience by firms (through use of the tit for tat strategy in a many shot game) collusion can become the equilibrium outcome despite the practical difficulties (see Levenstein and Suslow 2006; Feuerstein 2005). This work has now begun to focus on what factors make a collusive outcome more likely. Feuerstein (2005) draws four key conclusions (in the context of much uncertainty in results):

- the ability to share information appears to make collusion easier to sustain;
- symmetry of firms (in terms of cost structure etc) will support collusion as much as it will support fierce competition;
- market conditions that make very competitive outcomes possible do not exclude the possibility of collusive outcomes; and
- leniency programmes by antitrust authorities depend critically on their design features to deter cartels.

It has also been demonstrated that tacit collusion (with no actual communication, only public posting of prices) can lead to a stable monopoly pricing outcome (the so-called oligopoly problem: see Kaplow and Shapiro 2007; Martin 2006). The fact that explicit collusion takes place suggests, however, that tacit collusion is harder to get off the ground and that the pay-offs from explicit collusion are higher (see Harrington 2006a; supported by experimental evidence in Bigoni et al 2008a); theoretical research is now focused on identifying when communication is necessary (see Kaplow and Shapiro 2007). Tacit collusion may, however, be easier to detect as (according to Harrington 2005) tacit colluders will move quickly to the monopoly price (as there is no risk of prosecution due to the need for a smoking gun - ie explicit communication - under most jurisdictions) while explicit colluders will choose a gradual price path somewhat below the monopoly price to avoid suspicion.

Overall, from a theoretical viewpoint, it seems reasonable to take the possibility of cartels seriously. One should not necessarily expect them to be everywhere, but, equally, one should expect them to be somewhere. As Feuerstein (2005) concludes in a survey of the theory of collusion, a variety of results emerge which are ambiguous or depend on the exact setting; this “reflects the variety of possible

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3 This interpretation of Stigler is widespread (see, for example, Levenstein and Suslow 2006); my reading of Stigler’s article is that while the temptation to cheat is a central issue in cartels, a variety of factors will impact on whether the temptation is yielded to and that Stigler was neutral on the extent to which these factors would apply.
outcomes in oligopoly markets.” Ultimately whether cartels are widespread or exist in particular markets become empirical questions.

2.3. The significance of cartels: empirics

The challenge with empirical work is that it is impossible to observe the total population of cartels (for the obvious reason that cartels work to keep themselves secret). Inference from those observed is difficult, because it is unclear whether those observed are a random sample of the population (see Harrington 2005).

What can be stated is that the extent of cartel behaviour appears to be greater than previously thought. Coincident with the Stigler view, it seemed that during much of the latter part of the twentieth century there was a limited amount of cartel behaviour as not many cases were being detected. However, with the introduction of revamped leniency programmes in the late twentieth and early twenty-first centuries the number of cases detected sky-rocketed (in the US notifications to the Department of Justice’s Antitrust Division went from 1 per year to 20 per year; see Harrington 2005).

These developments have led to renewed academic interest in assessing the operation of cartels and in the extent of the harm done by them. This has been done by looking at the duration of cartels, the mark-ups achieved by them, the practices they have engaged to ensure the cartel does not break up, and at what causes cartels to form and break up. I highlight here the key findings from this research.

2.3.1. Duration of cartels

Levenstein and Suslow (2006) review a wide variety of empirical studies. They report that the median duration for cartels is 5-6 years. Distribution is far from normal, with cartels either breaking up very quickly or lasting a significant period of time. Arlman (2005) reports a similar median of 5-7 years. Evenett, Levenstein and Suslow (2001) review 40 case studies of international cartels; they find that 24 out of the 40 lasted at least four years. There does not seem to be any evidence on whether the duration of cartels has decreased over time.

2.3.2. Cartel mark-ups

There have been two significant studies of cartel mark-ups both associated with John Connor of Purdue University and claiming to be the only comprehensive studies of the question ever undertaken. First, Connor and Lande (2005) assess 674 independent cartel observations. They find an overall median overcharge of 28 per cent. Domestic cartels achieve median mark-ups of 17-19 per cent, compared to international cartels with 30-33 per cent. Observations are skewed to the high side, resulting in a mean overcharge of 49 per cent. The 28 per cent median holds when Connor and Lande review only what they consider to be the most trustworthy observations. Mark-ups have declined modestly since the 1990s with the international mark-up median reducing to about 25 per cent (see also Connor 2007).

Secondly, Connor and Bolotova (2005) conduct a regression analysis of 395 episodes of cartel behaviour. Their median overcharge is 19 per cent with durable international cartels achieving significantly (six per cent) higher mark-ups. The longer a cartel endures the higher the mark-up it achieves (consistent with the Harrington thesis). Consistent with oligopoly theory, higher mark-ups are detected
where the cartel has a high market share, there are high fixed costs, and demand elasticity is low (see also Bolotova, Connor and Miller 2008).

There is little evidence about contemporary mark-ups (ie that does not include results from more than a decade ago) that is not anecdotal; anecdote suggests mark-ups between 10 and 100 per cent (see Levenstein and Suslow 2006).

2.3.3. Cartel practices

Harrington (2006a) reviews 20 European Union cartel cases. He reports that contrary to expectations (that cartels would avoid regular meetings to avoid detection), cartels meet regularly as a means of minimising opportunities for cheating and incentivising compliance. These mechanisms were effective as most only collapsed as a result of external discovery and not defection. Overall, he says “one cannot help be impressed with the sophistication of their behaviour.”

Similarly, Levenstein and Suslow (2006) report that the key marker for successful cartels is the effort they put into monitoring the agreement (and not, as expected under Stigler, devising and implementing punishments for cheating). These efforts prove particularly important in coping with changing circumstances such as demand or technology shocks.

2.3.4. Cartel formation and break-up

Little research has been undertaken on the extent to which attempts are made to establish cartels which do not get off the ground. Consequently, a judgement cannot be made about the success rate of cartel formation. Given the fact that cartels do form it is clear, at least, that there is an ex ante assessment that there are reasonable chances of formation (see Levenstein and Suslow 2006).

Levenstein and Suslow also survey and discuss the break-up of cartels. Relying primarily on Suslow’s earlier work they state that it is hard to pinpoint the precise cause of break ups, but that to the extent there is a unifying factor it is that the threat of entry builds over time. Specific causes identified are: external shocks (42%), cheating (24%), entry or substitution (31%), and anti-trust activity (18 %). Harrington (2006a) also concludes that cheating is not a major cause of collapse (he reviews EU cases, so detection and prosecution is the primary cause here).

2.4 Conclusion

Due to the unobserved population issues any conclusions must necessarily be caveated. However, unless the increase in reporting in recent years is due to exogenous factors (which seems implausible) or the sample of detected cartels is very skewed (if anything it seems reasonable to conclude that the detected cartels are the least successful and so the sample under-represents the successful) it seems reasonable to conclude that:

- there are many more cartels than previously thought;

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4 It should not, however, be inferred that cartels are only detected in classic oligopoly industries; they can arise in a wide variety of industries (see Grout and Sonderegger 2005)
many cartels endure for long periods of time and achieve mark-ups that are a significant impost on consumers;

they achieve this because they put more effort than previously thought into monitoring to ensure compliance; and

they also achieve this result because external shocks and the threat of entry are likely to be the more destabilising forces and not outside detection.

Overall, it is difficult to disagree with the OECD (2002a) conclusion that “cartels cause billions of dollars of damage to consumers each year.” This paper proceeds on the basis that damaging hard-core cartel behaviour is a reality. It is difficult to think of any reason why New Zealand should be exempt. While it is tempting to think there may be cultural differences operating in New Zealand’s favour (such as relatively high levels of trust), these may in fact work in favour of cartels (see Bigoni et al 2008a for the demonstration of this effect in the Swedish context). While New Zealand generally performs well on international price comparisons (see OECD 2005) and we have very open markets that facilitate entry (see Evans and Hughes 2003), our small market size also creates high levels of concentration which may facilitate cartel formation. Finally, the Commerce Commission, following the introduction of an enhanced leniency programme, has experienced an increase in notifications of potential cartel behaviour similar to the rest of the world.

3. Frameworks for assessing cartel behaviour

We have so far concluded that cartels are a potentially significant economic behaviour. We have employed an economic framework to conclude that they are welfare reducing (through their impact on allocative efficiency). We have so far refrained from making a judgement about whether the transfer from consumers to producers is of concern or not. In this section we ask what are the potential ways in which cartel behaviour can be viewed and which of those ways we should deploy.

There are a number of frameworks that can be deployed to consider cartel behaviour (see Becker 1968; Whelan 2007; Harding 2006). They derive in large part from the theory of the state and theory of justice and (broadly) address the question: how do we as individuals and communities determine what treatment, including rewards or punishments, people should get in given circumstances. The five key frameworks I consider here and their key features are:

- **Retribution**: views some forms of harm as an affront to the moral standards of the community and claims, therefore, that the primary focus should be on communicating the community’s repugnance to the offender even if that comes at some cost to the community;

- **Deterrence**: says the primary focus should not be on moral considerations, but on responses most likely to deter the offender and others from inflicting the harm again;

- **Compensation**: says the primary focus should not be on moral considerations or deterrence of others, but on ensuring the victim is compensated for harm done;
- **Safety**: says the primary focus should be on protecting the community from harm and tends, therefore, to be concerned to minimise risks to the community; and

- **Rehabilitation**: says the primary focus should be on understanding why the offender committed the offence and helping them develop other options than offending.

Underpinning these different frameworks to some extent are different views about human behaviour. These are:

- **The rational actor**: a model which sees human beings acting largely in response to the costs and benefits of the various options available to them. This model is generally associated with the deterrence and compensation models; and

- **The social actor**: a model which sees human beings acting largely as a result of the social influences around them (the values and norms of peers for example). This model is largely associated with the retribution and rehabilitation models (though with very different implications).

Becker (1968) in a seminal consideration of the economics of crime and punishment argued that none of these approaches was optimal. Instead, crime should be considered like any other industry. If the industry was considered to be a harm to society, the aim should be to minimise the social loss by deterring it to the point where the marginal harm deterred equalled the marginal cost of deterring the harm. The framework clearly has close connections to the deterrence framework, but differs from it in arguing there is a point at which extra deterrence creates more cost to society than merited by the harm deterred (so I call it the social loss deterrence framework). This framework has been widely applied by economists in their consideration of cartel behaviour and it is clearly important that we apply it here, given that Ministry of Economic Development advice focuses primarily on economic impacts.

However, I think it important to apply also the retribution framework in this circumstance because those (including economists; see Kaplow and Shapiro 2007) who argue that cartel behaviour should be illegal do so on the grounds that the transfer from consumers to producers (and not just the deadweight loss) is a harm and use the transfer to calculate the appropriate penalty (even if using a deterrence framework to calculate penalties); a transfer prima facie looks like a theft which is a criminal offence. It is clearly important, therefore, to ask ourselves whether there is a serious moral concern to cartel behaviour and, if so, to see what a moral framework (the retributive justice theory) says about how such an offence should be treated.

My approach in this paper is to apply both frameworks, to see what the implications of each are, to ask whether any implications are irreconcilable, and if so to consider how these might be addressed. In practice, my treatment of the deterrence framework is much more detailed as this is the framework which has been most widely used and tested. I begin, however, with the retribution framework; as Parker and Nielson (2005) say it is wrong to consider treating cartel behaviour as a criminal offence without asking whether there is a moral seriousness to it.
4. The retribution framework: theory and practice

The retribution theory of justice states that some behaviours are repugnant to most human beings (the community) and that anyone conducting such behaviours should have that repugnance expressed to them most clearly even if expressing that repugnance comes at some cost to the community.
Murder is a key case in point. To murder someone offends most people’s moral standards. The community’s key need is to express that sense of repugnance and it is the right (just) thing to do so by taking some vengeance upon the offender. It does this (today) by putting murderers in jail. It does this knowing (at a rational level) that jail will not deter other murderers (since most murders are spontaneous one-offs), that jail does not compensate for the harm done (since nothing can compensate for the loss of a life), that jail does not make the community safe (since, again, most murders are spontaneous), and that jail very rarely rehabilitates the offender.

It is in recognition of this moral element to some human behaviour that there is a distinction at law between civil and criminal offences.Crudely, civil laws deal with harms done where there is not a strong moral dimension, while criminal law deals with those where there is, and in particular those where no amount of compensation can make up for the moral harm done. For this reason also criminal law brings with it many procedural restrictions; in convicting someone of a criminal offence society is expressing moral condemnation of an individual’s behaviour and potentially taking away their liberty, so it is very important that to minimise the incidence of mistaken convictions. Consequently, we have separation of investigative, prosecutorial and judicial functions, higher standards of proof, and the need to establish intention (see Wils 2006a).

Key principles applied under this framework are:

- **Proportionality**: the vengeance taken should be proportional to the harm done; the greater the harm done, the greater the vengeance;

- **Horizontal equity**: similar crimes should be treated similarly; and

- **Vertical equity**: different offenders undertaking similar crimes should be treated similarly (your position in society should not determine how you are treated).

Key questions we need to apply to cartel behaviour in applying a retributive justice framework are:

- Is there a moral dimension to cartel behaviour serious enough to warrant treatment as a criminal offence?

- If so, what is a proportional and equitable response to that behaviour?

4.1. **Is there a serious moral dimension to cartel behaviour?**

We have already seen that the transfer from producers to consumers is widely seen to be a harm that needs to be addressed through some framework of justice. What matters in applying a retributive justice framework is whether there is a moral dimension to the harm sufficient to merit retributive action for its own sake.
One moral philosopher (Green 2004) sees common white collar crimes as having a distinct moral component due to the cheating component of the activities. A number of commentators on cartel behaviour specifically treat it as a very serious moral offence. For example, Werden and Simon (1987) state that a Becker social loss framework should not be applied to cartel behaviour because that behaviour is one which, like child molestation, society wishes to prohibit, and not to minimise. Similarly, Harrington (2006a) says that he has “disdain” for cartel behaviour. Antitrust authority heads are widely reported as calling cartel behaviour “theft in suits” (Massey 2006). I have not yet come across any economist in contemporary discussion of cartel behaviour who argues that it is morally justified\(^5\).

We should probably be guided in this matter, however, by the views of ordinary citizens since retributive justice depends on a notion of community standards. Unfortunately on this matter the evidence is unclear. Stucke (2006) provides evidence of citizens viewing cartel behaviour as equivalent to theft and Parker and Nielson (2005) provide evidence that Australian executives are more concerned with what others would think of their behaviour than of fines or jail. However, Fisse (2007; discussed further in Beaton-Wells 2008) cites evidence to the contrary from the United Kingdom (only seven per cent, apparently, see cartel behaviour as equivalent to theft).

Baker (2001) states that there is a broad political consensus in the United States that cartels are bad, but that it is too early to tell if other jurisdictions will develop the same “public psychology”; conversely Harding (2006) says it is hard to see any strong public condemnation of cartel behaviour in the United States, with increased enforcement the result of top-down, rather than bottom-up action. Beaton-Wells (2008) states that doubts about the seriousness of the offence have led to a lack of regulator and citizen commitment to criminal treatment in Ireland, the United Kingdom and Japan.

Two countervailing forces seem to be at work here. On the one hand, cartel behaviour is complex to communicate and to understand; consequently surveys may understate the extent of moral condemnation there would be if ordinary citizens fully understood the issue. On the other hand, cartel behaviour is not an “in the face” offence but happens at a distance and without any immediate threat of physical harm, characteristics often seen to be crucial to triggering human moral responses (as in the so-called “trolley dilemma” experiments by moral philosophers); it may be people are prepared to discount the seriousness of cartel behaviour for this reason.

Overall, my judgement is that there is sufficient reason to view cartel behaviour as a serious moral offence similar in nature to theft, more serious in some senses because of the quantum involved (including the numbers of often low-income people), but with some of the less aggravating features of a home burglary or bank robbery. It therefore meets the threshold for application of a retributive justice framework.

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\(^5\) One New Zealand economist argues (not in print) that there is not a moral harm in that firms are simply pricing up the curve and buyers are willing transactors; there may be a small harm for those few buyers priced out of the market (the allocative efficiency loss)
To the extent that there is limited evidence of public condemnation, I attribute this to the complexity of the issue. I do not see this as problematic. It is legitimate in a representative democracy for representatives to make moral judgements on behalf of the community where the community has limited information. It seems reasonably clear that among elected representatives and their informed agents (antitrust authorities) there is much stronger condemnation of cartel behaviour than among the public; the more you know about it the less you like it.

Telling is the secrecy that surrounds cartel behaviour (see OECD 2002a). Cartels do not advertise what they are doing. Business representatives do not argue that cartel behaviour is positive for society. While the prospect of punishment is of course a factor, it seems likely also that most cartel operators believe the practice is wrong. Wils (2001) states that the key difference between those who commit cartel behaviour and those who do not is their level of regard for the law (ie their norms), not the prospect of penalties.

From the foregoing discussion it is clear that if cartel behaviour is criminalised, information about the harm caused by cartels must be well disseminated to ensure the seriousness of the offence continues to be understood by law makers, antitrust authorities, the business community and the broader public.

4.2 What is a proportional and equitable response?

Application of the proportionality and equity principles leads one to conclude that cartel behaviour should be treated similarly to theft (ie it is less serious than murder, but considerably more serious than jaywalking), that it should be treated equally with other white collar thefts (such as fraud or insider trading), and that as a white collar theft it should be treated equally with blue collar theft. In most jurisdictions, including New Zealand, theft (including white collar theft) is subject to potentially lengthy jail terms. Consequently, my conclusion is that jail terms are justifiable from a retributive justice viewpoint. The question now becomes whether this is consistent with a social loss deterrence framework.

5. The social loss deterrence framework: theory

The social loss framework is part of utilitarian theory that asserts (broadly) that there are few situations without both costs and benefits to the actors involved and that the aim of policy should (broadly) be not to eliminate costs but to maximise net benefits by finding that policy which maximises benefits relative to costs. It is (broadly) the standard economic framework.

As outlined briefly earlier the deterrence framework was first applied to crime and its punishment by Becker (1968). In this application the aim of policy is not to prevent all crime but to reduce crime to the point where the social loss is minimised. This point is reached when another dollar spent on deterrence (such as on detecting and prosecuting cartel activity) deters less than one dollar of criminal behaviour (ie the marginal benefit equals the marginal cost). This point is reached for the individual criminal actor when the expected benefits of criminal activity are less than the expected costs. As applied to cartel behaviour the expected costs are the fine or penalty applying to the offence multiplied by the probability of the crime being detected and successfully prosecuted.
Risks of Type 1 or Type 2 errors should play a role in establishing costs. The aim should be to minimise losses from the costs of enforcement, the undesirable behaviour that the rules permit and the desirable behaviour that is deterred. Where there is less ambiguity about the legality of behaviour (such as, arguably, with price fixing) penalties can be set higher to increase deterrence.

Harrington (2006b) states that the aim of policy should be to impact on the probability of successful prosecution, through that to impact on the probability of successful detection, and thereby to impact on the rate of cartel duration and formation.

In seeking to impact on the expected costs faced by cartel operators, theorists have focused primarily on establishing the penalties that should be applied for a given rate of detection (leniency theory is an obvious exception); however, some theorists do imply (and in rare cases make explicit) that various penalties will impact on detection rates. In the following sections I discuss the various penalties that have been proposed by theorists; where there is an implication that these will impact on detection rates then I make that as explicit as possible.

5.1. Fines on corporation

Since Becker, theorists have seen fines on corporations as the first best means of deterrence (see Wils 2001; Mullin and Snyder 2005). The corporation is the legal entity with the powers of a natural person, so it undertakes the offence. It establishes the incentive structure for the organisation and its agents respond to those incentives, so it is the corporation that should face the penalty (see Chen, 2008, for how incentive structures, through decision rights allocations, can prove a powerful means of sustaining collusion). Profit is the corporation’s raison d’etre, so a financial penalty will be particularly powerful with it. In addition, fines are seen (unlike jail) to introduce few social costs.

Despite widespread agreement that the corporation should face fines, a considerable number of problems are raised about whether they will work effectively in practice. These derive largely from the observation that if, as seems likely (see Part 6), the probable rate of detection is very low, then the optimal fine will have to be set very high. As a consequence:

- fining may not have a strong deterrent effect as firms will see themselves as judgement proof (judges will not set optimal fines, as companies would be made insolvent; see OECD 2002a)\(^6\);

- if judges did award optimal fines and firms were made insolvent, then competition would be reduced (to say nothing of employees unfairly suffering), a bizarre outcome for an antitrust action (see OECD 2002a); and

- even if optimal fines were a possibility they are extremely difficult to calculate accurately and would therefore be discounted significantly (due, among other things, to the difficulty of estimating the counterfactual; see Wils 2001; Massey 2006).

\(^6\) Department of Trade and Industry (2001) estimated that half of all firms prosecuted would be made insolvent if optimal fines were awarded.
Cseres et al (2006) raise the concern that fines may also limit deterrence by encouraging firms not to look for cartel behaviour by agents; I do not find this a particularly strong argument. More plausibly, Wils (2001) and Buccirossi and Spagnolo (2005) raise concerns about the deterrent effect of fines given the ability of firms to pass fines on to customers to some extent. From a retributive justice perspective, Department of Trade and Industry (2001) raise concerns about the proportionality of an optimal fine in relation to the harm done.

Overall, despite a strong conclusion that fines on corporations are crucial to effective minimisation of social losses, there are significant theoretical concerns about whether optimal deterrence can be achieved through fines on the corporation alone.

5.2 Fines on individuals

As a result of these difficulties with fines on corporations, it was proposed that fines should also be placed on individuals within corporations guilty of participating in cartel behaviour. Fines on individuals could be set at a level that outweighed the expected benefits for the individual (recognising the calculation for the individual may be different from the corporation’s) and potentially undermine the stability of the cartel through creating suspicion between principals and agents.

It was also seen as appropriate to place fines on individuals because of more usual principal-agent issues. The corporation as principal cannot control fully the actions of its agents and agents’ incentives are not always aligned with principals, so there is a possibility that agents will act without the full consent of principals; it is efficient therefore to create an incentive for the individual agent to deter cartel behaviour.

It is not (surprisingly) stated explicitly in the literature but it seems to be implicit that the introduction of fines for individuals would increase the detection rate and so lower the optimal fine required for corporations. Mullin and Snyder (2005) state that individual fines achieve the same level of deterrence at lower overall cost (they also point to lower cost through reduction in Type 1 errors – making insolvent an innocent corporation). Unfortunately, as far as I have seen, there is no calculation of how much the detection rate is improved and, therefore, of how much the fine on the corporation can be reduced.

This lack of consideration of the impact on detection rates may be a result of concerns about the effectiveness of individual fines. The two key difficulties identified are:

- given low detection rates, optimal individual fines create the same insolvency risks and proportionality issues as optimal corporate fines, with the same negative impact on deterrence; and

- there is a significant, virtually unavoidable risk that corporations will pay individuals’ fines with the consequence that individual fines actually lower deterrence by lowering overall penalties (see Department of Trade and Industry 2001; Mullin and Snyder 2005).

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7 The various OECD publications cited in the bibliography, as well as Wils (2001), provide a good overview of the development of thought in this area, as well as for the development of thought in relation to leniency programmes and criminalisation (section 5.3 and 5.5)
Overall, individual fines are seen to be a potentially valuable addition to the toolkit for deterrence, but not a means of achieving optimal deterrence.

5.3 Leniency programmes

Inspired by the theory of oligopoly and the difficulties posed by fines on corporations and, more latterly, individuals, a major focus of analysis over the past two decades has been the potential role that leniency programmes might play in achieving optimal deterrence and the effective design of such programmes.

Consideration of leniency programmes stems from the application of the game theoretic prisoner’s dilemma to the specific decisions cartel participants face. Under Stigler’s application (1964) the choices were to stay in the cartel or to cheat on it by cutting prices and gaining market share. Leniency introduces the choice to run to the antitrust authority in return for preferential treatment (see Harrington 2006b; Buccirossi and Spagnolo 2006a). Under this application expected benefits are lowered because of the possibility that another cartel member will go to the antitrust authority (i.e., the detection rate is increased). Incentives to destabilise the cartel are created. Leniency is therefore seen as overcoming the optimal fine problem at both the individual and corporate fine level.

There are a range of views about the extent to which leniency will be effective. While most see leniency as a valuable addition to the toolkit, it may not be a panacea. For example:

- Motta and Polo (2003) argue that leniency programmes may make cartels more likely by lowering the expected costs each member faces (through the prospect of leniency); and

- Harrington (2006b) posits that leniency will be more or less effective depending on the status of the cartel vis-à-vis the antitrust authority. If the authority is not aware of the cartel at all then Harrington concludes that there will be little increase in incentive for defection. However, if there is some authority awareness, then a race to the courthouse could take place.

In addition, there is an extensive literature on the effective design of leniency programmes. Motta and Polo (2003), for example, argue that it is crucial that leniency is high and automatic and available even after antitrust authority detection to maximise destabilisation incentives. Harrington (2005/8) argues that leniency should be high, but available to only the first whistleblower to maximise incentives.

Overall, leniency programmes appear to be a powerful addition to the toolkit. Unfortunately, theory does not seem to provide any insight into the extent to which such programmes achieve optimal deterrence. On this matter we must defer to the empirics.

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8 Buccirossi and Spagnolo (2006c) raise a question about whether it is appropriate to use the Becker deterrence model in the presence of leniency (on the grounds that leniency targets the incentive, rather than the participation, constraint).
5.4 Rewards for whistleblowers

Some theorists assume that even with leniency programmes the expected benefits and detection rates will not lower enough to create optimal deterrence. Such theorists posit that rewards for whistleblowers will achieve optimal deterrence (see Aubert et al 2005; Buccirossi and Spagnolo 2005). It is proposed that fines collected from cartels members be available to the first whistleblower among the cartel. These potential rewards lower the expected benefits of being a cartel member by introducing the possibility of another cartel member defecting and by increasing the detection rate. Wils (see Ehlermann et al 2006) argues that rewards for whistleblowers are not likely to be successful as the rewards will be gamed by cartel members (Buccirossi and Spagnolo themselves, 2005, identify the risk of fabricated evidence). Rewarding whistleblowers also clearly raises a moral issue, namely whether it is reasonable that offenders profit from their crime.

5.5 Jail for offenders

Becker (1968) argued that jail should be a last resort punishment for any crime, on the basis that jail introduces social costs; fines should be preferred wherever possible as, apart from collection costs, they were costless. Becker, however, recognised that fines could not be relied upon when the harm done exceeds the resources of offenders. Similarly, Polinsky and Shavell (2000) argue the use of fines should be exhausted before the costlier sanction of prison is resorted to (see also Cseres 2006). This approach clearly raises serious moral issues relating to equity, implying that the rich should be able to buy their way out of prison.

Because of the problems with fines, leniency and rewards discussed above, a number of theorists see jail as a necessary additional deterrent. While jail introduces social costs, it is argued that it creates an effective deterrent for individuals. As Arthur Litman put it (Arlman 2005) conventional risk-reward analysis breaks down when the risk is jail. Wils (2001) also argues that criminalisation sends a strong moral message (which fines do not) as well as creating a race between the company and staff to the courthouse. Cseres (2006) says criminalisation introduces a “serious negative utility”. Buccirossi and Spagnolo (2005), who oppose criminalisation, argue that a potential benefit of criminalisation is the stronger investigative tools made available, which presumably impacts on detection rates.

In addition, Kaplow and Shapiro (2006) state that there may be a case for jail because fines do not address the situation where corporations and individuals conspire to establish a cartel but do not actually get the cartel off the ground; as there is no harm done a fine based on gain would be zero.

There is limited discussion of the optimal length of jail time. On the one hand it is generally envisaged that short, low cost, jail sentences will be very effective (for stigma reasons) for business executives (Buccirossi and Spagnolo 2005) but that for vertical and horizontal equity reasons (equity of treatment with blue and other white collar crime) lengthy jail sentences may be appropriate (see Fisse 2007). The OECD (2003) suggests jail sentences should only be considered where consistent with a country’s norms.
Others point to possible problems with criminal sanctions. Particular problems highlighted include (Buccirossi and Spagnolo 2005):

- increased costs from Type 1 errors (jailing the innocent);

- the higher standard of proof generally required for criminal cases and procedural complexities (parallel civil and criminal investigations, separate investigation and prosecution), lowering the probability of detection (see also Parker and Nielson 2005; Fisse 2007);

- imprisonment costs; and

- potential increases in enforcement activity by cartels (including, Cseres et al 2006, against the antitrust authority).

Cseres et al (2006) also raise the possibility that criminal sanctions will result in overly cautious behaviour by executives and dent entrepreneurship. It may also deter the anti-trust authority from investigating novel cases (due to the higher standards of proof). Beaton-Wells (2008) and Fisse (2007) raise potential concerns about defining hard-core cartel behaviour with sufficient clarity. Kaplow and Shapiro (2006) also discuss difficulties with economic and legal definitions of agreement.

Some of these criticisms of jail sentences have in turn been challenged. Whelan (2007) argues that definitional issues are minimal since hard-core cartel behaviour is clear cut; discretion could be exercised in rare cases of ambiguity. Massey (2006) argues that there is no grey zone between competitive and anti-competitive behaviour with hard-core cartel offences. Massey also states that to establish cartel behaviour has always required a “smoking gun” (see also Cseres 2006). Consequently, concerns about higher standards of proof and impacts on innovation are misplaced. Wils (2006) argues that the costs of Type 1 errors are not raised because procedural safeguards (such as higher standard of proof) exist for criminal offences. Ultimately, the issue of whether criminalisation will dent entrepreneurship depends on how these sorts of issues play out in practice; the evidence is discussed in section 6.5 where it is concluded that a hard-core offence can be designed and implemented with sufficient clarity and certainty that entrepreneurship is not dented.

I have not identified any substantial discussion of the use of criminal fines as opposed to jail sentences. One might posit that such sentences will introduce some but not all of the stigma (through a criminal record) of a jail sentence, but suffer many of the deficiencies of fines generally. Department of Trade and Industry (2001) rejected a criminal fine due to the indemnification risk. I imagine this is why criminal fines have not been considered in isolation from jail sentences.
6. The social loss deterrence framework: empirics

In this section I review the evidence on the extent to which the theory of social loss deterrence is borne out in practice. It is important to note at the outset that it is impossible to achieve the standards of proof for evaluation in this area that one would normally hope for. This is for the simple reason that it is never possible to identify the total population of cartels and so observe whether the cartels detected for evaluative purposes are representative of the entire population. As Harrington (2006c) says this results in the possibility that increased levels of detection are consistent with both lower and higher overall deterrence and lower levels of detection with higher and lower deterrence. Harrington is working on an approach which sees observed cartel duration as a proxy for the effectiveness of penalties on the overall population, but this is still in its early stages. As a result, it is not possible to be definitive about the effectiveness of particular interventions; one is limited to drawing plausible judgements from partial evidence.

In addition, there is little evidence of market conditions (for example, mark-ups) following the break-up of cartels (see Mehta 2005), so we are left to speculate somewhat on the impact of different penalties in the long run.

Much of the evidence brought forward in this section constitutes information about practice in various jurisdictions and the reasons why practice has followed a particular course. This evidence helps inform plausible judgement, while again being far from definitive.

Some experiments and modelling has also been undertaken simulating cartel behaviours. While obviously needing to be treated with the cautions more broadly applied to such simulations, I have drawn on this evidence also given the paucity of wider sources.

Overall, however, we can be confident that strong antitrust law and enforcement is effective at limiting the level of price rises among detected cartels compared to jurisdictions with weak antitrust law and enforcement (see Bolotova, Connor and Miller 2008; Evenett, Levenstein and Clarke 2001; Connor and Miller 2005).

6.1. Corporate fines

In the light of the social loss deterrence framework, most developed country jurisdictions have moved over the past 20 years to raise significantly the fines applying to corporations for cartel behaviour. This has been driven by (in addition to increasing concern about cartels) a recognition that the detection rate for cartels was low. The seminal work on this was by Bryant and Eckard (1991), which identified the likely detection rate as 13-17 per cent. As a result the optimal fine was typically set by governments at six times the expected gain. The OECD (2003), however, has stated that three times the gain is more commonly used (I have not been able to establish what the evidence for this claim is). Wils (2006b) notes that overconfidence

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9 On my reading of Bryant and Eckart this detection rate is simply the rate for those cartels which are going to be detected at some point and not for all cartels; if I am correct the actual rate of detection will be lower as not all cartels are detected.
bias may result in firms underestimating the detection rate; Bigoni et al (2008b) highlight the impact risk propensity will have on behaviour.

Using the 1 in 6 detection rate, together with a (conservative, as we have seen) mark up of 10 per cent and duration of 5 years, Wils (2001) calculated that the optimal fine was 150 per cent of annual turnover of the affected products.

In practice both legislated and judicially awarded fines have not reached anywhere near the optimal fine level. In the EU there is a legislated maximum fine of 10 per cent of turnover with fines consistently found to be less than the benefits gained let alone the optimal fine (Cseres et al 2006; Veljanovski 2007). The OECD (2002b) in its survey of hard-core cartel awards identified that in only four cases had fines exceeded the gain and in none of those cases had the fine approached two or three times the gain. It (2007) continues to encourage members to apply fines closer to the optimal fine level. Connor (2006) highlights that the under-deterrence effect applies particularly to international cartels.

The reasons why optimal fines have not been applied are, as signalled in Part 5, concerns about making insolvent affected firms (OECD 2002a; Wils 2001; Cseres et al 2006), proportionality concerns and judicial reluctance (Wils 2001; OECD 2007; Whelan 2007), and the difficulty of quantifying the gain (see the Koppers judgement in New Zealand for an example).

6.2. Individual fines

In the wake of theoretical and practical concerns about the effectiveness of optimal fines a number of jurisdictions (including New Zealand and encouraged by the OECD 2003) have adopted individual fines on the grounds that they can lower costs and mitigate judgement proof issues. However, the number of jurisdictions with individual fines remains low, particularly in the European Union (Harrington 2006b; Buccirossi and Spagnolo 2006a), while the actual use of these fines is lower still at about one third of the (somewhat over half) OECD countries that provide for individual fines (OECD 2002a, 2004, 2007).

The reasons given for the low adoption and use of individual fines in practice is that it is very difficult to prevent indemnification of individuals by the company (Buccirossi and Spagnolo 2005, Wils 2001, Mullin and Snyder 2005); it is difficult to identify any hard evidence to this effect, however (indemnification is illegal in New Zealand). Wils (2001) goes on to argue that other means of targeting the individual (except for jail) such as director disqualification are equally ineffective through circumvention (for example, by appointing the director as a consultant to the board).

The OECD (2004) says there is no hard evidence on the effectiveness of fines on individuals and that ultimately each country has to make its own judgement on the issue. It considers, however, there is likely to be limited incentive for individuals to come forward if there are no sanctions upon them.
6.3. Leniency

Leniency programmes have been widely adopted around the OECD in the wake of theoretical developments and dissatisfaction with fines in practice. A wide variety of schemes have been developed with variation on the numbers for whom leniency is available and the extent to which leniency is available. A common feature is the absence of immunity provisions for the initiator of the cartel. Leniency programmes appear to have been effective at increasing the rate of successful prosecution of cartels (see Kaplow and Shapiro 2006). In the US notifications went up from 1 per year to 20 per year following the introduction of leniency programmes (Harrington 2006a). A strong, but not as dramatic, increase in notifications was also experienced in the European Union. Not all this success can necessarily be attributed to the leniency programmes alone as the programmes coincided with stronger antitrust enforcement and increased public concerns about cartels (Massey 2006).

It is doubtful that leniency programmes have been as effective as they might have been. The absence of immunity for initiators obviously reduces expected costs for offenders. Similarly, it seems that the optimal scheme is to provide full immunity for only the first whistleblower (see Harrington 2005/8); many schemes allow more than the first applicant to receive leniency. In addition Arlman (2005) argues that leniency programmes have in fact brought forth little novel information suggesting in many cases an easy out may have been provided for cartels that were already effectively detected (Massey 2006 argues this is not so). Overall, the OECD (2007) has stated that there are considerable opportunities to increase the effectiveness of leniency programmes.

Even if the design of leniency programmes were optimised (and it seems unlikely on moral grounds that initiators will be widely included), it seems unlikely that such programmes can achieve optimal deterrence. Buccirossi and Spagnolo (2005) model the impact of leniency programmes and conclude they are likely to reduce the optimal fine by some 20 per cent, not sufficient to address proportionality and judgement proof issues.

There is even a question as to whether leniency programmes result in net benefits. Bigoni et al (2008a) conclude on the basis of their antitrust experiments that leniency, like fines, does increase deterrence but raises prices in remaining cartels. Harrington (2005) finds a similar result where the leniency programme is poorly designed (see also Chen and Harrington, 2006, who, nonetheless, find prices charged by cartels are lowered). Buccicrossi and Spagnolo (2005) argue that this sort of outcome may be due to strengthened incentives for monitoring within cartels created by leniency (the same authors, 2006a, produce some evidence to this effect with poorly designed programmes).

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10 New Zealand does not have such a distinction; in practice it is found that it is difficult to determine who the initiator is.
6.4. Rewards

The only jurisdictions to have implemented rewards are Korea and the UK. This appears to be largely due to the relative newness of the idea and concerns about crime paying for at least some perpetrators (see Wils, 2007, for the principle there should be no more leniency than justice requires).

By contrast Buccirossi and Spagnolo (2005) point to rewards being effective in other white collar crime settings. Their modelling suggests that rewards or bounties (if set at the optimal level and combined with leniency programmes) would reduce the optimal fine to below 10 per cent of relevant annual turnover and so create optimal deterrence. Bigoni et al (2008a) find through their experiments that the presence of rewards where the ringleader is free to defect achieves full deterrence and detection.

6.5 Jail

The USA and Canada have a long history of allowing for criminal conviction of cartel behaviour, although it is only in the last few decades that jail has been a regular sentence; in the last 10 years in the USA 80 individuals have been jailed for a total of 100 years, with one individual jailed for 10 years (Cseres et al 2006). A debate about the issue began in the European Union in 2003 (see Whelan 2007). The United Kingdom has recently achieved its first successful criminal prosecution; Australia is currently considering criminalisation. Harrington (2006b) states that few countries have tried criminal sanctions. OECD (2002a and 2004) indicates a distinct minority of members provide for criminal sanctions, with considerably fewer having actually used them.

There is no hard evidence on whether criminalisation increases deterrence. It might just be possible to conclude tentatively from Connor’s work that the lower mark-ups in domestic cartels in the US are a result of criminal sanctions but separating out the effect of tougher fines and leniency programmes from jail sentence does not seem possible. Connor and Lande (2005) state that tougher US sanctions historically may account for the significant difference between domestic and international mark-ups. However they note that that difference has narrowed since the 1990s when considerably stiffer fines have been imposed internationally; moreover, Connor and Bolotova (2005) find mark-ups in international cartels in Europe to be lower than in the US.

There is, however, considerable anecdotal evidence (see Lowenstein and Solow 2006). For example, the Department of Justice interviewed a number of international cartel members who did not operate their cartel within the United States. They claimed the existence of jail sentences was the key reason for them not to operate in the US (DoJ 2004). The Department also says they have had no experience of any individual offering to serve a longer jail sentence in return for a lesser fine. Baker (2001) has no doubt about the effectiveness of criminal sanctions in the US; he reports an executive saying “once you begin talking about taking away my liberty, there is nothing that the company can do for me”.

How much weight one is to give to these anecdotes is difficult to say. Ultimately it is a matter for individual judgement. My judgement is that, all other things being equal,
the possibility of a jail sentence is likely to add significantly to deterrent effects as the jail time cannot be indemnified and carries considerable stigma for business people.

The question then becomes whether all other things are equal. This largely comes down to evidence about the judicial consequences of criminalisation. In particular we are concerned to find out whether the judicial factors involved in obtaining a criminal conviction lower the probability of conviction significantly enough to outweigh the increase in the cost of conviction for the cartel member, or conversely whether they make conviction so likely (potentially for the innocent) that they deter businesses from innovative behaviour with public benefits. The following sub-sections consider the judicial factors identified in the literature surveyed.

### 6.5.1. Definition of the offence

In order to criminalise hard-core cartel behaviour effectively (ie to deter undesired behaviour without deterring desirable business innovation) it is critical that businesses are clear about what constitutes hard-core cartel behaviour; there needs to be a hard boundary between hard- and soft-core cartel behaviour (where the civil track will be used) without a grey zone that creates uncertainty for business. This has been addressed in the UK legislation and the Australian exposure bill by the use of a dishonesty test. Criminal cartel behaviour is that where the corporations and individuals involved had an intent to defraud and knew that their behaviour would be viewed by the community as intended to defraud. This accords with the a key principle of criminal justice (see Beaton-Wells 2007) that to be convicted of a criminal offence culpability (or intentionality) has to be established (in addition to the offence being morally wrongful and harmful).

The proposed ‘dishonesty’ test has raised considerable concern in Australia. Fisse (2007) questions whether it will be possible to satisfy this test given Australian common law. He says, however, that difficult definitional issues will not matter in clear-cut cases (so long as dishonesty is replaced with intention), only in cases with difficult boundary concerns. It seems to me, however, that the criminal track should only be used for clear-cut cases. Cartel behaviour (as we have seen in our discussion of it as a moral issue) is one which actors know is wrong and therefore attempt to keep secret; there is not generally a grey zone about whether an attempt to fix prices is being made; if there is any ambiguity about what the actors have done or what their intentions were the civil track should be used. This issue has effectively been addressed in the US through Department of Justice guidelines. It will be important to follow how the Australian legislature addresses this issue.

### 6.5.2. Standard of proof

Criminal conviction requires a ‘beyond reasonable doubt’ standard of proof, rather than the civil standard of ‘on the balance of probabilities’. This could potentially be an issue for criminalisation if, as OFTA (see Harding 2006) has stated, it is true that cartel agreements are often informal and verbal and if, as Fisse (2007) says, often there is only evidence of sharing of prices which courts do not view as sufficient to establish an agreement has taken place.
However, as we have seen, cartels generally create more of a paper trail than expected and need to do so to remain stable. Given this it seems reasonable to conclude that the higher standard of proof will be capable of being met in at least some cases (as there will be a smoking gun). Where there is not such evidence, the civil route should appropriately be taken. Again the US has a long history of successful prosecution at the higher standard; cartels do not seem to have been deterred from creating an evidence trail (it is acknowledged that the grand jury system is helpful also in the US; see Baker 2001).

If we abstract from our understanding of the potential consequences of leniency (discussed in Part 5) there may be a risk that higher penalties (particularly jail) and the higher standard of proof required, will create incentives for cartels to either adopt informal rather than formal monitoring processes (leaving less chance of a smoking gun) or increase their monitoring significantly (including creating more smoking guns) in order to reduce the risks of defection. Neither of these outcomes are necessarily negative; less formal monitoring will reduce cartel stability, while more formal monitoring may reduce detection but increase the probability of successful prosecution where detected.

6.5.3. Dual procedures

Fisse (2007) states that because all investigations may eventually result in a criminal case being taken, criminal investigative procedures (more restrictive than civil procedures) will have to be exercised from the beginning; this will result in a lowering of overall deterrence; Fisse also points to potential procedural costs if there is a separation between investigator and prosecutor (as is proposed in Australia). However, MacCulloch (2003) reports that in the United Kingdom at least, investigations will be able to commence as a civil process and then later take criminal form (“a delicate transition”). Expert advice should be sought on these points in the New Zealand context. If it proved necessary in New Zealand to begin all procedures as if they were criminal, then this would clearly be a cost (particularly in terms of the discussion following on rules of evidence) of the new regime that would need to be taken into account in assessing the net effect.

6.5.4. Rules of evidence

As the OECD (2002a) points out many jurisdictions (including New Zealand) have rights against self-incrimination for criminal offences (there are also other restraints on the power to acquire evidence in criminal, compared to civil, investigations). Under criminalisation the exercise of this right may make obtaining convictions more difficult and so lower overall deterrence. This fact does affect the calculus for offenders; it potentially creates an equilibrium in which all agree to exercise their right to silence. Against this is the prospect of jail if one breaks silence to acquire leniency and avoid the risk of someone else breaking silence first; it is hard to see such an equilibrium holding. Again this is a matter on which expert advice should be sought.

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11 I understand that in practice all investigations commence as if they may be a criminal matter.
6.5.5. Credible use

The argument is made (see Parker and Nielson 2005) that if cartel behaviour is criminalised, but there is a perception that regulators will be reluctant to take prosecutions or judges to impose criminal sanctions, then overall deterrence is reduced. Parker and Nielson fear this will happen in Australia because prosecutions for other white collar criminal offences are extremely rare. Harding (2006) cites OECD evidence of reluctance by the judiciary in Norway, Japan and Korea. This does appear to be a compelling factor. It seems one should be sure there is regulatory and judicial support for criminalisation. This again points to the importance of building understanding of cartel behaviour as a moral issue and not just as an effect to be deterred.

6.5.6. Conclusion of judicial issues

My conclusion, with Massey 2006, is that these issues are not sufficiently problematic to lower the detection rate and that, therefore, criminalisation can be supported; however, the extent to which legal definitions can be achieved without a grey zone is a critical issue and further analysis of this issue seems to be merited. Equally, given the checks and balances in the system and the lack of a grey zone between hard-core and soft-core cartel behaviour, there seems to be limited risk of conviction of anyone but a hard-core cartel member; it is difficult, therefore, to see criminalisation deterring businesses from innovative behaviour with public benefits.

7. Overall assessment

This review of the theory and evidence in relation to sanctions on cartel behaviour has applied (briefly) a retributive justice framework and (in more detail) a deterrent justice framework. From a retributive justice perspective I concluded that there may well be a case for applying criminal sanctions to cartel behaviour; cartel behaviour can be equated with theft and equity principles require various forms of theft to be treated equally.

From a social loss deterrence perspective, what matters is whether a particular sanction is net beneficial at the margin. Unfortunately, making firm judgements on the effectiveness of various sanctions is near impossible because of the methodological problem that one can never observe the total population of cartels. One is required therefore to make judgements based on partial evidence and this partial evidence can support various judgements. Ultimately, it comes down to a value judgement about how much weight to give to particular factors and the evidence associated with them.

In making such a judgement in the context of New Zealand’s situation one needs to consider whether there are greater net benefits to any of the other options we have. The key options are:

- Strengthened enforcement activity;
- Strengthening the fine system;
- Introducing criminal fines;
- Introducing rewards;
- Encouraging private action/consumer compensation; and
- Norm building/education.

I offer some preliminary thoughts on each of these options based on the material brought forward earlier in this paper.

7.1. Strengthened enforcement activity

A key means of increasing deterrence can be increasing the quantum and quality of enforcement activity. A review of the Commerce Commission's baseline is currently underway; if that review shows insufficient resources to handle detected cartel activity in a timely manner then clearly that situation should be corrected (Beaton-Wells 2008; Baker 2001; Parker and Nielson 2005).

My review of the literature has also identified developments in auditing (Frezal 2006), monitoring and predictive tools (Mehta 2005; Grout and Sonderegger 2005; Harrington 2005) and forensic economics (Schinkel 2007); I am not aware of the extent to which the Commission works at best practice in these regards but any opportunities should clearly be taken. There may also be opportunities to improve the leniency programme in the light of the theoretical developments identified in this review.

I doubt, however, that strengthened enforcement will by itself increase deterrence sufficiently or do so at least cost; the benefits from cartel behaviour are potentially so high and detection so difficult that increased penalties are likely to be the more effective means of increasing deterrence.

7.2. Strengthening the fine system

An option available to New Zealand is to raise the maximum fine to six times the gain. This would not be out of line with international understanding of likely detection rates. However, significant problems remain with such an approach: the proportionality, judgement proof (insolvency), judicial reluctance and quantification problems highlighted throughout this report. While increasing fine levels should be considered in my view, these factors mean that the optimal level of deterrence will not be reached.

7.3. Introducing criminal fines

Introducing a criminal fine will certainly add to deterrence through the stigma associated with a criminal record. It is an open question how significant the stigma is (particularly relative to a jail sentence). I infer from the lack of use of criminal fines internationally that it is not seen to be particularly significant (as well as being vulnerable to financial indemnification). My personal judgement is different here but I think it would be wise to be guided by international views in this instance.
7.4. Introducing rewards

It seems likely to me that introducing rewards will destabilise many cartels and deter cartel formation. I find Wils’ argument (2001) that rewards will lead to gaming rather implausible. The real problem with rewards it seems to me are the moral issues it raises; it is one thing to give leniency to a whistleblower, another to reward such a person for illegal behaviour. While from a deterrence viewpoint rewards may make sense, to be successful a legal framework needs to enjoy community support; it is possible that this approach would fail to meet this test.

7.5. Encouraging private action/consumer compensation

The OECD (2007) generally recommends allowing private action so that consumers can take collective action against cartel operators. Such actions are common in the US where treble damages have long been available and strategic litigation a consequence. Private action is feasible under New Zealand’s Commerce Act, but limited action has been taken. I suspect in a small market like New Zealand such collective action is less feasible than in larger jurisdictions where the costs of action can be spread more broadly. I suspect, therefore, that there is little more that can be done to encourage private action in New Zealand. Any change would also need to be considered in the context of the broader legal system and not just for cartel offences.

7.6. Norm building/education

The final option available is to build community and business understanding of cartel behaviour and use the moral condemnation associated with it to deter cartel behaviour. This approach, of course, implicitly requires us to make a judgement that cartel behaviour is immoral (ie to apply a retributive justice framework in part) but to use social norms to support the deterrent purpose (Polinsky and Shavell 2000 suggest the role norms might play in enforcement is a ripe area for future research; Fingleton et al (2006) emphasise the need to build norms around cartel behaviour in Europe if criminalisation is to be more widely adopted). I certainly think norm building is an important part of the deterrent mix12, but doubt that increased emphasis in this area will on its own increase deterrence markedly. In fact, if not accompanied with expected criminal sanctions, the effort to persuade that it is a significant moral issue may well founder.

7.7. Conclusion

Overall, my conclusion is that from a social loss deterrence perspective jail sentences are likely to be net beneficial by significantly deterring cartel behaviour. While there will be some costs (the cost of jail, potential increased performance by surviving cartels), I consider many of the costs (particularly the entrepreneurial and some of the judicial costs) to be overstated given the clear cut nature of hard-core price-fixing. Overall, I find it hard to believe these costs are not more than outweighed by the cartels deterred from formation or, if extant, destabilised.

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12 Parker (2006) rightly points out that no offence can be deterred optimally without community support for the offence being deemed an offence; otherwise a compliance trap arises. See also Baldwin and Black (2007) on responsive regulation.
That said, if criminalised, it is crucial that criminal sanctions are applied to be meaningful. This requires education and norm building to build understanding of the need for criminal sanctions. Ultimately, if we require criminal sanctions for their deterrent effect, we also need community agreement that criminal sanctions are appropriate. My judgement, from the application of a retributive justice framework, is that such support is attainable. However, given the complexity of the issues it is not a trivial endeavour to achieve that support.

Addendum

This paper was substantively completed in mid-2008. The situation in Australia has moved on from the circumstances described in this paper. This addendum provides a brief update and identifies relevant new literature.

At the time the paper was written Australia was considering an exposure draft bill. The Trade Practices Amendment (Cartel Conduct and Other Measures) Bill was introduced to Parliament in early December 2008. The Senate Economics Committee reported on the Bill on 20 February 2009, recommending that the Bill be passed without amendment. The Bill was passed by the Senate in June with a maximum jail sentence of 10 years.

As discussed in this paper, the exposure draft used “intention to dishonestly obtain a benefit” as the defining characteristic of a criminal offence compared to a civil prohibition. This proved very controversial and the dishonesty element was not retained in the Bill before Parliament. The UK is the only country to have the dishonesty element.

Under the Bill there will be two cartel offences and two corresponding per se civil prohibitions. The only difference between the offences and the prohibitions is that the offences will require proof of mental (fault) elements usually associated with criminal offences, the intention to make an arrangement and the knowledge or belief that it contains a cartel provision.

Criticism of this approach, according to Caron Beaton-Wells, has focused on the failure to ensure that only the most serious forms of cartel conduct are captured by the offences. Both the offences and per se prohibitions, it is argued, risk capturing conduct that is not anti-competitive or is positive for welfare, and create uncertainty for business. Beaton-Wells argues a better starting point would have been to begin with the existing prohibitions which could have been adopted as building blocks for the new offences and per se prohibitions.

Concern has also been expressed at the wide latitude the ACCC and Commonwealth Director of Public Proceedings will have. The ACCC has agreed, following the Senate Economics Committee recommendation, to issue guidelines to provide greater clarity on the matter.
The Australian experience illustrates that the challenge of creating a legal hard line between hard-core behaviour, behaviour that should be subject to a civil prohibition and behaviour that may be welfare enhancing is not inconsiderable. What at the conceptual level looks a hard line, in practice may have something of a grey zone around it. I do not take the potential existence of this grey zone and the challenge of creating a hard line definition that gives business certainty to be sufficient to deter one from concluding that cartel behaviour should be criminalised. It does, however, place a considerable onus on legislators to ensure that the definition of the offence is thoroughly considered.

Key literature since this paper was completed is as follows:


C Beaton-Wells and B Fisse, “The Cartel Offences: An Elemental Pathology”, Paper at Federal Court of Australia-Law Council of Australia Workshop on Cartel Criminalisation, Adelaide, 3-4 April 2009; and

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