The purpose of this article is to examine the interplay between two competition policy enforcement instruments - leniency policy and individual liability, by opening the ‘black box’ of the cartel, with the analysis of interactions both among the cartel members and within each company. The interplay of these instruments translates into a two-dimensional system: the horizontal dimension is formed by the cartel members; the vertical one by the interactions within each cartel member. We base our analysis on the theory of the firm, advocating the separation of ownership and control, and on the theory of agency that states the principles of inherent moral hazard problems between the principal (owner) and the agent (manager). The reasoning is carried out along economic and legal literature on collusive agreements, leniency programmes and individual liability. The economic literature also gives key insights on corporate governance issues that are relevant in cartels, through game theoretical approaches. Theoretical insights will help us to understand why cartel activity is a matter of agency and governance issues. The subsequent section will be dedicated to the examination of individual liability and corporate leniency policy, in the light of agency issues. Individual leniency policy will be assessed in the last section. Individual leniency programmes are in practice never used by individuals of companies of a cartel. Nonetheless, such programmes are efficient in the way they undermine both the relations between cartel members and those inside the companies. We show how opening the ‘black box’ of the cartel is of primary importance when assessing the efficiency of leniency and individual liability. Agency issues shape the interactions between actors operating in both dimensions of the system under consideration, which are the principals and the agents of the firms of the cartel.

INTRODUCTION

Leniency policy and individual liability have been increasingly adopted by various jurisdictions.

‘[In the jurisdiction of the European Union] The term ‘leniency’ refers to immunity as well as a reduction of any fine which would otherwise have been imposed on a participant in a cartel, in exchange for the voluntary disclosure of information regarding the cartel which satisfies specific criteria prior to or during the investigative stage of the case.’

The efficiency of this public enforcement mechanism has been widely acknowledged. This is consistent with the fact that in the European Union, detection of cartels mainly relies on leniency applications. Another instrument of antitrust enforcement which is

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1 European Commission Notice on Immunity from fines and reduction of fines in cartel cases (2006/C 298/11).
increasingly used in cartel cases is individual liability. Individual liability entails the possibility for a current or former employee, or director of a firm to be prosecuted for illegal market conduct. Individual liability ranges from fines imposed on individuals, to imprisonment. The synthesis between the two instruments is the individual leniency policy: such an instrument opens the possibility for individuals to apply for leniency separately from their company.

Leniency programmes are intended to undermine cartel stability, by modifying the incentives of cartel members and amending the interactions of the system they participate in. Individual liability, however, addresses the incentives of individuals. Individual liability modifies the interactions between persons inside or outside the firm. In this situation, the actors are individuals. When considering the interplay between individual liability and leniency, we come to opening the ‘black box’ of the cartel. Cartel participation is now a multi-agent system\(^2\) interacting on different levels: the horizontal one between cartel members, and a vertical system between the members of the firms. This analysis is restricted to the case where the firm is composed of two actors: a manager and an owner. Figure 1 represents the two-dimensional system.

![Figure 1 - The Interplay of Leniency and Individual Liability: A Two-Dimensional System](image)

The interplay between individual liability and leniency gives the chance to ask about interactions of a particular nature – those arising from the organisation of the firm, and also gives access to a key ingredient approaching relevant issues concerning leniency policy and individual liability.

After giving an overview of competition policies, we will show that cartel activity is all about governance issues: interactions between cartel members, but also within each company (corporate governance). Second, we will show that both leniency policy and individual liability are efficient if they exploit cartels’ and companies’ governance issues. The synthesis of both enforcement instruments will be eventually assessed in light of the previous outcome: a leniency programme is nonetheless efficient by affecting both the interactions between cartel members and within companies.

\(^2\) The term ‘system’ here employed, referring to the interactions between actors, is only preferred to ‘game’ for the sake of scientific rigour.
1. ANTITRUST POLICIES IN EUROPE

The concept of leniency has to be understood as a ‘catch-all’ term that refers to all the types of immunity and reduced fines available under various competition policies.\(^3\) In European Union competition policy, the 2006 Commission Notice on Immunity from fines and reduction of fines in cartel cases sets the framework for leniency. This programme grants total immunity from fines to the first company that brings convincing evidence of its cartel participation. The fine reduction for the first undertaking meeting the requirements amounts to 30 to 50% of the fine which would have been imposed. The second successful applicant can claim up to 20% fine reduction. In the European Union, all the Member States have a corporate leniency programme in their competition system, apart from Malta.

The original version of the US Sherman Act imposed criminal sanctions on individuals, from fines to imprisonment. Since 2004, an individual involved in a cartel can be imprisoned for up to ten years.\(^4\) In the United Kingdom, disqualification, imprisonment and criminal fines are sanctions faced by individual price-fixers. Imprisonment is a possible sentence in Austria and Germany, but for bid-rigging only. In the latter country, individuals can also have fines imposed on them, but of a non-criminal nature. In the Netherlands, fines can be imposed on natural persons since the new Fining Code came into force in 2007.\(^5\) In Belgium, individuals can be imposed with fines and/or imprisonment of between two months and five years, for misuse of documents related to cartel activity.\(^6\) In Ireland, individuals face imprisonment penalties of up to five years.\(^7\) In Spain, an individual who directly took part in the decision to collude faces a fine.\(^8\) The Danish Competition Act entails the possibility of criminal fining to individuals involved in a cartel, and the first prosecution occurred in 2005. As for Portugal, individual liability is expressly stated.\(^9\) In Malta, liability of directors can be joined to that of the firm, and individuals can be sanctioned by criminal fines as a consequence. Some countries have opened the possibility of prison sentences for individuals, but have not actually imposed such a penalty. This is the case for France, Cyprus and the Slovak Republic. The Estonian Competition Act entails the possibility of sanctioning individuals through fines or detention of up to three years.\(^10\) In Slovenia, individual fines can be levied on responsible persons.\(^11\) In Latvia, infringement of

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\(^5\) Dutch Competition Act, 2007, section 57.
\(^7\) The Competition Act, 2002, Article 10.
\(^8\) Competition Act, 2007, Article 63.
\(^9\) Law No. 18/2003, Article 47.
\(^10\) Competition Act, 2006, para 148.
\(^11\) Competition Act, Article 30.
Leniency and Individual Liability

competition can be sanctioned by up to two years imprisonment, and between four
months and six years in Romania. In Greece and Hungary, competition policy
provides for criminal sanctions, including imprisonment. All the other countries have
an enforcement regime addressing sanctions only to undertakings.

Among the countries referred to, only some of them have an individual scheme for
leniency. In the United States, a programme of individual leniency has been established
since 1994. If an individual is the first to self-report illegal market conducts, he can be
granted amnesty from any criminal sanction that would have been levied on him
otherwise. The programme also encompasses the possibility of considering statutory or
informal immunity from criminal sanction, this being decided on a case-by-case basis.
In the United Kingdom, an individual programme was introduced in December 2008.
The Leniency and No-action guidance, released by the Office of Fair Trading, expressly
considers the individual leniency application outside the blanket criminal immunity that
is granted automatically to current and former employees and directors by corporate
leniency. An individual can benefit from such a programme if he is the first to self-
report, provided that anti-competitive conduct was unknown to the Office of Fair
Trading. If investigations have already started, there is still the possibility to be granted
immunity if the individual adds significant value to the investigation of the case. The
guidance also states that if an individual application is undertaken, immunity for other
individuals of the firm as well as for the undertaking as a whole cannot be guaranteed.
In the Netherlands, the introduction of individual fining in 2007 has been coupled with
the possibility for an individual or a group of individuals active in the same firm to
undertake leniency on their own. The rules for leniency are the same whether the
applicant is a firm or an individual acting on his own behalf. The amount of reduction
of fines depends on the position of the application, whether the investigation has
started, as well as on the quality of evidence and cooperation. The reduction can go up
to 100% of the fine if the applicant is the first to self-report. If the undertaking blows
the whistle, individuals can still apply on their own behalf, and will be considered as
‘co-applicants’. In Germany, since 2006, the leniency programme can now be applied
for by natural persons, in order to be in line with the individual liability regime.
Individual applicants are under the same rules as corporations. When the undertakings
blow the whistle, individuals are also covered by the corporate programme.

2. AGENCY RELATIONS IN CARTELS

Anti-competitive collusive practice is a form of corporate crime. Corporate crime, such
as the Enron scandal, illustrates corporate governance problems. We will show here

12 M Holmes and I. Davey, op cit, n 6.
14 Department of Justice, Leniency Policy for Individuals, 1994.
that cartel activities may interact with governance issues on specific dimensions which have to be elucidated in terms of welfare impact. This analysis combines therefore elements related both to the theory of industrial organisation and the theory of corporate finance.

2.1 Corporate governance and agency relations issues

All the analysis that will be carried out relies on the theory of modern organisation of the firm: where management and ownership are separated. Issues inherent to the ‘modern corporation’ have been analysed by Berle and Means:18 distinction of ownership and management leaves room for discretion of the manager, which can be abused, especially if the firm is owned by dispersed shareholders. The idea that management can hurt ownership interest through its action is widespread in the economics literature. Such misbehaviour can range from taking over risky action that engages the whole firm to insufficient effort in commitment to the interest of the firm and to financial expenses serving its private interest. These are examples of agency relations issues: the interest of the ‘agent’ (the insider of the firm: the manager) and the ‘principal’ (owner, outsider) may not be aligned. In other words, the manager has no natural incentive in maximising ownership utility, which determines the value of the firm.

From a financial point of view, corporate governance relates to the way investors in companies assure themselves of getting a proper return from their shares.19 Corporate governance can be seen as the institutional arrangement addressing inherent agency relations problems. It includes ex ante and ex post mechanisms aimed at orientating agency relations in an optimal way. Contracts between agent and principal aim at shaping behaviours ex ante, while monitoring and rewarding schemes are examples of ex post mechanisms. However, information is not perfect; there is a limited observability of the agent’s action by the principal.20 Such an asymmetry of information is fundamental in explaining why opportunistic behaviour cannot be eliminated, but only reduced, and remains an issue of corporate governance, whatever contracts and mechanisms there are. Opportunism that is likely to arise between principal and agent is called moral hazard. Moral hazard indeed relates to such situation where the agent does not bear the full cost of its action and has incentive not to act in the best interest of the principal.

Jensen and Meckling’s theory21 focuses on the impact of such divergence of interests within the firm: ‘agency costs’ reflect the loss in terms of value of the firm due to agency relations problems. The concept of agency costs is relevant to the extent that it

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not only states the problem of asymmetry of information and interest, but also goes into its practical consequence. Costs are those borne by the firm in addressing ex ante and ex post the informational problems and resulting opportunism. Costs are also those of agency residual problems: informational problems can only be reduced, contracts and mechanisms are imperfect, and this has a cost, included in the ‘agency costs’.

2.2 Corporate crimes, a matter of corporate governance

Moral hazard, like an iceberg, has a ‘tip’ and a ‘submerged part’. The tip is the misbehaviour of a manager. The submerged part is constituted by all corporate governance arrangements aimed at addressing management misbehaviour: institutional structure of the organisation, contracts, incentives-targeting schemes etc. Moral hazard has roots in the intrinsic divergence of interests between agent and principal. Moral hazard also occurs because of dysfunctional corporate governance, located at the ‘submerged’ level of the iceberg. The lack of transparency, tenuous link between performance and compensation, and accounting manipulations have recently led to corporate crimes such as those brought to light with the Enron, Worldcom and Parmalat scandals. In these cases, not only the internal system of governance failed, but also the external institutional structure.

In the case of the Enron scandal, the corporate governance arrangement failed at two stages: both the internal and external structures have been the ‘submerged parts’. Firstly, shareholders failed to fulfil their mission of controlling management. This was not a matter of lack of information on management practices, but rather a matter of excessive trust in the CEO and Chairman Kenneth Lay, misled by his charisma and reliance on the apparent excellent results of the firm. Secondly, as for the external aspect, auditing failed its mission of ensuring good accounting practice: Arthur Andersen complied with the accounting manipulations of its client Enron. Finally, corporate scandals exacerbate situations where moral hazard is particularly severe. Agency costs are of multiple origins: loss of efficiency, reputation, cost of legal sanction all affecting the intrinsic value of the firm. At the extreme, this can lead to the failure of the firm.

Illegal cartel participation is a form of corporate crime or fraud. In criminology, a corporate crime is an illegal behaviour perpetrated either by a corporation, or by individuals legally identified with a business entity. Participation in cartels is sanctioned by competition policy schemes, as a form of corporate crime. We see here that ‘common’ corporate crimes are about corporate governance issues. They relate to situations where moral hazard is too severe, and fails to be addressed by corporate governance schemes. As a corporate crime, cartels are surely related to corporate governance.

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2.3 Cartel activity, an issue of corporate governance

Why is cartel participation related to corporate governance? We will give here some intuitive arguments that derive from logic similar to the one that concludes that corporate crime is about agency relation issues. The comparison between cartels and other forms of organised crime can be found in the work of Spagnolo:23

As an illegal activity involving many agents, cartels can be considered a form of organized crime, certainly not the most harmful. Long term corruption (where at least two parties are repeatedly involved, a briber and a bribee), collusion between agents and supervisors (e.g. between auditors and management or regulators and regulated firms), large scale frauds (including financial ones), and most kinds of illegal trade (in drugs, arms and people trafficking, where at least a buyer and a seller repeatedly interact) are similar to cartels in terms of the incentive structure they generate for the involved agents, and the social costs of these activities to society are enormous.

As a classic corporate crime, cartel activity can be intuitively seen as benefiting managers in particular, who make the most of the low visibility of their actions from shareholders. Managers have as a primary objective to make profits, and are held to account through their achievements to shareholders. This was a central motive behind corporate crimes such the Enron scandal. Cartel participation, if successful, brings higher profits to a firm because it allows companies to price at higher than competitive levels. The margin between price and marginal cost being greater, profits are higher. Why can moral hazard lead to participation in a cartel? One of its consequences is that incentives are not aligned because costs and benefits are not allocated similarly between agent and principal.

The benefits of cartel membership are common to shareholders and managers alike: any increase in revenue to a company results in an increase in share value. Managers also gain from an increase in a firm’s value; the extent of gain is determined by the remuneration scheme in place. In terms of costs, the picture is different. In the absence of individual sanctions, detection leads in most jurisdictions to administrative and/or monetary fines, borne by the firm as a whole. Shareholders bear all the prejudice, while managers may avoid direct personal punishment for their actions completely. Furthermore, by the time the involvement of a corporation in a cartel is detected and sanctioned, the responsible manager may have left the company.24 From the managerial viewpoint, a decision to take part in a cartel involves several parameters: the expected profits, the expected cost of detection (i.e. sanction) and the probability of being detected. When considering the possibility of cartel-like behaviour, managers balance the costs and benefits, and ceteris paribus, managers stand to benefit financially more than shareholders, who also bear any financial burden of cartel detection (including,

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amongst others, fines and loss of share value). An asymmetry of interests is typical of corporate crime-associated behaviour, and this is also the case with cartels.

Illegal collusive practice, as found in classic corporate crime, involves agency relation issues and is therefore a matter of corporate governance. Shareholders are deemed to bear the cost of managerial misbehaviour. However, the story is not as simple as it seems; the principal may not always be the innocent victim of an agent’s crime. As Aubert says: ‘Collusion is a particular violation of the law for which firm owners are particularly likely to gain’. Suggesting that cartel practice is about agency relation issues because it involves opportunism encourages further analysis: what are the implications of the specificities of this type of corporate crime? As our study focuses on agency issues, we will explore the nature of opportunism and its implications.

2.4 Specific agency relationship issues in cartels

We will first focus on the specific nature of moral hazard associated with collusive practice, referring primarily to Aubert. In her model the author assumes that there are two sources of moral hazard: intensity of effort and market conduct (either pro or anti-competitive) that the manager can choose privately. An owner is deemed not able to distinguish whether profits come from legal managerial effort, or from illegal market conduct. Opportunism arises from the fact that a manager has natural incentives to substitute illegal market conduct for effort. If shareholders want to decrease managerial incentives to collude, they need to reduce any incentives that promote the substitution of effort by collusion. In other words, the greater the effort expected from an agent, the greater is the incentive to find a substitute for it, e.g. by colluding. This idea has an impact on welfare that is neglected if the process ignores agency relations and drivers to collusion. This idea also impacts on problems identified with particular remuneration schemes, such as the distribution of stock options. Recent studies have highlighted the fact that cartel participation often comes from decisions of top management. Senior managers especially are remunerated by a mix of benefits including bonuses and stock options, which are both types of financial arrangement that potentially facilitate collusive practice and its maintenance. This is ironic because stock options were originally implemented with the objective of attenuating corporate governance issues and providing managers with incentives to optimise levels of effort to maximise a firm’s value. The finding that such schemes have perverse effects when considered in terms of moral hazard market conduct is consistent with the finding that such schemes may be at the origin of corporate fraud, such as in the Enron scandal.

26 Ibid.
27 Ibid, p 5.
Another specificity of agency relations in collusive practice relates to the nature of agency costs. As stated before, cartel participation can be seen as a profitable crime for the firm as a whole, and accordingly desired by the owners. We will thus take the problem from the owner’s point of view: what kind of benefit could an owner expect from inducing an agent to engage in a cartel? Cartel participation may not always favour the manager, and as it is argued by Mullin and Snyder, such misbehaviour may be the result of owners’ incentives. We can distinguish two reasons that might explain an owner’s interest in collusive practice: a revenue effect, and agency relationship effects. First, the revenue effect relates to benefit accrued by the firm as a whole, as when collusive practice leads to increased profit. Second, corporate governance issues may induce shareholders to provide an agent with incentives to engage in such misbehaviour. Beyond the question of the nature of the benefits from cartel participation to owners, we will now focus on the specificity of corporate governance issues in cartels.

We assume that an owner wants to participate in cartel-like activity. Corporate governance arrangements may then serve the objective of inducing and maintaining collusive agreement. We will first consider the case of remuneration schemes, such as stock options, and then the implications of the theory of strategic delegation. The argument concerning stock options relates to the implicit information and signals that are given by stock options to competitors: in an oligopolistic market, incentives to tacit collusion are high. Stock options give useful information to competitors by linking ‘manager’s present compensation to the stock market’s expectations about the firms’ future profitability’. For example, competitors can anticipate from the magnitude of stock options whether there is significant fluctuation in the market’s anticipation of a price war in the case of a firm breaching an agreement. Thus stock options not only induce the substitution of effort by collusive behaviour, but also sustain tacit and explicit colluding agreements through stock market-associated mechanisms.

Fershtman et al argue that delegating decision rights about market conduct to agents increases the sustainability of collusive practice. When there is no separation of control and decision making the main challenge of the collusive agreement is to overcome the natural incentive to cheat. The incentive to cheat is reduced by the delegation of decision-making. The principal can threaten the agent to not pay him in case the latter adopts a cheating behaviour. What about the principal’s incentives to cheat? Since such a decision is delegated, the principal can only induce his agent to deviate, in the particular design of incentive contracts. However, the agent knows that

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31 This situation would suggest that there is no agency issue if the owner considers that participating in a cartel increases the value of the firm. However this serves the idea that the relation between the agent and principal can be peculiar in cartels.

32 P Buccirossi and G Spagnolo, op cit, n 29, p 10.

from the moment he cheats, cooperation with other companies terminates,\(^{34}\) in which case rather than achieving any benefit he is likely to bear responsibility and be liable for any infringement of competition rules; depending on what liability scheme is in place.\(^ {35}\) Corporate governance arrangements, such as strategic delegation, can signal the sustainability of a firm’s engagement in a cartel.

These arguments serve to stress that collusion agreement outcome can also be considered a matter of corporate governance, in a game where not only do firms need to make sure that their partners respect an agreement, but that all the operators within the firm will also do so. Therefore, cartel activity is all about governance issues, that are, interactions between cartel members, and also within each company.

3. **INDIVIDUAL LIABILITY AND CORPORATE LENIENCY POLICY IN AN AGENCY PERSPECTIVE**

3.1 Individual liability

Individual sanctions are of several types and features, which can be either administrative or criminal, ranging from monetary fines to prison penalties. For the sake of simplicity, we will assume that individual sanctions encompass all type of sanctions towards individuals of the firms (i.e. managers or employees), as opposed to administrative and monetary fines levied against corporations as an entity.\(^ {36}\)

The use of individual sanctions is deemed to increase the efficiency of antitrust enforcement for several reasons. One of those relates to a corporate governance issue: it can be argued that individual sanctions solve some agency problems,\(^ {37}\) and in particular reduce moral hazard between the principal and the agent in cartel participation. The aim of this part is to show that corporate governance issues particularly matter in the perspective of sanctioning individuals on top of, or separately from, corporations.

Some arguments in favour of individual sanctions relate to the limited liability of firms. Empirical studies have been carried out in order to determine the optimal level of fine capable of deterring corporations from taking part in cartel activity. Variables under examination relate to expected gain from price-fixing: price increase caused by the collusive agreement, price elasticity of demand faced by the companies and their turnover for the product considered, as well as duration of cartel activity.\(^ {38}\)

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34 Under the assumption that he can be caught cheating.
36 For more details on the criminal nature of sanctions, see WPJ Wils, op cit, n 4.
37 CR Leslie, op cit, n 24.
of detection is also necessary in order to determine the optimal level of fine needed to deter cartels. As Wils says:\footnote{Ibid, p 252.}

Assuming a 10% price increase, and a resulting increase in profits of 5% of turnover, a 5-year duration and a 16% probability of detection and punishment, the floor below which fines will generally not deter price-fixing would be in the order of 150% of the annual turnover in the products concerned by the violation.

Individual sanctions may be desired because the optimal level of fine is not conceivable to be given to the firms, for many reasons. One reason relates to the limited liability regime and the probable inability of firms to pay such amount of money, coupled with undesirable side-effects and consequences.

The justification of the need of individual sanctions relates to agency problems: it is argued that corporate sanctions fail to address the incentives of individuals in an optimal way. As we stated above, the intuition coming from the parallelism done with common corporate fraud, says that there is a moral hazard problem between the principal and the agent in cartel participation. On this ground, individual sanctions may be a useful instrument in aligning incentives, and thus reducing moral hazard problem.\footnote{CR Leslie, op cit, n 24.} Managers, who, according to simple intuition are the wrongdoer, will then have reduced incentives to misbehave, since they fear a personal conviction. In other words, individual sanctions bring about symmetry in costs and benefits of such activity in the agency relations.

There are also corporate governance considerations that give arguments against automatic individual sanctions of cartels: as it was stated before, agency problems have specific features in cartel participation; shareholders can benefit from it at the expense of managers. Thus, the possibility of sanctioning managers may not decrease shareholder’s incentives in taking part in a cartel, and may not be the relevant legal instrument.\footnote{G Spagnolo, ‘Criminalization of Cartels and their Internal Organization’ in K.J. Cseres, M.P. Schinkel and FOW Vogelaar (eds), Criminalization of Competition Law Enforcement: Economic and Legal Implications for the EU Member States, Cheltenham, Edward Elgar, 2006, p 142.} Another point made by Spagnolo\footnote{Ibid.} and Aubert\footnote{C Aubert, op cit, n 25.} is that individual liability may undermine cartel stability by affecting internal cartel governance: this can create agency problems by widening the asymmetry of interests between shareholders willing to collude, conversely to managers willing not to.

Finally, this seems also to be a matter of different corporate governance systems across countries: Spagnolo\footnote{G Spagnolo, op cit, n 41.} establishes distinction between Europe and the United States. In the former region, shareholders seem to be residual claimants of cartel profits, and managers are much less likely to gain from such misbehaviour than in the system of
corporate governance prevailing in the United States. Then we might raise the question of the existence of a link between corporate governance systems and efficiency of particular enforcement instruments, following the logic of the link established between legal systems and corporate governance, by La Porta et al.\textsuperscript{45}

Individual liability is about agency issues in several respects: arguments in favour or against its use deal with corporate governance practices, and their relevance as enforcement instrument may depend on the corporate governance system considered.

3.2 Corporate leniency policy

Cartel activity is a form of corporate crime involving various actors. As stated above, cartel activity can be considered as a two-dimensional system in which incentives are of primary importance. Leniency is an enforcement instrument, which aims at undermining cartel stability. We will here argue that such enforcement instrument is all about agency problems that are inherent to such organisation.

Two concepts will be distinguished here: \textit{corporate governance} and \textit{cartel governance}. Both are defined by the necessity of addressing opportunisms arising from asymmetry of information in such relations. \textit{Corporate governance} relates to institutional arrangements of the firm that ensure that managers will act in a way that maximizes the value of the firm. \textit{Cartel governance} relates to all relational arrangements enforcing cartel stability between the members. They particularly address the natural incentive of each firm to deviate from what had been agreed upon in terms of prices. Retaliation and monitoring mechanisms are examples of such incentive schemes that may sustain cartel agreements. Observation of each member’s effective pricing, and the knowledge that price wars can be triggered help the maintenance of cartels. In other words, the dynamic feature of such games guarantees that cartels are sustainable (to a certain extent).\textsuperscript{46} In terms of cartel governance, this is one feature of the actors’ interactions: ‘criminal activity takes the form of an ongoing relation: … this delivers future benefits and damages’\textsuperscript{47}. Another specificity of agency relations in the cartel governance relates to their illegal nature, which brings about constraints on the way they organise the cartel. As a consequence, parties cannot rely on legally enforceable contracts, this providing an extra source of moral hazard within the governance system of the cartel. The third feature of such cartel relations identified by Spagnolo relates to the resulting information that each cartel member possesses on each other.\textsuperscript{48}

\textsuperscript{45} R La Porta, F Lopez-de-Silanes, A Shleifer and RW Vishny, ‘Legal Determinants of External Finance’ (1997) 52(3) J Fin 1131.

\textsuperscript{46} According to the Prisoner’s Dilemma theory, the fact that the game is repeated makes the cartel sustainable, on the basis of conditional cooperation between the members. Cooperative outcome occurs only if cooperative behaviour is observed from the other party, and non-cooperation in the other option. There is a tendency of seeing non-cooperative outcome when there is an expectation of end of the game. See JM Perloff, \textit{Microeconomics}, 3rd ed, New York, Pearson, 2004, and N. Eber, \textit{Théorie des jeux}, 2nd ed, Paris, Dunod, 2007.

\textsuperscript{47} G Spagnolo, op cit, n 23, p 6.

\textsuperscript{48} Ibid.
By reducing fines or even granting immunity to a cartel member which self-reports, leniency programmes are about exploiting such intrinsic agency problems. From a game theory point of view, leniency aims at modifying the expected payoffs of cartel participation, and consequently the outcome of the game. As regards relations between the actors, leniency targets ongoing incentives problems so that parties play against each other.\(^{49}\) Well-designed leniency programmes will make the most of opportunism which is intrinsic in such agency relations, by ‘making more severe the free-rider problem that plagues all legally non-enforceable cartels’.\(^{50}\)

Perverse effects of leniency programmes are highlighted in the economics literature: Motta and Polo\(^{51}\) argue that if the leniency programme is moderate, the cartel is actually strengthened by the fact that the expected fine from cartel participation is lowered. Depending on the probability of being detected, leniency programmes can have adverse effects along agency relations features identified above: being aware of the possible motivation of self-reporting, a cartel member can use information and proof of illegal practice as hostage, as a way to align incentives of cartel members against deviation by cheating or confessing. In other words, cartel members can be prevented from deviating, if they know that other members hold evidence that could make their application for leniency successful. Equilibrium can be sustained, contributing to maintain the trust between cartel members.\(^{52}\)

The specificity of corporate governance issues in cartels is also of primary importance. When the principal is in favour of collusion against the agent’s will, corporate leniency programmes may be inefficient. Such programmes eventually make the principal better, since the agent cannot undertake it on its own absent reward schemes for individuals. Amnesty decreases the expected sanction of competition policy infringement for the principal. In this case, cartels are more robust and profitable.\(^{53}\)

Leniency programmes are all about agency issues: their efficiency relies on the way they are designed so that they optimally exploit agency problems inherent to cartel organisation. If specific issues of governance in cartels are neglected, leniency may bring about adverse effects, such as the improvement of the robustness of cartels.

### 4. Individual Leniency Policy

Until now, we have been examining relevant elements concerning individual leniency. The first point of the argumentation developed in the third section showed that cartel activity may have some impact on corporate governance issues. The second point showed that enforcement instruments have to be designed so as to take this into

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\(^{49}\) Ibid.

\(^{50}\) P Buccirossi and G Spagnolo, op cit, n 29, p 21.


\(^{53}\) Z. Chen, op cit, n 35, p 5.
account. We now come to individual leniency programmes. Governance issues matter for individual liability and leniency, considered separately from each other. What about their interplay? What about individual leniency policy as an instrument? This section will examine the relevance of individual leniency as an enforcement instrument. Is individual leniency an efficient instrument in terms of undermining cartel stability? What are the negative side-effects of such an instrument? Through these questions, we will see that individual leniency is a question of agency relations.

4.1 The interplay between leniency and individual leniency, in the absence of an individual programme

What can be said by the interaction between leniency programmes and criminal sanction? Does individual liability enhance the effect of leniency programmes? We consider here the case where corporate leniency grants immunity from corporate as well as from individual sanctions. Once again, agency issues are important. Let us first consider the case where the manager wants to collude. The threat of individual sanction may provide more incentive in blowing the whistle. As a result, antitrust enforcement coupling individual sanction and leniency programmes is more efficient in detecting cartels. However, if the owner prefers collusion, the picture is different. The threat of individual sanction may not be directly deterrent for the owner, since he is not the one who fears individual sanctions. The impact of individual sanction in leniency applications may here be limited. Thus, corporate governance is of primary importance: of course, if ownership and control are not separated, the owner-manager, under the threat of individual sanction has significant incentive to blow the whistle. In the case considered – separation of ownership and control – things are different. The specific relations and interest in cartel participation help explain the role of individual sanctions in an overall leniency programme.

4.2 Individual leniency - an efficient instrument

Individual leniency brings about efficiency, by causing an increased use of corporate leniency and by increasing costs of collusion.

4.2.1 Individual leniency: towards more corporate leniency applications

Individual leniency programmes feature a request to the antitrust authority made by an individual distinctively from its company. Cooperation with the programme can grant him immunity from any criminal sanction that he may get from cartel activity. Once involved in the cartel, the individual balances the cost and benefits of continuing the illegal activity. In jurisdictions where individual sanction entails imprisonment, the incentive for individuals to blow the whistle is strong. In terms of game theory, individual leniency makes the prisoner’s dilemma even more complex because it affects the two-dimensional system: the horizontal one between cartel members, and the vertical one between individuals within the firm.54 Not only are payoffs and outcome

54 CR Leslie, op cit, n 24.
modified in the cooperative game between cartel members, but also within the firm. What impact does the introduction of individual leniency in the ‘box of a cartel’ have?

4.2.1.1 A two-dimensional system: The introduction of individual leniency policy

Acknowledgment and caveat: The aim of this part is to set the architecture of a system within which actors make decisions about cartel activity. We intend to schematise in a simple way the possible interaction of actors. The assumptions are straightforward and the reasoning does not pretend to follow the convention and requirements of game theory analysis. Acknowledging what such analysis requires we intentionally do not use the term ‘game’ here, even though the nature of strategic interactions that arise here may fit well under this concept, with actors considered as ‘players’.

The vertical dimension comprises the strategic interactions between the principal and the agent within the firm. The horizontal dimension is the interactions between the two members of the cartel: represented legally by the principals of the firms. There are two firms in the cartel, represented within vertical circles. Both have separate ownership and control functions. Each firm has one principal, that we will call ‘she’, and one agent ‘he’. We primarily consider the point of view of the actors of Firm 1, represented at the left-hand side of Figure 2.

The story is as follows: cartel activity begins, then an individual leniency programme is introduced. What are the options faced by each actor?

- The agent can either choose the continuation of the cartel, or choose to apply for individual leniency.
• The principal can either choose the continuation of the cartel, or choose to apply for corporate leniency.

Thus, we consider here the question of *ex post* efficiency of individual leniency in the detection of cartels.

Here are some basic assumptions that support our analysis: firstly, let us assume that the costs of being detected correspond to the cost of the sanctions imposed. Secondly, the manager benefits from cartel participation, which the owner is aware of. Thirdly, this is a one period system, as where costs and benefits elements are considered given parameters for all the actors. Fourthly, the *corporate* leniency programme is available, and we consider the introduction of individual leniency along with it. Finally, the corporate leniency programme entails immunity for both firms and the individuals.

The scenario can be explained as follows: the agent (manager) balances the costs and benefits of continuing the cartel. In absence of individual liability, costs he has to incur are those of detection, entailing individual sanctions. Benefits stem from increased revenue. With the introduction of individual leniency, benefits remain unchanged, while expected costs are mitigated by the possible immunity granted by individual leniency. In this context there seems to exist incentives to blow the whistle. What does he expect from other actors of the system? Other actors are not only the partners in his firm who are also involved in the cartel activity, but also individuals occupying similar positions within Firm 2. If these individuals adopt the same rationality as him, they will also lean to the option of blowing the whistle. From the principal (owner) point of view, the benefit of the cartel is increased revenue; the cost of detection is the administrative fine. With the introduction of individual leniency, benefits and costs are both unchanged *ceteris paribus*. What does the principal expect from the other actors? She comes to the same conclusion as individuals: there are increased chances that each individual will go for cartel termination. The other principal expects the other principal will also expect cartel termination.

*Figure 3* summarises the steps in reasoning.

![Figure 3 - Development of the System](image)

We assume that the principal of the firm anticipates all the individuals’ actions, in which they all get protection while she doesn’t. Individual leniency does not protect the firm
as a whole, but only the individuals. As a consequence, she will have to face the
incrimination procedure, and get sanctioned for antitrust infringement. The outcome
seems to be the termination of the cartel anyway; she chooses the less costly option,
which entails applying for corporate leniency, where the firms as well as individuals get
immunity. Consequently, the system tends to evolve towards a race for corporate
leniency between the principals of the members of the cartel.\footnote{CR Leslie, op cit, n 24.}

4.2.1.2 Further analysis

The outcome reached previously is expressed by Hammond, ‘The real value and
measure of the Individual Leniency Program is not in the number of individual
applications we receive, but in the number of corporate applications it generates’.\footnote{SD Hammond, ‘Cornerstones of an Effective Leniency Program’, speech delivered to ICN Workshop on
Hammond gives further practical details on this, emphasizing the scope individual
leniency can have within a firm engaged in cartel activity.\footnote{Ibid, p 13.}
Even individuals not exposed to such sanctions, and not directly involved in the cartel activity may seek
corporate leniency. This author takes the example of an employee who is engaged in a
price-fixing agreement. The upper management is aware of such conduct, because a
secretary, in charge of transmitting related information to competitors, reports it.
Absent individual leniency, the firm itself could sanction the errant employee, and
internalise the cost of its illegal behaviour. With an individual leniency programme,
management finds itself put at risk by the conduct of his employee: the latter is
individually liable, and may have the incentive to blow the whistle on its own.
Anticipating this, the firm as a whole has every incentive to seek application for the
corporate programme. It is then all about the non-observability of actions, which is the
key ingredient of agency problems.

Many questions as to the practical use of individual leniency arise: why would individual
leniency be undertaken on its own? Could one think of circumstances in which
individual leniency would be effectively applied for? First of all, individual leniency is
shaped by the procedure of application: who precisely can go for it. Is the first
applicant the only one benefiting from immunity? Is it possible to undertake it once the
investigation of the cartel has started? What kind of cooperation is needed in order to
get immunity from sanction? What is the level of proof required? Several scenarios may
be identified: an individual wants intentionally to put his company under the risk of a
cartel prosecution, knowing that he cannot himself fear anything anymore. For
example, this could be the case of an individual who, once he left the company, blows
the whistle because he kept incriminating evidence.\footnote{C Aubert, P Rey and WE Kovacic, ‘The Impact of Leniency and Whistle-blowing Programs on Cartels’
(2006) 24(6) Int J Ind Organ 1241, p 1251.} Asymmetry of information and
expectations may best explain this scenario: divergent expectations between owner and
managers or between managers and employees may induce the actors to reach different
conclusions, and to act according to it, believing it is consistent with the other actor expectation. Arguments which can be found are of the same nature as those explaining why one company applies for corporate leniency before other cartel members. Asymmetry of information seems thus to be the only rational answer available.

4.2.2 Individual leniency increases costs of collusion

The efficiency of individual leniency is also all about agency relations: it helps align incentives towards better market conduct, while increasing costs of collusion. Firstly, the programme seems to have been designed to increase cartel detection, by acting on managerial incentives. Without an individual leniency programme, individual liability seems to be efficient only in the case where managers favour cartel participation at the expense of shareholders. Indeed, we said that shareholders can also benefit from and may want to induce such practice. In this situation, the intuition is as follows: if I am a manager involved in cartel activity, I fear individual sanctions. In the absence of individual leniency, I may want to terminate the cartel, against the will of the shareholders. Thus, I am not able to benefit from any amnesty because self-reporting can only come from the legal representative of the firm, i.e. the owner. The interest of individual leniency is as follows: in case individual liability is not coupled by an individual programme of leniency, there is much room for moral hazard between the principal and the agent, at the expense of the latter. Individual leniency may then help align agent and principal’s interests towards further antitrust compliance.59

Secondly, when deciding whether to participate in a cartel, the individual will balance costs and benefits of collusion. Information costs are significantly increased in presence of an individual leniency programme. For example, a manager willing to enter a collusive agreement will need to take into account the implications of individual leniency on his costs. The possibility that an employee has to blow the whistle on his own induces different types of costs for the company: firstly, the cost of being prosecuted and sanctioned. Secondly, it gives rise to the necessity of paying information rent to employees, in order to avoid relevant information being used in a leniency application. This type of agency costs considerably increase costs of collusion and so the deterrence of such instrument.60

Aubert et al stress the efficiency of individual leniency if coupled with a corporate leniency programme.61 The model developed by the authors sets up conditions for cartel sustainability. Several parameters of relevance are identified and taken into account: profits from collusion, the probability of getting evidence of collusion, the amount of fine, and the time (accounted for by a discount rate), the rewards granted by individual and corporate leniency programmes, as well as the number of employees informed, and the rent the firm has to pay to them in order to secure the information. This model first considers the absence of corporate leniency, while looking at the effect

59 CR Leslie, op cit, n 24.
60 P Buccirossi and G Spagnolo, op cit, n 29, p 23.
61 C Aubert, P Rey and WE Kovacic, op cit, n 52.
of individual programme. A relevant remark is that that the number of informed employee matters for efficiency. The firm needs to pay each of them the same rent of information, to an amount at least equivalent to what they can expect from blowing the whistle. What can we conclude from this? First, the more agents involved in a cartel, the more governance problems that are created. Second, this shows that individual leniency in particular, is nothing but playing along agency costs: in individual leniency, such costs are multiplied by the number of agents, conversely to corporate leniency. This is consistent with our argument that cartels are about agency problems. Costs of collusion are thus determined by agency costs.

Absent corporate leniency, individual leniency decreases cartel profitability. This does not suffice to make it terminate though, because the firm as a whole would still be prosecuted by the antitrust authority, and still has the incentive to compensate its informed employee. Hence, the use of both programmes is needed to increase antitrust enforcement efficiency, ‘even when each instrument, taken separately, would not have been sufficiently effective’.62

The efficiency of individual leniency entails triggering more corporate leniency applications and increasing the costs of collusion. This is all about agency problems: influencing agency costs and creating a moral hazard within the cartel’s organisation so that the two-dimensional game leads to a satisfactory outcome. Not only are corporate governance issues of primary importance for the success of the programme, but their negligence may explain negative outcomes or side-effects.

5. CONCLUSION

In the black box of a cartel, we found a complex widget. We looked at its architecture, which can be represented by a two-dimensional structure. We first separated the widget into two pieces and then assembled the two parts in order to examine its whole functioning. The conclusion of such manipulation is as follows: it is all about articulations. Agency relations in cartels are like the articulations of a widget; not only do they shape the interactions between actors, but also they are of significant importance in the overall functioning of the system. Governance issues are a parameter of analysis that should be given full consideration when assessing antitrust instruments. Institutions need to master the system and its subtleties in order to win the fight against cartels. This may give the ingredients for further discussion on antitrust and governance issues, à la manière La Porta et al,63 for example. These authors link corporate finance and the legal system. They argue that the distinction between common law and civil law systems matter in the structure of external finance. Similarly we may ask whether a similar link can be established between corporate governance and antitrust policies in different countries. Are antitrust policies shaped by similar drivers that determine

62  C Aubert, P Rey and WE Kovacic, op cit, n 52, p 16.
63  R La Porta, F Lopez-de-Silanes, A Shleifer and RW Vishny, op cit, n 45.
corporate governance? If this is the case this can further stress that corporate governance matters in antitrust policies issues.