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GRANTING INCENTIVES, DETERRING COLLUSION:

THE LENIENCY POLICY

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Granting Incentives, Deterring Collusion: The Leniency Policy

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I. Introduction

"*The detection, prohibition and punishment of cartels is one of the highest priorities of the Commission in the field of competition policy. The greatest challenge in the fight against hard-core cartels is to penetrate their cloak of secrecy and counter the increasingly sophisticated means at the companies' disposal to conceal collusive behavior*"[1].

Over the last few years, the fight against cartels has become one of the top priorities for the European Commission. In line with conventional economic theory, the European Commission ("the Commission") indeed views cartels as a serious impediment to an efficient organization of the economy: "*Collusive practices allow firms to exert market power they would not otherwise have, and artificially restrict competition and increase prices, thereby reducing welfare*"[2]. Accordingly, the Commission has sought to deter cartel behavior through the imposition of hefty fines on firms engaging into such arrangements. Recently, the Commission imposed its largest fine ever (€1 383 896 000) on four car manufacturers for unlawfully partitioning the car glass market. [3]

This being said, cartels are first and foremost uneasy to detect. As acknowledged by former Competition Commissioner Mario MONTI, "*since, by nature, cartels are secret and therefore difficult to uncover, it is likely that what we are seeing is only the tip of the iceberg*"[4]. In order to better detect cartels, antitrust agencies have thus introduced new instruments, among which the notorious "leniency program" which ranks nowadays amongst the most efficient tools in the fight against anticompetitive arrangements.[5]. The purpose of the present paper is to discuss is the economic underpinnings of the leniency program and to examine to what extent economic theory may help refine the legal framework of this program..

To this end, the present paper is divided into eight Sections. Following this introduction, Section II considers the analysis of criminal behavior in economic theory. Section III provides a description of the prisoner's dilemma. Section IV explains the transposition of the prisoner's dilemma in the context of the leniency policy. Section V discusses a number of possible *endogenous* amendments with could help improve the efficiency of

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1 Press Release, "Commission adopts new leniency policy for companies which give information on cartels", IP/02/247, 13 February 2002.

2 On the negative effects of cartels see M. MOTTA, *Competition Policy*, *Theory and Practice*, Cambridge, Cambridge University Press, 2004, p. 616. In addition to the negative effects created by a monopoly (allocative, distributive, productive, technical and dynamic inefficiences), the cartel, or collective monopoly, also suffer from flaws such as an inability to make any scale economy.

3 N. KROES, "Car Glass Cartel. Opening remarks at press conference", SPEECH/08/604, 12 December 2008

4 M. MONTI, "Fighting Cartels How and Why ?", *Third Nordic Competition Policy Conference, Stockholm*, 11-12 September 2000, p.1

5 Competition Commissioner Neelie KROES said "Secret cartels undermine healthy economic activity. To root out cartels we need heavy sanctions to deter cartels and an efficient leniency policy providing incentives to report them". Press release, "Competition: Commission adopts revised Leniency Notice to reward companies that report cartels", IP/06/1705, 7 December 2006

leniency programs. Section VI and VII describe a number *exogenous* features that impact, positively or negatively, on the efficiency of leniency programs. Section VIII concludes.

II. Economic Analysis of Criminal Behaviour

Under the most traditional economic theory, individuals –and among them, infringers– are fully rational utility maximizers. A potential offender will decide to act illegally if he has an interest in doing so, or if the expected gain linked to the violation of the law exceeds the expected sanction. The decision to act in breach of the law will then depend on three factors : the probability of conviction –which comprises the probability of detection–, the potential punishment, and the possible gains.

According to this analysis, public authorities have mainly two ways of acting to deter violation of the law. They can increase the potential legal punishment or, on the other hand, put in place control mechanisms to increase the probability of detection of illegal behaviour. If we assess that players are risk neutral, it should be possible to deter illegal infringements only by imposing increasingly harsher sanctions. This traditional approach recommends raising the severity of punishment, while reducing detection mechanisms to a minimum. Inspections and detection schemes being expansive by nature, increasing punishments would by comparison offer the advantage of saving public money[6].

However, recent developments have shown that this approach needs to be moderated. Research has shown that individuals do not always act rationally. The paradigm of the *homo oeconomicus* is not validated by empirical studies. Individuals suffer many biases that should be taken into account while making recommendations for public policies[7].

Indeed, it has been assessed that agents "simplify the prospects by rounding probabilities or outcomes", and that depending on the context and on the individual characteristics of the subject, this phenomenon of "simplification of prospects can lead the individual to discard events of extremely low probability" [8]. This assessment can have heavy consequences on what should be done to deter law infringement: if a low probability of detection is perceived as equal to zero, the potential offender will not fear the sanction and the deterrent effect of harsh penalties will be nil.

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6 G. BECKER, "Crime and Punishment : An Economic Approach", *Journal of Political Economy*, 1968, p.169

7 For example, individuals can be risk adverse or risk preferers. The biases they suffer are many. These biases can for examples be classified as follows : bounded rationality, as individuals suffer from availability heuristic, misperception of probabilities, and overoptimism that leads to mistakes; bounded willpower, which refers to the fact that human beings often take actions that they know to be in conflict with their own long-term interests ; bounded self-interest, meaning that they do care for the well-being of other people. C. JOLLS, C. SUNSTEIN, and R. THALER, "A behavioural approach to law and economics", *Stanford Law Review* No 50, 1998, p. 1476 to 1479

8 D. KAHNEMAN and A. TVERSKY A., "Prospect theory: An analysis of decision under risk", *Econometrica* No 47, 1979, p. 275 and 282 (available at : http://www.hss.caltech.edu/~camerer/Ec101/ProspectTheory.pdf)

It can be argued that cartel agreements initiated by white collars managers being financial offences by nature, are not concerned by this criticism. On the contrary, we firmly believe that even for strictly cold-blooded financial infringements, the analysis cannot be limited to a cost-benefit approach, since professional managers suffer from biases as much as any other individuals[9]. This leads us to nuance the classical theory: the harshening of the sanction is not the sole factor that matters and other means have to be examined in order to develop efficient mechanisms to deter collusion.

III. Prisoner's Dilemma

Economic science can provide lawmakers with sound lines of enquiry. In our efforts to shape an efficient detection program for cartels, game theory and the prisoner's dilemma paradigm are of the utmost interest.

The prisoner's dilemma was given its name by A. TUCKER after M. FLOOD and M. DRESHER, who drafted this model of cooperation and conflict as an application of the game theory.

The prisoner's dilemma can be presented as follows:

Two suspects are arrested by the police, having committed both a major crime and a minor crime. The police has sufficient evidence to convict them for the minor crime. In order to obtain denouncement for the major crime, the police place the suspects in separate jails and interrogate them, offering them the same deal.

Each prisoner has to choose whether he will betray or not. If both prisoners remain silent, both will be convicted and jailed for the minor crime during one year. The prisoner that is proved to be guilty for the major crime will receive three years. Each of them can denounce the other prisoner and have a reduction of sentence of one year.

Prisoner's Dilemma Matrix		
(A ; B)	B does not confess	B confesses
A does not confess	(1 ; 1)	(3 ; 0)
A confesses	(0 ; 3)	(2 ; 2)

[9] Even for offences that are financial by nature, the utilitarian model of deterrence has been questioned. It is assessed that normative reasons also play a role in the decision process : individuals comply with the law also because they believe the law is just or because the authority enforcing the law has the right to do so. Moreover, people are less likely to infringe law when they see their peers comply with it : "An employee's decision to commit corporate crime may be affected as well by the context or cirumstances of the organization. For example, organizational actors may be more inclined to commit corporate crime (…) whether the moral climate [within the] organization tolerates or encourages such disconduct". In tax law, that shares with corporate crime that fundamental monetary aspect, it has equally been shown that "a person's beliefs about whether other persons in her situation are paying their taxes plays a much more significant role in her decision to comply than does her perception of the expected punishment for evasion". D.M. KAHAN, "Social Influence, Social Meaning and Deterrence", *Virginia Law Review*, 1997, p.354. In consequence, "because of normative influences, people may voluntary act against their self-interest" A. P. REINDL, « How strong is the case for criminal sanctions in cartel cases ? », in *Criminalization of Competition Law Enforcement : Economic and Legal Implications for the EU Member States*, Cheltenham, Edward Elgar, 2006, p. 116

The four possible combinations provide four possible game solutions. If A confesses, B will spend less time in jail if he also confesses. If A does not confess, B is still better off if he confesses. The structure of the situation makes confession a dominant strategy, since each prisoner is better off confessing regardless of what the other prisoner does.

The prisoner's dilemma can be described as a *non zero-sum* game of *complete* and *imperfect information*. Since each of these characteristics will be used in our further developments, it may be of some use to define them more precisely.

In a game of *complete information*, everything in the description of the game must be common knowledge for the players. This includes the various choices available for the different players, the possible solutions of the game, the gains linked to these solutions, and the players' motives and preferences for the different outcomes[10].

In a game of *imperfect information*, the players are not aware of the way the other gamers have played when they have to take their own decision. On the contrary, in a game of perfect information "the players know everything they might wish to know about what has happened in the game so far when they make a move"[11].

The prisoner's dilemma is a *non zero-sum* game. It means that the gains or losses of one player do not necessarily result in the gains or losses of the other player. The sum of the parties' aggregate gains and losses does not total zero, but varies with the strategies put in place by the different gamers, who can gain or lose altogether[12].

The latter characteristic has a direct impact on the analysis that can be made of the game. Indeed, a prisoner's dilemma exists when "two parties pursue their own individual interests and act in a rationally selfish manner, which results in both parties ending up in a worse position than if they had cooperated and pursued the group's interest instead of their own"[13]. If we assume that the players cannot communicate and consult, we also have to assume that the game will be solved by a double denunciation, even if prisoners would be better off if both of them remained silent.

What strikes us is that a situation in which both parties would have gained a better payoff was available, but that the appeal of the Nash equilibrium was strongest[14]. If none of the

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10 B. GUERRIEN, *La Théorie des jeux*, Paris, Economica, 1993, p. 7.

11 K. BINMORE, *Playing for Real. A text on Game Theory*., Oxford, Oxford University Press, 2007, p. 46.

12 On the contrary, a zero sum game is a situation in which the gains or losses of one player equals the losses or gains of the other. In a zero-sum game with two players, there will be a winner and a loser. The game will therefore be "strictly competitive" See N. DAIDJ and A. HAMMOUDI, *Le management stratégique par la théorie des jeux. Une introduction,* Paris, Lavoisier, 2008, p. 64.

13 C. R. LESLIE, "Antitrust Amnesty, Game Theory and Cartel Stability", *Journal of Corporation Law*, 2006, pp. 453-488, p.455 (available on : http://papers.ssrn.com/).

14 The Nash Equilibrium can be defined as the solution chosen by the gamers when "no player can achieve a better payoff by changing his or her strategy, assuming the other players do not change

prisoners had deviated from a loyalty choice, a Pareto optimal situation would have appeared in which the welfare of both players would have been at its highest level. Instead, not being allowed to communicate, both prisoners decide to betray their accomplice and end up in a worse off situation.

The interest of the prisoner's dilemma paradigm in the struggle against cartels is obvious. Indeed, the cartel members are in a Pareto optimal situation when enjoying the benefits of collusion while, on the other hand, the public authorities look for means to force them to deviate from their secret agreement.

However, difficulties arise as the reality does not exactly map with the theoretical model. The control authorities, for example, are generally not aware of the existence of a particular cartel, and even when they do suspect it might exists, they are not able to threaten the conspirators with the sanction of a minor crime in order to incite them to denounce the cartel.

Another strategy had to be found: leniency would not be offered to every member of the cartel, but would be reserved to the one or the few who would confess first. The incentive to report the cartel was reintroduced through the *race* in which the cartelists would have to compete among themselves.

IV. Leniency. Definition and Objectives

Leniency programs are sanction schemes granting total or partial immunity from sanction that would otherwise have been imposed on a cartel member "in exchange for disclosure of information on the cartel and cooperation with the investigation"[15]. They are based on the principle that people who break the law might confess their crimes if given sufficient reasons to do so. In competition law, the Antitrust Division of the Department of Justice in the US was the first to introduce a leniency program in 1978 whose scheme was redesigned in 1993.

The EU adopted a first leniency policy in 1996. However, the program did not produce the expected results and was reformed in 2002 and enhanced in 2006.

Two conditions have to be fulfilled to allow collusion: the participation constraint, and the incentive constraint. According to the participation constraint, the expected profits from participating in the cartel have to exceed the expected fine, while the incentive constraint requires that individual deviation from the collusive agreement does not pay.

Put differently, while the "incentive constraint" requires that net expected profits from participating in the cartel are sufficiently large to outweigh the temptation to undercut the

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theirs". A. E. ROTH and M. A. OLIVEIRA SOTOMAYOR, *Two-Sided Matching. A study in Game-Theoretic Modelling and Analysis*., Cambridge, Cambridge University Press, 1990, p. 96.

15 Press Release, "Competition: Commission and other ECN members co-operate in use of leniency to fight cross border cartels", IP/06/1288, 29 September 2006.

cartel price, the "participation constraint" only requires that the net expected profits from entering the cartel are positive. If both constraints must be fulfilled to allow collusion, the "incentive constraint" is always more stringent, as it matters for both cartel stability and cartel deterrence[16]. While increasing fines can undermine the participation constraint, only leniency programs can undermine the "incentive constraint", because the one who breaches the agreement can be granted immunity and win the benefits resulting from price-cuting.

Cartel formation relies on trust : trust in the loyalty of the other members to the rule of the cartel and/or trust in the efficiency of the discipline mechanism. In making public the incentives given to confess the cartel, the whole purpose of the leniency drafter is to create distrust among the different parties, as the imperfect information feature of the prisoner's dilemma allows it. "As it becomes more rational or beneficial for one's partner to confess, one should trust her less. And, because one has been offered the same deal, one's partner should trust her less. Once he knows that she trusts him less, that should make him trust her even less. There is a vicious cycle of distrust until someone confesses"[17].

The objectives of leniency programs are evident. The main purposes are :

- to make existing cartels collapse
- to deter cartel formation.

Leniency is also an efficient tool that enables authorities to save it on resources. Collecting evidence for an offense is costly, but leniency can help, as the confessing party has to provide evidence of the collusive agreement to pretend to leniency. The finances of the control authority being limited, saving money allows the authority to reaffect it to other inquiries[18].

Soon after the enactment of the new leniency program, both numbers of applications and of cartels convicted increased[19]. As the number of hidden cartels is unknown, it is

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16 P. BUCCIROSSI, G. SPAGNOLO, "Antitrust sanction policy in the presence of leniency programs", *Concurrences*, n°4, 2006 p. 27.

17 C. R. LESLIE, "Antitrust Amnesty, Game Theory and Cartel Stability", *loc.cit.*, p. 474.

18 The same reasoning explains the recent introduction of a settlement procedure for cartels**.** (Commission Regulation (EC) No 773/2004 of 7 April 2004 relating to the conduct of proceedings by the Commission pursuant to Articles 81 and 82 of the EC Treaty, *O.J.,* L123, p.18) When parties to a cartel are convinced of the strength of the Commission's case in view of the evidence gathered during the investigation and of their internal audit, they may be ready to acknowledge their participation in an infringement and accept their liability for it, in order to speed up the adoption of a decision and obtain a reduction of the fine : "this should free resources to deal with other cases, increasing the detection rate and overall efficiency of the Commission's antitrust enforcement. This is also expected to have a positive impact on general deterrence." Presse Release, "Antitrust: Commission introduces settlement procedure for cartels – frequently asked questions", MEMO/08/458, 30 June 2008.

19 The statistics available on the EU Commission website establish that more than 80 leniency applications were filed during the 1996-2002 period, while the Commission received 167 applications in the 2002-2005 period (MEMO/02/23 and MEMO/06/470). Correspondingly, in more than five years, only 16 cartels were dismantled while in less than four years, the score went up to 80.

difficult to determine to what extent the leniency policy is efficient. However, we note that the number of cartels convicted per year has been multiplied by ten since the 2002 reform of the leniency program. As it seems unreasonable to think that the number of existing cartels has been multiplied by ten while, at the same time, the competition authorities were strengthening their control on the antitrust behaviors, we can conclude that the leniency programs do have some positive effect[20].

V. Drafting Efficiency

The efficiency of a leniency program depends on how it is shaped. How many firms of the same cartel can be eligible for leniency? When can they apply for it? And to what extent will they be entitled to a reduction of fine? These are some of the questions we shall try to examine. The following lines will be devoted to the analysis of the different conditions under which leniency has to be granted to provide the best results.

1. Transparency and impartiality

One crucially important feature when drafting a leniency program is the certainty the program will deliver. Few are the cartelists that will ever seriously consider leaving the shadows of secrecy without being aware of how they will be treated. In order to provide the minimum certainty needed, the rules for granting leniency must be transparent and guarantee fair treatment to applicants.

Much has been done in this direction these last few years. A good example of this trend is given by the Guidelines on the method of setting fines[21] aimed at providing "transparency and impartiality" to the decision of the Commission.

Whether or not the Commission should offer greater *predictability* in the setting of the fines, is discussed. The goals expressed by the Competition Commissioner on this question are unclear and sometimes, contradictory[22]. The Commission still allows a certain leeway in the appreciation of the different factors taken into account to determine the level of the fines, while the Court of First Instance, alleging efficiency effects, has stated that the predictability of the sanction does not need to be perfect:

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20 P. MASSEY, "Criminalization and leniency : will the combination favourably affect cartel stability ?", in *Criminalization of Competition Law Enforcement : Economic and Legal Implications for the EU Member States*, Cheltenham, Edward Elgar, 2006, p. 187.

21 Commission Communication, Guidelines on the method of setting fines imposed pursuant to Article 23(2)(a) of Regulation No 1/2003, 2006/C 298/11*, O.J.,* C 210, 1 september 2006, p. 2-5.

22 Compare the declarations of the Competition Commissioner N. KROES : "We want to increase deterrence and ensure greater predictability." (N. KROES, "Delivering on the crackdown: recent developments in the European Commission's campaign against cartels", *The 10th Annual Competition Conference at the European Institute, Fiesole, Italy*, 13th Oct. 2006, SPEECH/06/595) and : "as a matter of principle, allowing infringers to calculate the cost/benefit ratio of cartel participation in advance would not lead to a sustained policy of cartel deterrence and zero tolerance" (N. KROES, 'The First Hundred Days 40th Anniversary of the Studienvereinigung Kartellrecht 1965-2005', *International Forum on European Competition Law, Brussels*, 7th April 2005, SPEECH/05/205).

"In addition, it must be added that, to avoid excessive prescriptive rigidity and to enable a rule of law to be adapted to the circumstances, a certain degree of unforeseeability as to the penalty which may be imposed for a given offence must be permitted. A fine subject to sufficiently circumscribed variation between the minimum and the maximum amounts which may be imposed for a given offence may therefore render the penalty more effective both from the viewpoint of its application and its deterrent effect"[23].

This assessment can be questioned. Indeed, if we can understand that the Commission wishes to preserve its leeway to be able to adjust the fines according to the factual conditions of the cases, the reasoning followed has been criticized as incompatible with the economic strategy developed through the leniency program: "If the fines are always set sufficiently high, predictability will enhance, not dilute the deterrent effect. If managers know that the level of fines discounted for the risk of detection will always be unacceptably high, the cost-benefit analysis will be persuasive."[24]

If the whole purpose of a leniency program is to provide enough incentives to convince cartelists to quit the collusive agreement because rationally they have more interest in doing so, the drafters of the program have to make sure that the different solutions of the game are well known. It is true that fairness requires that each case is judged on its own merits. However, to some extent, the discretionary power of the Commission while taking decisions on cartels, has to be framed. As we have seen, the prisoner's dilemma is characterized by complete information. It seems to us that in order to match the economic paradigm in the closest way, leniency policies have to be tailored to provide predictability to the applicants.

2. Leniency after inquiry has started

It has been demonstrated that leniency policies that limit "eligibility to the case where the inquiry has not yet been opened completely eliminate the incentive to reveal and the effectiveness of the program"[25].

Indeed, firms that collude because the expected benefits are higher than the expected costs have no reason to report as long as the situation does not change: a cartel already

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23 CFI, 27 September 2006, T-43/02, *Jungbunzlauer AG v. Commission of the European Communities*, para. 84 and 90. It has also been stated that in this situation, the fact that firms are not in a position "to know in advance the exact level of the fines that the Commission will choose in each individual case" is not contrary to the principle of legality. Later, the Court clearly stated that : "The objective of the Guidelines is therefore transparency and impartiality, and not the foreseeability of the level of the fines." CFI, 15 March 2006, T-15/02, *BASF v Commission*, para. 250.

24 J.M. JOSHUA, "That Uncertain Feeling : The Commission's 2002 Leniency Notice", *Proceedings of 2006 EU Competition Law and Policy Workshop*, European University Institute, Robert Schuman Centre for Advanced Studies, p. 24 (available at http://www.eui.eu/).

25 M. MOTTA and M. POLO, "Leniency Programmes and Cartel Prosecution", *International Journal of Industrial Organization*, No 21(3), 1991, p.349.

formed can only be confirmed by the introduction of a leniency program that reduces the fines and the expected costs, while a cartel formed after the passing of a leniency program has beforehand integrated the leniency in its calculation of expected costs and benefits. In both cases, there will be no confession.

However, if the authority starts investigating, the expected costs, based on the probability of being caught, dangerously rise, and the trade-off is changed. The expected costs of continuing to collude being higher when the expected benefits are the same, the firm might give up the cartel, provided that confession is still rewarded after the investigation has started[26].

Examining the EU Notice on "Immunity from fines and reduction of fines in cartel cases", we observe that the Commission has opted for an intermediate answer. According to Point (10), full immunity "will not be granted if, at the time of the submission, the Commission had already sufficient evidence to adopt a decision to carry out an inspection in connection with the alleged cartel or had already carried out such an inspection". This limitation does not suppress any possibility of reward, though. Point (23) of the Notice states that cooperating undertakings that do not meet the conditions for immunity may still be eligible for a reduction of fine[27].

In our opinion this ingenious distinction is welcome. It meets the objection that no cartel would ever confess in the absence of leniency after inquiry has started and at the same time, rewards early report. Indeed, if the reward for confessing were the same before and after enquiry, the race would be delayed to begin only after enquiry has started and the collusive agreement would be consequently prolonged[28].

3. Increasing Incentives to Report

In order to destabilize cartels leniency policies have to be sufficiently appealing. The cartel members have to face the risk of a sufficiently heavy sanction, and the reward for who ever confesses has to be sufficiently attractive[29].

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[26] More generally, changes in the environment can put an end to cartel stability : scrutiny of the control authority, but also distrust in the new management of a colluding partner, change over time in the perception of the risk of being caught colluding (possibly because a more risk-adverse management takes over), or changes in the economic environment that make collusion less pay-off (eg. : modification of the demand, entry of a new competitor in the market,…). M. MOTTA and M. POLO, "Leniency Programmes and Cartel Prosecution", *op. cit.*, p. 374.

[27] Commission Notice on Immunity from fines and reduction of fines in cartel cases (2006/C 298/11), *OJ*, C 298, 8 December 2006, p. 0017 – 0022.

[28] F. LÉVÈQUE, « L'efficacité multiforme des programmes de clémence », *Concurrences,* n°4, 2006, p. 35

[29] Note that if the reward consist in an immunity of sanction the increase of the potential fine will consequently lead to an increase of the value of the reward.

(a) Optimal Sanction. Harsher Sanctions

Broadly speaking, an optimal sanction is aimed at deterring the rational agent from infringing the law. Theoretically, it consists of a fine such as the illicit gain expected from participating in the cartel minus the expected fine, is zero.

According to economic studies, calculation of the optimal sanction depends on different factors: probability of detection, the competitive price-cost margin, price-elasticity of demand and the collusive mark-up. Numerical measures of these variables can change and result in different findings, especially if we distinguish between a confiscatory fine and a deterring fine that integrates an average rate of detection. Anyway, economists agree that the results would lead to a dramatic rise in the fines. In the most extreme cases, some fines imposed these few last years should have been multiplied by up to more than ninety times to match the optimal sanction level[30].

We hit here an important topic. Indeed, even if we cannot *solely* rely on the threat of harsh punishment to deter infringement, but also have to try to optimize detection of violations in order to grant sufficient incentives to report, we still need heavy sanctions.

Of course, excessive fines, aimed at deterring illegal conduct, risk infringing a fundamental law principle, i.e. the principle of proportionality of penalties[31]. However, this risk should not be overstated as Council Reglementation No 1/2003 limits the fine that can be charged for infringement to 10 % of the total turnover of each undertaking and association of undertakings in the preceding business year"[32].

But other important objections are also made. It is assessed that overweighed fines could cause the guilty firm to go bankrupt, thereby reducing competition on the market and penalizing the stakeholders that are in no way responsible for the infringement. There is also evidence that sentenced undertakings can react to fining by increasing their prices to counterbalance their losses[33].

These last arguments are discussed in the literature. First, it seems obvious that an increase in prices can happen only if the fined firm shows some market power; otherwise such strategy would only lead to second punishment by competitors. Secondly, some observers stress the fact that too low fines have no deterrent effect at all, and that driving some undertakings to bankruptcy may be less costly than having an antitrust system that does not work. Furthermore, driving some undertakings to bankruptcy with adequate

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30 E. COMBE and C. MONNIER, "Le calcul de l'amende en matière de cartel : Une approche économique », *Concurrences,* n°3, 2007, pp. 43-44.

31 Let us remind that in Europe, this principle is established within the Charter of Fundamental Rights of the European Union. Article 49 (3) sets : "The severity of penalties must not be disproportionate to the criminal offence".

32 Article 23 (2) of the Council Regulation (EC) No 1/2003, 16 December 2002, on the implementation of the rules on competition laid down in Articles 81 and 82 of the Treaty, *O.J.*, L 001, pp. 1-25.

33 E. COMBE, "L'efficacité des sanctions contre les cartels : Une perspective économique", *Concurrences*, 2006, n°4, 2006, p.13 and E. COMBE, "Quelle sanction contre les cartels ? Une perspective économique", *R.I.D.E.*, 2006, p. 21.

publicity would increase *ex ante* deterrence. The negative impact of harsh fines is also moderated. Indeed, it has been assessed that economically sound firms that are driven to bankruptcy by fines can be sold to new owners, so the competition would not be undermined while the only agents really sanctioned would be shareholders for their inability to control the way the undertaking was managed[34].

All the same, if we cannot reasonably consider enforcing a cartel regulation with fines that would match the optimal sanction, it is important to note that, according to economic studies, administrative sanctions could still be increased « far above current levels without seriously affecting firms' subsequent ability to survive, invest and compete effectively"[35].

(b) Adverse Effects of Too Lenient Policies

As we have seen, many voices plead for a toughening of the fine regulation against cartels. Simultaneously more radical leniency policies are demanded. Again, economic analysis provides us with precious lines of inquiry. Indeed, several studies stress the fact that mild leniency programs can either have no effect, or can even have perverse effects on antitrust regulation.

Some authors assert that leniency "may have ex-ante a pro-collusive effect" [36]. The basic idea is that leniency can increase incentives to collude as it allows colluding firms to pay reduced fines, therefore decreasing the expected cost of anticompetitive behaviour. "In the case of programmes which provide that more than one firm can qualify for reduction in fines"[37], a risk exists that the race is undermined by the thought that an exit door is always available. The danger is that enterprises may not apply for leniency if they know that a substantial reduction in fines would still be available later, in the hope that the cartel will not collapse at all[38].

Put differently, drafting authorities should be concerned about the risk that multiple reduction of fines can decrease the threat of sanctions. Another trap, contrary to the first, but equally worrying, would be to forbid any possibility of leniency for late arrivals: firms would be less likely to report as time passes, if they believe that another cartel member has applied first. In this perspective, the Notice on Immunity and Reductions seems to have provided a well-balanced answer : even if reductions of fines are

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34 P. BUCCIROSSI and G. SPAGNOLO, "Antitrust sanction policy in the presence of leniency programs", *op. cit.*, p. 26.

35 G. SPAGNOLO, "Criminalization of cartels and their internal organization", in *Criminalization of Competition Law Enforcement : Economic and Legal Implications for the EU Member States*, Cheltenham, Edward Elgar, 2006, p. 136.

36 M. MOTTA and M. POLO, "Leniency Programmes and Cartel Prosecution", *op.cit.*, p. 349.

37 P. MASSEY*, op. cit*., p. 190.

38 Combined with the insight that a cartel must take a dominant position in order to be sufficiently attractive, it has been shown that if full deterrence cannot be achieved, the perverse pro-collusive effect of leniency policies is at its full strength in oligopolistic markets. I. BOS, *Leniency and Cartel Size: A Note on how Self-reporting Nurtures Collusion in Concentrated Markets*, July 2006, p.7 (available on : http://papers.ssrn.com/).

theoretically open to every undertaking –till the very last !– that reports the cartel[39], the condition according to which the late applicant has to provide evidence "which represents significant added value with respect to the evidence already in the Commission's possession", if strictly construed, will in fact make it almost impossible for third or following applicants to enjoy fine reduction.

(c) Effect on Cartel Price

Collusive agreements, as is the case with any other form of illegal agreement, have at least one flaw: they cannot be enforced in court. Cartelists have to set enforcement mechanisms or face the possibility that one of them can at any moment deviate from the agreement and cut prices. It is indeed "a well established proposition that if any member of the agreement can secretly violate it, he will gain larger profits than by conforming to it."[40]

The respect of the cartel rule can be obtained through the threat of a price war. Once it is discovered that a cartel member has deviated from the common agreement, the other cartelists can retaliate and punish the reluctant firm by lowering their own prices on the market that concerns the cartel, or on another one. This kind of retaliation is however far from perfect. Abnormal price fluctuations are likely to be discovered by control authorities. Indeed, it is a sensible rule for antitrust enforcement: "monitor the price, and if it falls dramatically for a period and then returns to a much higher level, investigate all firms for price fixing"[41].

That said, let us examine how leniency policies interfere with this scheme. Complex dynamic analysis reveals that leniency programs also have impacts on the cartel price and, consequently, on the way cartel members behave.

A firm tempted to cut prices may fear the detection that would follow price war retaliation. An adequate program could remove a firm's last doubts and encourage it to cut prices to poach the client from other cartelists. Consequently, "leniency affects not only the penalties paid by a firm that deviates, but also the profits it receives when it does deviate"[42].

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39 If the Commission can offer full immunity to the first applicant, the reductions of fines for the following applicants are less generous. Theoretically however, reduction is always available. See Commission Notice on Immunity from fines and reduction of fines in cartel cases (2006/C 298/11), *op. cit.*, Point (26) : "any undertaking that provides evidence of significant added value can apply for a reduction of up to 20 %".

40 G. STIGLER, "A Theory of Oligopoly", *Journal of Political Economy*, vol. 72, 1964, p.46.

41 P. CYRENNE, "On Antitrust Enforcement and the Deterrence of Collusive Behaviour", *Review of Industrial Organization* 14, 1999, pp. 262-263.

42 J. CHEN and J. E. HARRINGTON Jr., "The Impact of the Corporate Leniency Program on Cartel Formation and the Cartel Price Path", *CIRJE-F-358 Discussion Paper*, 2005, p. 12 (downloadable to : http://www.e.utokyo.ac.jp/cirje/research/03research02dp.html).

However, in such situation it is very likely that the cartel will react. It will judiciously reduce the incentives to introduce price cutting by setting the cartel price not much above the competitive level[43].

Such an outcome, even if not as positive as causing the cartel fall, would have the effect of reducing the harm caused to the consumers. Unfortunately, such a reaction does not always occur. Leniency policies can also produce perverse effects: in some cases, potential cheaters that would prefer there were no leniency program because their benefits are limited, can be discouraged from deviating from the secret agreement. Indeed, who is ever looking for extra profits by cheating upon the cartel will not be able to afford to cut prices and not apply for a first place leniency. Especially if a price war is likely to provoke the detection of the cartel by the authorities. This can reduce expected benefits and discourage cheating. In consequence, when leniency is limited, the cartel is able to raise its price above the level of what it would have done in the absence of a leniency program and enhance the attractiveness of forming a cartel[44] [45].

(d) Leniency as a Way of Enhancing Cartel Stability

Leniency can also be used to enforce the cartel rule in a more active way. If discipline among cartel members is typically reached through the threat a price war, it has been shown that leniency can provide a strong tool to implement the illegal agreement, reducing police and enforcement costs and so, facilitating collusion. "Poorly designed leniency policies may solve the governance problem of the cartel by inducing transacting parties to collect hard evidence on the illegal agreement and use it as a "hostage", threatening to report it to law enforcers" in case of deviation.

In the most classic example, the ringleader harbouring evidence of the participation of other cartel members, will use it to threaten reluctant firms that have no other choice than complying with the cartel rule or suffer the administrative sanction triggered by the ringleader that has applied for leniency in the meantime. "A poorly designed/managed leniency policy may ensure that this threat is credible, so that all parties comply with the otherwise unfeasible occasional illegal exchange"[46] [47].

(e) Rewarding reporting undertakings

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43 G. STIGLER, "A Theory of Oligopoly", *op. cit.*, p. 46.

44 J. CHEN and J. E. HARRINGTON Jr., "The Impact of the Corporate Leniency Program on Cartel Formation and the Cartel Price Path", *op. cit*, p. 17.

45 More precisely, leniency programs shaped in an inefficient way will have an influence on the cartel price. Other (external) factors such as the conditions of entry into the market and the elasticities of demand can also affect the cartel price.

46 P. BUCCIROSSI and G. SPAGNOLO, "Leniency Policies and Illegal Transactions", *Journal of Public Economics*, 2006, vol. 90, issue 6-7, p. 1282.

47 If the application of the ringleader for full immunity seems not excluded by the Commission Notice, the application for a reduction of fine for an undertaking which took steps to coerce other undertakings to join the cartel or to remain in it can only lead to a reduction of fine. Commission Notice on Immunity from fines and reduction of fines in cartel cases (2006/C 298/11), *op. cit.*, Point (13).

More generally[48], to avoid any adverse effect of the kind described above, economic analysis encourages us to accentuate the difference of treatment between those who are rewarded for reporting and those who have to be punished[49]. If this can be done by increasing the amount of fines and offering full immunity, many economists plead for the radicalisation of leniency policies and the introduction of payment of cash rewards for the first applicant. Such reform should have a positive effect both on deterrence and ex-post efficiency.

Nevertheless, promoters of this reward scheme do not deny that the enforcement of such a scheme would raise a number of difficulties. If the issue of financing such a policy can be solved by rewarding the informant with a fraction of the fines paid by the other firms, hostility towards such a scheme is often presented as an insoluble problem. Ethical and political issues are then stressed, as many people would consider it immoral to reward someone who acted illegally, and would fear the lack of trust of an "informants' society"[50].

In such situation, the antitrust authority could imagine keeping rewards secret and bargain discreetly with firms under suspicion. However, such an approach would create judicial uncertainty and affect the credibility of the reward. Indeed, rewards should be contractually enforceable in court to guarantee that the antitrust authority does not renege on its promises. Secret rewards may be less credible, and so firms may apply for them less often [51].

According to us, the alleged public opposition to rewards is overweighted. First, public opinion is not frozen, but can change in time. It is the duty of a political body like the Commission to show some pedagogy and promote a policy among the European people that it believes to have positive outcome[52].

Second, it can be argued that the moral gap between leniency as it exists today, with immunity of punishment granted to firms that have acted illegally, and the implementation of a reward scheme, is not so wide. Leniency policies seem to be globally accepted. The passing of a reward reform would in this context only consists of an increase in intensity.

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48 In this sub-chapter we will speak about the incentives in cash for firms to report under "reward", while we will speak later about "bounties" for individuals.

49 F. LÉVÈQUE, « L'efficacité multiforme des programmes de clémence », *op. cit.*, p. 33.

50 P. BUCCIROSSI and G. SPAGNOLO, "Leniency Policies and Illegal Transactions", *op. cit.*, p. 1278.

51 C. AUBERT, P. REY, and W. E. KOVACIC, "The Impact of Leniency and Whistleblowing Programs on Cartels", *International Journal of Industrial Organization*, 24 (6), 2005, p.13 (Available at : http://idei.fr/doc/by/rey/leniency.pdf).

52 Such a reward scheme for reporting undertakings would be in the straight line of the policy of the Commission that has long ago stated that the end justifies the means : "The interests of consumers and citizens in ensuring that such practices are detected and prohibited outweighs the interest in fining those enterprises which cooperate with the Commission, thereby enabling or helping it to detect and prohibit a cartel." Commission Notice on the non-imposition or reduction of fines in cartel cases (96/C207/04), *OJ*, C 207, 18 August 1996.

Thirdly, if we are to believe the results of economic analysis, this kind of measure should be introduced not to be used. If a reward policy is proven to be as effective as expected, few new cartels would not be deterred from colluding. This would therefore reduce the number of potential applicants that would apply for reward. Indeed, "optimal fines calculated taking appropriately into account this novel type of deterrence are different and lower" than the traditional optimal fines[53]. Theoretically, fines would sooner and more closely match the sanction that precludes any benefit for the infringer, and so the deterrent effect would be drastically increased.

(f) Amnesty Plus

Firms are managed by individuals. It is therefore likely that a firm, headed by executives that have decided to act in breach of Antitrust law on one market, also collude on other markets. In the US, two additional tools have been developed to fight multi-market collusion. Under the Amnesty Plus Program, subjects of ongoing investigations on one market are offered to report the cartels that may be established in other markets. "So even though a company may not qualify for amnesty for the initial matter under investigation, the value of its assistance in disclosing a second cartel will lead to amnesty for the second offense and a substantial additional reduction (the "plus") in the calculation of the fine for its participation in the first offense". That kind of offer is supported by the so-called Penalty Plus provision that see the failure to self-report under the Amnesty Plus program as an aggravating sentencing factor[54].

Despite the positive results alleged, these tools do not exist under the current EC Leniency Notice. It is true that economic study tends to moderate the enthusiasms. Indeed, it has been shown that Amnesty Plus may have an anticompetitive effect by stabilizing a cartel which is individually unstable in the presence of another cartel which is individually stable. "If the latter cartel is detected, the firms report the former in the hope of a discount in the fine already imposed. Hence, Amnesty Plus decreases a firm's expected fine from a cartel conviction such that, for each firm, the joint creation of the cartels may result in an expected discounted value of profits larger than the payoff from the optimal unilateral deviation. The firms would anticipate that the cartels are jointly stable and form both cartels whereas only one of them would have been created under the EU Leniency Program".

However, it is also said that this adverse effect can be circumvented "by setting the size of the fine discount granted in one market such that it does not exceed the fine a non successful Amnesty Plus applicant would have incurred in the other market, the antitrust

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53 P. BUCCIROSSI and G. SPAGNOLO, "Antitrust Sanction Policy in the Presence of Leniency Programs", *op. cit.*, p. 28

54 S. D. HAMMOND, "Cornerstones of an Effective Leniency Program", *ICN Workshop on Leniency Programs*, Sydney, 22-23 November 2004 (available at : www.usdoj.gov/atr/public/speeches/206611.htm)

authority can avoid any stabilizing effect of this policy"[55]. Again, this last study show that leniency programs have to be cautiously tailored.

4. Radicalization of Leniency

In order to draft an efficient leniency program, we need to cautiously consider which policy can be implemented and is desirable. If we can understand the will of public authorities to strictly limit leniency to a level that deters cartel formation without however preventing outlaw undertakings to escape punishment, these qualms cannot justify the passing of inefficient leniency programs characterized by adverse effects. To prevent many of these flaws, most economists, as we have seen, recommend radicalizing leniency schemes.

Leniency programs being based upon the self-report of the illegal agreement by the involved actors at the end of a cost-benefit analysis, the main idea is to increase the incentives to confess. This can be made –paradoxically– through increasing the potential sanction while granting full leniency for the first applicant, or through the offer of reward for the reporting firm.

VI. Reporting Undertakings Facing Side Costs

In drafting a leniency program, we have to be aware of all the costs that a firm needs to consider before chosing to apply for leniency or not. There are disincentives to confess that a mere calculation of probable fines does not reflect. For example, the undertaking will expose opportunity costs: time, resources and employees will have to be diverted from more profitable allocations to tasks of internal investigations and the defense of the firm. Moreover, the confession will harm the reputation both of the undertaking and of the individuals who were involved in the conspiracy[56]. And correlated with the latter, the firm may have to face market share punishment[57] : antitrust sanctions have a negative impact on the stock market valuation of a firm[58]. As investors may turn away from the fined firm, the risk of loss in capitalization will also be taken into account by the firm before it applies for leniency.

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55 Y. LEFOUILI and C. ROUX, ""Leniency Programs for Multimarket Firms: The Effect of Amnesty Plus on Cartel Formation", October 2008 (Available at : www.hec.unil.ch/deep/textes/08.05.pdf).

56 For example, in the car glass case, the two managers that had initiated the cartel participation of Saint-Gobain were paid off. C. BELLEMARE, «Pierre-André de Chalendar fait le ménage chez Saint-Gobain», *Le Figaro,* 2 Décembre 2008

57 G. LANGUS and M. MOTTA, "On the Effect of EU Cartel Investigations and Fines On the Infringing Firms' Market Value", *Proceedings of 2006 EU Competition Law and Policy Workshop*, EUI-RSCAS, p. 8 (available at http://www.eui.eu/). The authors also showed that an ex-post annulment of the fine does not restore the initial position of the firm, therefore fixing the harming effects of a type-I error.

58 See for example the recent car glass cartel. Even if a counterfactual analysis should be made to determine exactly to what extent the fines imposed by the Commission caused the share dive, the market share value of every cartel participant fell after the decision of the Commission was made public. Shares of Saint-Gobain fell 5.20 percent that day. T. URANAKA, "Nippon Sheet, Asahi shares dive after EU cartel fine", *Thomson Financial News*, 13 Nov. 2008 (available at : http://www.forbes.com/afxnewslimited/feeds/afx/2008/11/12/afx5686528.html)

While we are trying to increase the inducements to confess, we should take care than no other factor can interfere with the leniency scheme and reduce the incentives to betray.

1. Relation between Private Enforcement and Leniency Programs

A firm that takes part in a collusive agreement infringes the law and at the same time causes damage to the consumers who are made to pay a higher price for the products they buy. This is why the ECJ stated that:

"Article 81(1) EC produces direct effects in relations between individuals and creates rights for the individuals concerned which the national courts must safeguard. It follows that any individual can rely on the invalidity of an agreement or practice prohibited under Article 81 EC and can claim compensation for the harm suffered where there is a causal relationship between that harm and the prohibited agreement or practice."[59]

If this ruling has to be welcomed, there is a risk that a firm that takes into account the weight of the civil damages it will have to pay in the event of a private action, may be reluctant to apply for leniency. Such a reaction would be negative both for society and the private individuals who are the victims of the cartel price, as the probabilities are higher that the cartel will be perpetuated in the absence of an efficient leniency program.

The White Paper on Damages actions for breach of the EC antitrust rules[60] adopted by the European Commission to promote the exercise of the private action suggests some solutions to preserve the attractiveness of the leniency program. First, it provides that all corporate statements submitted by all applicants for leniency should be protected against disclosure in private actions for damages so the applicants are not in a less favourable situation than the co-infringers, and second, that the civil liability of the immunity recipient to claims by his direct and indirect contractual partners should be limited.

We note that some contributors[61] express their regrets that the White Paper limits the restriction of civil liability to the immunity recipient alone, while other undertakings that have been granted fine reductions for their collaboration should equally be entitled to this benefit. We do not think that this proposal should be followed: the damage action promoted by the Commission is also meant to be part of the deterrent effect of the sanction. It would be undermined should civil liability exemption be unduly generalised.

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59 ECJ, 13 July 2006, joined Cases C-295/04 to C-298/04, Manfredi v Lloyd, *Report*, 2006, p. I-6619, after ECJ, 20 Sept. 2001, C-453/99, Courage Ltd v Bernard Crehan, *European Court reports,* 2001, p. I-06297.

60 White Paper on Damages Actions for Breach of the EC antitrust rules, COM(2008) 165, 2 April 2008.

61 See for example : « Observations du Groupe France Télécom à la consultation sur le Livre Blanc », page 6, paar. 39 (available at : http://ec.europa.eu/competition/antitrust/actionsdamages/white_paper_comments.html).

2. Impact of the Existence of Multiple Jurisdictions

In a globalized world, many cartels are international. In such a situation, applying for leniency in a jurisdiction can have heavy consequences in other jurisdictions. By confessing the collusion to one authority, a firm invites competition law agencies in other countries to investigate and prosecute the cartel activities that are within their legal reach. The applying company then risks to be fined several times for the same acts, even if the collusive agreement would not have been discovered without its collaboration and despite the promises of immunity.

In our jurisdiction the European Court of Justice does not forbid a single act infringing different antitrust rules from being punished several times:

"Under the *ne bis in idem* principle, the same person cannot be sanctioned more than once for a single unlawful course of conduct designed to protect the same legal interest. The application of that principle is subject to the threefold condition of identity of the facts, unity of the offender and unity of the legal interest protected."[62]

However, the unity of legal interests protected will be difficult to establish, as the Court held:

"In that regard, the exercise of powers by the authorities of those States responsible for protecting free competition under their territorial jurisdiction meets requirements specific to those States. (…)

It follows that, when the Commission imposes sanctions on the unlawful conduct of an undertaking, even conduct originating in an international cartel, it seeks to safeguard free competition within the common market, which constitutes a fundamental objective of the Community under Article 3(1)(g) EC. On account of the specific nature of the legal interests protected at Community level, the Commission's assessments pursuant to its relevant powers may diverge considerably from those of authorities of non-member States."[63]

If this threat to the attractiveness of leniency programs is to be met, international agreements should be concluded between the different jurisdictions. An international "one stop-for-shop" provision, or situation in which a cartel member, once it has applied for a leniency programme, would not have to apply later for the same treatment in other legal systems[64], would present the advantage of reducing transaction costs through unification of the application proceedings. However, the most efficient answer would be to unify the competition authorities in one international authority, competent for surveying and fining international cartels. If such a far-reaching objective does not seem feasible at this stage because of political oppositions and discrepancies between legal

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62 CFI, 27 Sept. 2006, T-322/01, *Roquette Frères SA v. Commission*, para. 278.

63 ECJ, 29 June 2006, C-308/04, *SGL Carbon v. Commission*, para. 29 and 31. In the same ruling the Court stated that moreover, "there is no principle of law obliging the Commission to take account of proceedings and penalties to which the appellant has been subject in non-member States" (para. 33). Note that the principle *Non bis in idem* is construed in a more flexible way and encompasses a wider protection when the same acts cause different proceedings in different Europen Member States.

64 N. ZIGALÈS, "European and American Leniency Programme : Two Models Towards Convergence ?", March 2008, p. 23 (downloadable at : http://papers.ssrn.com/).

regimes, such a system would present the obvious advantage of enhancing certainty for the leniency applicants while at the same time producing economies of scale for the public powers.

VII. Reporting Individuals

Another solution to bring undertakings into compliance with antitrust laws and to increase the detection of cartels is to introduce incentives for employees to report illegal agreements. Spontaneous cooperation by insiders can happen. Disgruntled employees or non-guilty individuals who are unwilling to be disloyal to customers can voluntary disclose information about an illegal agreement. In the other cases, public powers may provide incentives for individuals to report.

If sufficient incentives are given to individuals, undertakings acting in breach of antitrust laws will no longer be in a race for leniency with their competitors only, but with their own employees as well: from the CEO to the secretary, the whistle can be blown on every level of the hierarchy scale. The larger the number of employees that are aware of the agreement, the more efficient the deterrent effect will be.

In order to induce reports, public authorities can, in application of the agency theory, exacerbate the differences of interests existing between the employees-agents and the undertaking-principal that acts in violation of the antitrust law, to stir up confessions from insiders[65]. Two levers are available for doing so : the threat of penal sanctions and the appeal of bounties.

1. Penal Sanctions

As for private actions undertaken earlier, our purpose here is not to provide an exhaustive review of the multiple issues on the criminalization of competition law. While mainly focusing on economic analysis, we will investigate the deterring effects that such a reform would produce and the relationship it should have with leniency. Therefore, interesting as they might be, we shall not approach the institutional or procedural issues of this topic[66].

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65 The agency theory is based on the assumption that "problems can occur when cooperating parties have different goals and different vision of labor" (K. EISENHARDT, "Agency Theory : An assessment and Review", *Academy of Management Review*, No 14, 1989, p. 58) Generally, the risk is that in case of asymmetric information and imperfect monitoring, either concerning what action the agent has undertaken or should undertake, the agent who is not fully controlled will pursue other objectives than the ones of the principal if he has personal incentives for doing so (for example collecting evidences of the cartel to benefit a reward).

66 We are fully aware of the technical complexities that the setting up of an efficient penal system would create. Questions on whether the EU has powers to act on penal matters have been discussed at length. Procedural questions also matter. Indeed, the deterrent effect of penal sanctions depends on the credibility of the threat of detection. It has been argued with some reason that the good results obtained by the US criminal system, thanks to the wide use of settlement procedure or of efficient investigation tools, worked within a unique procedural and institutional framework that substantially contributes to the success of the US anti-cartel enforcement. (A. P. REINDL, "How

Agency problems can also arise in a way opposite to the one already introduced: the initiative to take part in a cartel can as well be secretly taken by individuals pursuing other interests than those of the firm. Managers who (temporarily) head the undertaking may look for rapid short-term profits in order to increase their own prestige and bonuses while the fine will finally be borne by shareholders at a time when the managers will have left the firm.

This kind of situation may induce undertakings to improve the monitoring of their employees through the setting of internal disclosure and reporting mechanisms. However, it has been shown that firms have only limited possibilities to discipline their agents and many arguments make us think that corporate policies would not be efficient enough to deter collusion. First, firms with widely dispersed shareholders may be management-controlled: because of their small stakes, shareholders might not have enough incentives to try to control the managers. Second, monitoring the agents efficiently can create distrust within the firm and would generate costs with no clear benefit. Indeed, it is likely that the inspections may result in the violation becoming public, with the firm being punished for it. Furthermore, it is assessed that the harshest sanction that a firm might impose would not necessarily deter any wrongdoing. Some managers may prefer to take the risk of being fired and to have to look for a new job than to abandon the idea of rapid short-term profits, especially if their mandate is limited in time[67].

Penal sanctions might support corporate policies and would contribute towards reducing potential conflicts of interests that may arise between the firm and its managers in the direction of less collusion, while fines on companies do not always guarantee incentives for responsible individuals within the undertaking. Companies are run by persons. The criminalization of antitrust rules would present the advantage of sanctioning the right individual, who is really responsible, instead of harming shareholders and stakeholders : company liability would no longer work as a shield behind which managers can hide and collude.

Another asset often presented in support of the criminalization of competition law is that penal sanctions would constitute an ideal answer to the fact that effective deterrence involving only administrative sanctions would require impossibly high fines. Penal

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strong is the case for criminal sanctions in cartel cases ?", *op. cit.* p. 110.) The complexity of the proceedings can generate costs and time losses, therefore undermining the efficiency of leniency programs. However, these issues does not fit in the framework of our study and will not be discussed any further. On these topics, see also W. E. KOVACIC, "Competition policy and cartels : the design of remedies", in *Criminalization of Competition Law Enforcement : Economic and Legal Implications for the EU Member States*, Cheltenham, Edward Elgar, 2006, p. 41 ; D. SCHROEDER and S. HEINZ, "Request for leniency in the EU : experience and legal puzzles", in *Criminalization of Competition Law Enforcement : Economic and Legal Implications for the EU Member States*, Cheltenham, Edward Elgar, 2006, p. 163

67 W. WILS, "Does the effective enforcement of Articles 81 and 82 EC Require Not Only Fines On Undertakings But Also Individual Penalties, In Particular Imprisonment ?*", 2001 EU Competition Law and Policy Workshop/Procredings*, EUI-RSCAS, p. 18 to 20 (available at http://www.eui.eu/).

sanctions could complement administrative fines without presenting the disadvantages resulting from a too heavy financial burden[68].

Some commentators argue that penal sanctions should not be implemented against competition law infringements because, on the one hand, "undistorted competition in the internal market is not the kind of social value to be protected with enforcement instruments belonging to the sphere of criminal law", and on the other hand, because it would be unfair to do so given the complexity of EC competition rules and the "difficulty for those responsible for managing undertakings to determine whether their actions are in breach of competition rules"[69]. We disagree with these assumptions. First, we think that distortion of competition law can justify criminal sanctions. Indeed, some essentially financial infringements are punished by prison sentences in Europe, as it is sometimes the case in tax law. Moreover, several European States such as France, England, Ireland and Germany already penally punish competition law violations. Second, it is our opinion that penally punishing only the most obvious violations, those corresponding to hardcore cartels, while raising the standard of proof in antitrust cases would be a proper way to avoid undue sentencing. Moreover, even if such an approach would lengthen procedures and hence the cost of enforcement, it would also limits the risks of type-I errors, thereby reducing the fear of false convictions that could harm entrepreneurial spirit.

(a) Which sanction?

Prison sentences have been criticized for a long time: the cost to the community for maintaining prisons, and the opportunity costs resulting from the loss of productivity for the managers jailed plead for cheaper forms of punishments, such as fines. However, these last few years the trend has changed: the advantage of fines has been reduced as it is recognized that firms can remove the deterrent effect of this sanction by indemnifying their agents, while jail sentences do not present such a flaw. It is also argued that prison sentences, because of their stigmatising effect, send a strong message among the white-collar community that efficiently deter officials from colluding. The results obtained seem clear: strong criminalization policies are said to produce good results[70].

However, to the previous sanctions we prefer the director disqualification order: in case of disqualification, the convicted individual is barred from being director of a company during a specific period of time. The disqualification sanction presents the advantage of reducing future collusion through incapacity of the individual who has already shown his proclivity to collude. This kind of sanction also presents the advantage of cutting down the cost of punishment for society compared to jail sentences, while the firm will not be

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68 The consequences of too high fines on undertakings have already been discussed. See point V.3.1.

69 M. ZULEEG, "Criminal Sanctions to Be Imposed on Individuals as Enforcement Instruments in European Competition law", *2001 EU Competition Law and Policy Workshop/Procredings*, EUI-RSCAS, p. 8 (available at http://www.eui.eu/).

70 W. WILS, "Is Criminalization of EU Competition Law the Answer ?", *Amsterdam Center for Law and Economics Conference, Remedies and Sanctions in Competition Policy,* Feb. 2005, p. 37 (available at : http://papers.ssrn.com/). It is reported that some cartels that had every reason to act on the US territory gave up the idea to do so precisely because of the threat of penal sanctions S. D. HAMMOND, *Cornerstones of an Effective Leniency Program, op. cit.*, 2004.

able to completely indemnify the stamp of banishment that disqualification put on the individual. We would like to note here that the first studies available on the efficiency of such a sanction have underlined its positive effects[71].

(b) Immunity for Penal Sanctions Can Support Leniency Policy

The main interest of criminal sanctions would consist in the deterring effect it could have on cartel formation. In this perspective, combining an efficient penal system with leniency policy could produce the best results. It is very likely that a manager facing the risk of being put in jail will prefer to confess, if he is offered an opportunity to apply for penal immunity. In order to gain immunity from administrative sanction for the firm and from penal sanction for the employees, the undertaking, that is under threat of being betrayed by its own executive officers would be placed in a situation in which confession would be the best solution. Consequently, the firm that anticipates such an event would be prevented *ex ante* from collusion.

Regretfully in Europe, and despite the existence of custodial sanctions in some member States, leniency for individual is rarely offered. For example, according to Article 8 of the last Commission notice, leniency applies only "to undertakings", a term that excludes mere individuals.

2. Bounties for Individuals

The basic idea of a bounty policy would be to offer cash rewards to private individuals if they blow the whistle on collusion. These individuals would be mainly employees, but possibly also creditors, bank employees, and other stakeholders aware of the collusion.

Offering bounties to individuals would create a new source of information for public authorities, thereby enhancing the risk of detection for undertakings and increasing the expected costs. This would therefore contribute to the global deterrence system we are trying to put into place.

Moreover, a bounty scheme would force undertakings to adopt costly strategies to avoid reports, which would decrease the incentives to collude by reducing the expected benefits. Two strategies are conceivable. In order to avoid raising the suspicion of their workers, firms can adopt seemingly competitive behaviour. They can also pay bonuses to prevent their employees disclosing the secret agreement. In both cases, they would have to face additional costs that would contribute towards deterring cartel formation[72].

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71 The UK enforced such disqualification order in its Entreprise Act 2002. The first studies and reviews made seem to assess that the involved actors see disqualification order as a greater deterrent than fines. See "The deterrent effect of competition enforcement by the OFT - *S*ummary of comments to discussion document", *OFT* 963, March 2008, p.11 (available at : http://www.oft.gov.uk/advice_and_resources/resource_base/evaluation/publications) Adverse publicity is also considered as an efficient threat.

72 C. AUBERT, P. REY, and W. E. KOVACIC, "The Impact of Leniency and Whistleblowing Programs on Cartels", *op. cit.*, p.36.

As for leniency policies, the features of an efficient bounty policy have to be properly tailored. If it is sometimes alleged that a bounty scheme could possibly induce informants to deliberately fabricate false claim, or drive them to erroneously perceive the existence of cartels, consequently leading control authorities to spend time and resources in unjustified investigations, we think that these issues should not be overstated. Indeed, sanctions could punish and deter voluntary vexatious suits, while the competition authority would still be free to pursue investigations or drop them after some basic checkouts. Moreover, false leads also exist when tips are provided by mere volunteers.

Bounties are also said to possibly decrease incentives to oppose misconduct if the bounty scheme is tied to the amounts recovered by the public authorities, since informants could be induced to wait until the penalties increase before reporting. However, that adverse effect could easily be countered by granting bounty to the first informant only[73].

On this issue, Korea recently took the initiative and introduced a 'whistleblower protection and reward system' in 2002. Even if the data available are still limited, it is encouraging to note that the first results are said to be positive : the number of reports received by the authorities have substantially increased, while the information provided appears to be credible and useful[74].

3. Incentives for Individuals as Incentive for Undertakings

To our mind, penal sanctions and bounties for individuals should not be seen as substitutes, but rather as complementary tools to leniency programs. If they are well coordinated, these various schemes could have substantially positive effects in fighting cartels, while indirectly encouraging firms to comply with the law. As Scott HAAMOND, Director of US Criminal Enforcement Antitrust Division put it when discussing the effects of criminalization of competition law:

"While we do not receive individual amnesty applications at the same rate as company applications, the individual amnesty program helps prevent companies from covering up their misconduct. *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.* It works because it acts as a watchdog to ensure that companies report the conduct themselves."[75]

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73 W. E. KOVACIC, "Bounties as Inducements to Identify Cartels", *Proceedings of 2006 EU Competition Law and Policy Workshop*, EUI-RSCAS, p. 18 (available at http://www.eui.eu/).

74 N.-J. LEE, "Korea's Whistleblower Protection and Reward System", OECD *Controlling Corruption in Asia and the Pacific*, *4th Regional Anti-Corruption Conference of the ADB/OECD Anti-Corruption Initiative for Asia and the Pacific*, Kuala Lumpur, 3–5 December 2003, p. 123 (available at : http://www.oecd.org/dataoecd/28/19/38225653.pdf)

75 S. D. HAMMOND, *Cornerstones of an Effective Leniency Program, op. cit.*, 2004.

VIII. Conclusion

In line with many economists and legal observers, we believe that a radicalization of the policies fighting cartels is justified, through an increase of the incentives to report and disincentives to collude.

First, harsher administrative sanctions are needed to deter cartel formation, both directly and indirectly as this would reduce many of the adverse effects generated by mild leniency programs. In this context, the Commission has obviously demonstrated a certain degree of commitment, with increasingly high fines being imposed on cartel infringers. Yet, there is still some way to go. In this regard, a close examination of the fines imposed in the car glass cartel – which have had a resounding impact on the antitrust community – reveals that the alleged elevation of the Commission's fines policy is largely overestimated (they are partly the result of aggravating circumstances for repeated offenses).

Second, leniency schemes would be enhanced through the introduction of additional features such as rewards for firms, bounties for individuals and criminal sanctions. If well coordinated, those mechanisms can lead to a significant increase of leniency applications and, in turn, achieve an optimal degree of compliance with competition law.