Leniency Programs

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1. Introduction

A Leniency Program (LP) defines a set of rules for granting reductions in penalties to firms or individuals involved in cartels, in exchange for discontinuing participation into the practice and for providing an active cooperation in the investigation of the enforcement authorities. These schemes were first adopted in 1978 and then reformed in 1993 by the Department of Justice in the US, and are now operated in a large set of countries including the European Union.[1]

One of the main areas of intervention of antitrust policies today is the prosecution of cartels, and in particular of international cartels. Leniency programs can be viewed as a success story in this perspective, as they have allowed to reach an unprecedented effectiveness in discovering and interrupting illegal agreements among firms. The regulations adopted in the different countries share some general features, although we also observe some heterogeneity in the specific rules of the policies. It is therefore important to highlight first of all the elements in common to the main jurisdictions, and then the country specificities that allow to evaluate the possible solutions and the different degrees of success across economic areas.

In parallel with a review of the main LP regulations we shall summarize the main findings of the theoretical literature, which stresses that the details of LPs play an important role in determining their effectiveness in deterring cartels.. By cross-checking the theoretical insights, the actual practices and their effects we shall try to identify some desirable rules and mechanisms that LPs should meet.

[1] The European Commission adopted a regulation on LP's in 1996, and reformed it in 2002. In the European Union member states a LP is in use in Belgium, Cyprus, the Czech Republic, Finland, France, Germany, Hungary, Ireland, Latvia, Lithuania, Luxemburg, the Netherlands, Slovakia, Sweden and the United Kingdom. Other relevant experiences include Canada and Korea. On LP regulation in the OECD countries see OECD (2002), *Fighting Hard-Core Cartels*.

2. A review of the main regulations and practices

In this section we discuss the main elements that constitute LP regulation, comparing the solutions adopted in the main jurisdictions, mostly the US and the EU. A LP can be interpreted as a selective and conditional discount in penalties, and the more important dimensions over which it must be designed are:

a. The time when cooperation starts, and in particular the distinction between reporting before or after a formal investigation has been opened;
b. The time ordering of reporters and the distinction between first and later reporters;
c. The role of the reporters in the agreement, namely ring leaders v. minor partners;
d. The behavior of the reporter during and after the investigation;
e. The amount and design of fine reductions according to all the above elements;
f. The degree of discretionality or precommitment of the enforcer in applying the rules announced.

Moreover, there are some additional elements, that depend on the general enforcement policy and the antitrust law, that greatly influence the effectiveness of the LP. First of all, it is important to consider whether the norms in place in a given jurisdiction entail personal or only corporate liability in cartel cases. In the former situation, penalty reductions, including immunity from imprisonment, can be given to individuals and not only to companies. Secondly, the severity of fines that are allowed by the norms and applied by the authorities (in case no cooperation is provided) play a role as well, determining the overall saving in penalties that cooperation can bring about. Both elements suggest that the overall framework of fines and liability rules influences the severity of punishment in case of no reporting, making cooperation with the authorities more or less attractive.[2]

Both the US and the EU regulations admit the possibility of granting penalty discounts to firms (or individuals) reporting before or even after a formal investigation has been opened. The

[2] During 2004 the US Government has increased the maximum criminal fine for companies involved in cartel infringements from 10 to 100 million $ and the maximum imprisonment to 10 years. See M.Delrahim, Antitrust enforcement priorities and efforts towards international cooperation at the US Department of Justice, November 2004, http://www.usdoj.gov/atr/public/speeches/208479.htm

amnesty is usually more generous or complete if a company reports when the authority has not yet received any information regarding the illegal activity, but in the US partial or even full amnesty can be obtained also in case of late reporting, provided that the authority has not yet collected evidence sufficient to condemn the companies. In the case of late reporting, the authorities usually require that the information provided is very relevant, allowing to substantially improve the case.

The first reporter receives a more generous treatment in all regulations: in the US the first firm or individual that comes before the authority receives automatic full amnesty when the case has not yet been opened, and can apply for full amnesty even if the case is already underway. Immunity from fines can be given also in the EU to the first reporter both in the case of an undetected cartel, or in the case the European Commission, having already initiated inspections, has not yet reached enough evidence to establish an infringement. Partial reductions are granted in the EC 2002 regulation also to late comers, provided that their marginal contribution ("value added") in assessing the case is very relevant. Distinguishing between the first comer and the later reporters is a very common feature of LPs also in individual countries regulations, and obeys to a clear incentive to trigger a race to report once rumors of an investigation start circulating.

Another common feature of most of the regulations refers to the role that the companies applying for leniency have had in the agreement. In order to grant full immunity, the US and the EU regulations require that the applicant has not exerted any coercion on the other companies to force them joining the agreement, acting as the promoter and the leader in the cartel. Excluding these companies from amnesty is not necessarily an efficient choice from the point of view of the implementation of LPs: we can presume, in fact, that in some cases the leading companies are also those that could provide more complete information on the agreement. Fairness considerations are probably the main reason why a different treatment is prescribed for those companies.

In addition to the issues discussed so far, a LP sets strict requirements on the behavior of applicants once cooperation has started. First of all, it is always required that the companies interrupt their participation in the cartel; moreover, a complete and ongoing cooperation in the investigation is needed to qualify for leniency. When the applicant is a company, a LP requires that it ensures full and complete cooperation of its managers and executives. Moreover,

reporting has to be an official corporate act and not just the result of single individuals delivering information to the authority. Moreover, in the US, restitution of damages to injured parties is required whenever possible. Making amnesty conditional on a continuous cooperative behavior of the applicant over the entire inquiry seems important as investigations take time and can evolve in manners that are not initially predictable, requiring further information to be collected from the reporters.

Once highlighted the conditions that determine the eligibility of applicants and the further requirements on their type and behavior, a LP has to design and shape the fine reductions according to the different cases that can arise. As already mentioned, the maximum level of reduction is full immunity both in the US and in the EU. While partial reductions can be granted in the US, the regulation does not spell out explicitly the precise conditions and boundaries of such discounts. The EC regulation, instead, defines explicitly several cases of fine reductions: non imposition (100%), for instance for a first comer of an undetected cartel; very substantial (75-100%) or substantial (50-75%) reductions, that for instance can be granted to a party offering the proof of the "smoking gun"; and significant reduction (10-50%) to late comers that provide critical information and do not contest their liability. Narrowing the scope of sanctions, in particular in those jurisdictions where personal liability holds, is another dimension of leniency: granting immunity to individuals, instead of reducing fines, can be a very effective substitute to obtain cooperation of managers and executives.

It must be said, however, that even a very generous LP cannot exclude civil damages in private suits. Hence, although the fines and penalties of public enforcement can be reduced to zero, the risk of exposure to high damages in private enforcement remains, and can reduce the effectiveness of LPs. In the US, companies applying for leniency often try at the same time to reach a settlement agreement with potential private plaintiffs to avoid treble damages and reduce the burden of private suits. In 2004 the US Congress has passed a new legislation limiting the potential damages in private lawsuits to single, rather than treble, damages for companies that fully cooperate with the plaintiffs in private lawsuits on cartels.

A related issue is the protection of reporters from any retaliation or punishment of the former partners in the cartel: in the pros and cons of reporting, in fact, a company or individual has to evaluate the possible reactions to its choice of cooperation. While it is very difficult to maintain

secrecy over the identity of cooperating companies, when we consider individuals some more room for protecting the identity of witnesses may exist.

Finally, a crucial feature of a LP is the predictability of penalty reductions: when applying for leniency, a company forecasts that the case will be closed establishing the existence of illegal conduct; a more certain set of conditions that lead to granting fine reductions helps computing the benefits and costs of reporting. For instance, automatic full immunity if some precisely stated conditions are met offers a clear perspective to a firm. At the other extreme, a wide range of possible fine reductions and fuzzy definitions of eligibility requirements entail a high risk of receiving a substantial fine after having applied for leniency.

The possibility of committing to a predetermined line of policy also depends on the institutional setting of antitrust enforcement as a whole. In the EU the antitrust decisions, including those on leniency, are taken by the European Commission as a whole and not by the Directorate General for Competition, which is the Commission Directorate in charge for antitrust matters. Hence, no formal commitment to fine discounts can be taken by the officers that handle a case. Hopefully, a consistent treatment over time on cases involving leniency might help to create strong expectations in the companies on the application of the LP even in the absence of a formal commitment. Moreover, the 2002 European Commission Notice goes in this direction, by reducing as far as possible discretionality and granting certain reductions.

3. Self-reporting: some insights from the theory

Once reviewed the main features of actual LP regulation we can briefly consider the theoretical analysis of self-reporting and law enforcement, that has addressed similar issues in the tradition of the law and economics approach. Starting from Becker (1968)[3] the choice of committing an illegal act has been analyzed within the framework of rational choice, comparing the expected benefits and costs. In this approach the enforcement policy is designed in order to deter the frequency of illegal acts and to induce criminals to commit less rather than more harmful acts.

The law and economics literature has studied also the case of self-reporting considering different cases and environments, and the results obtained are very useful when evaluating the

[3] See Becker G. (1968), Crime and Punishment: an Economic Approach, *Journal of Political Economy*, 76: 169-217.

introduction and design of leniency regulation. We shall briefly consider three situations that allow to highlight the different components of LP:

- The case of an infringement by an individual causing a one shot benefit and harm;
- The case of an infringement by an individual causing on-going benefits and harm;
- The case of a group-infringements causing on-going benefits and harm.

The simplest case of an individual committing a crime that determines a one-shot benefit to him and one-shot harms to the society has been considered in Kaplow and Shavell (1994)[4]. Consider an individual that commits an act that gives him a one-shot benefit U^C while causing a one-shot harm h to the society. Individuals differ in their benefit U^C from the act. Given the maximum fine F admitted by the law and the probability of successful enforcement p, that depends for instance on the resources devoted to monitoring and prosecution, an individual will commit the crime if and only if $U^C \geq pF$, i.e. if the expected benefit from the act is larger than the expected fine. In this standard setting we can consider the introduction of a LP such that if the individual reports and cooperates in the investigation, it has to align his behavior getting a utility U^R and receives with certainty a reduced fine R. The choice to commit the crime and then report or not depends on the relative gain of the two alternatives: if $U^R - R \geq U^C - pF \geq 0$, the individual will prefer to commit the crime and then report. Since in the one-shot case all the benefits are immediately recouped, the individual has not to renounce to any gain if reporting, i.e. $U^R = U^C$. Then the individual will report after committing a crime if and only if

$$pF \geq R.$$

Kaplow and Shavell show that LPs allow to improve enforcement by saving resources: setting $R = pF$ the enforcer is able to deter the same individuals, with utility lower than the expected fine, but reaches this result inducing self-reporting and reducing the resources needed to monitor the market and prosecute the offenders. Hence, even in this very simple setting a first virtue of LPs springs out: this regulation allows to reach the same level of deterrence with lower enforcement costs.

[4] See Kaplow L. and Shavell S. (1994), Optimal Law Enforcement with Self-Reporting of Behavior, *Journal of Political Economy*, 102: 583-606.

Let us now consider the case of an act that is committed by a single individual but that produces on-going benefits (and harms) over time. In this case, the choice of reporting requires to abandon the illegal conduct with a reduction in the utility, i.e. $U^R < U^C$. The condition to induce reporting becomes now tighter and can be written as

$$pF - (U^C - U^R) \geq R.$$

In other words, if reporting requires to comply with a legal conduct, applying for leniency implies a lower penalty but also a loss in utility, that must be compensated with a more generous reduction in fines. The reduced fine R must be lower in the case of on-going benefits than in the one-shot benefit case. Generous fine discounts are therefore needed in those cases, as the prosecution of cartels, in which the agents committing a crime receive a stream of benefits (collusive profits) as long as they stick to an illegal conduct. Moreover, more severe fines F in case of no cooperation and a more effective independent prosecution activity (high p), allow to meet the condition above more easily. The possibility of imprisonment, in those jurisdictions where there exists personal liability, makes the penalty particularly severe for individuals and LPs a very appealing opportunity for managers and executives.

The third step requires to move from crimes committed by individuals to illegal acts that involve many agents, as it is the case when firms join a cartel. In this case, that has been first studied in Motta and Polo (2003),[5] an illegal act (collusion) is committed only if the conditions for coordinated behavior are met. In order to maintain the same notation, let us now define $U^C - pF$ as the discounted stream of profits from collusion when the firms join the cartel and do not report its existence to the enforcer: notice that the firms anticipate the possibility of being prosecuted and fined (with probability p). When firms decide to report, their discounted stream of profits is $U^R - R$, where $U^R < U^C$ due to antitrust compliance. In the case of group crimes, we have to further check that joining the cartel is preferred to deviating (and reporting) getting $U^D - R$. Notice that $U^D > U^R$ because the firm that cheats gets initially higher profits and then, when discovered, receives profits U^R once the cartel collapses and non collusive (legal) behavior prevails. Summing up, the crime is committed if and only if the cartel is created, i.e if

$$U^C - pF > U^D - R$$

[5] Motta M. e Polo M. (2003), Leniency Programs and Cartel Prosecution, *International Journal of industrial Organization*, 21: 347-79.

Once the cartel is formed, reporting follows if $U^R - R \geq U^C - pF$. But since $U^D > U^R$, this latter inequality never holds if the former is met. Therefore we obtain the following result: if a cartel is formed, then it is better not to report, waiting to be discovered by the authority and collecting the high collusive profits in the meanwhile. Self-reporting, that can be elicited with sufficiently low fines R when individuals are involved, does not work anymore once group crimes are considered.

The intuition of this result is simple: since the precondition for committing a group crime is the creation of a team, we need that all the participants find it more convenient to behave (illegally) according to the agreement (taking into account the expected fines) rather then cheating and forcing after one period to go back to legal conduct. In this framework, the choice to report and go back immediately to legal conduct is dominated by deviating from the cartel (and then reporting). Which, in turn, is dominated by sticking to collusion, if illegal behavior occurs.

Since LPs have proven to be very effective in cartel prosecution, we have to understand why this negative result does not always work. As a general argument, if the probability p of being inquired and condemned is not constant over time but varies, we can understand why at some point in time the cartel is formed (implying $U^C - pF > U^D - R$) but then, if the probability increases up to p', some firm cheats and reports to the authority (that requires $U^C - p'F < U^D - R$).[6]

The assessment of firms on how likely they will be monitored and prosecuted (our parameter p) can change over time for many different reasons: exogenous information shocks can occur, such that a particular industry at some point finds itself at the center of newspaper inquiries or political debate; or cartel cases in the same industry are discovered in other countries, perhaps suggesting to the national antitrust authority a closer look in the future; fired managers and executives start whistleblowing on their experience in the cartel, etc. But the first and more general case where the probability of being condemned suddenly increases occurs once the authority starts investigating the industry. At this point, in the interim phase after an investigation is opened but no infringement is still proved, the cartel is put under pressure, as shown in Motta and Polo (2003).

[6] See on this point Harrington J. (2005), Optimal Corporate Leniency Programs, mimeo.

This observation suggests that extending immunity also to reporting after a case is opened plays a crucial role in improving the effectiveness of LPs. In the same vein, limiting full immunity to the first reporter can shorten the period of stand-by, inducing earlier revelations. And maintaining the possibility of partial reductions in fines to other firms that bring value added to the investigation can fuel the prosecution activity with fresh additional evidence.

With group infringements, therefore, the enforcement activity finds a richer ground to intervene: on the one hand, by reducing the expected profits from collusion, and on the other by making the cartel more fragile to individual deviations. An interesting perspective is offered in those jurisdictions where personal liability adds to corporate liability in collusive conducts. We already noticed that, as long as single managers or executives receive a great loss from imprisonment, the fines F for them become very high and induce them more frequently to report. There is an additional effect that can play a role, that has been considered in Aubert, Rey and Kovacic (2003)[7]: in order to prevent their executives from reporting, the companies have to "buy their silence" through higher compensations and benefits, that reduce the profits from illegal behavior U^C.

Finally, in all our discussion we have implicitly assumed that the reduced fines are non-negative, that is the authority can at most grant full immunity but cannot reward the reporting firms or individuals. If we drop this assumption, LPs become more powerful and reporting can be induced more frequently. Spagnolo (2003)[8] has shown that we can reach maximum deterrence by granting leniency to the first reporter and rewarding it with the fines collected from the other participants.

Summing up, from the theoretical literature on self-reporting and law enforcement we can draw the following conclusions:

- LPs allow to save enforcement resources inducing reporting;
- LPs must be generous to induce reporting;
- Maximum reductions in fines should be given to the first reporter, to induce rush to the courtyard;
- Full immunity should be given also to first reporters that apply after an investigation is opened;

[7] See Aubert C., Rey P. and Kovacic W. (2003), The Impact of Leniency Programs on Cartels, *mimeo*.
[8] See Spagnolo G. (2003), Divide et Impera: Optimal Deterrente Mechanisms Against Cartels (and Organized Crime), *mimeo*.

- Personal liability and criminal sanctions make LPs very effective;
- High fines for non reporting firms and an effective ability to run independent prosecution increase the incentives to report;
- Rewards for reporting companies or individuals would make LPs very effective.

We can now briefly consider the recent experience in the adoption of LPs in the main jurisdictions.

4. The recent experience with Leniency Programs

After the pioneering introduction of Leniency Programs in the US and the very effective reform in 1993, the European Commission has approved a regulation in 1996 and reformed it in 2002. Moreover, many other countries have adopted similar schemes. The first, indirect signal that LPs can improve the effectiveness of prosecution against cartels can be drawn from this process.

However, it is difficult to assess more directly the effects of LPs on enforcement and which characteristics of the regulation play the major role. The empirical analysis, in fact, suffers of a serious problem of self-selection: since we do not observe all the cartels but only those that are detected, it is hard to identify whether overall deterrence has been improved due to LPs and which types of cartels are more likely to be discovered or reported. An increase in the number of cartels successfully prosecuted might be due to an overall increase in the level of collusion in the economy, that allows to open more cases, or instead being the consequence of more effective mechanisms of enforcement. However, we can compare the evidence on cartel prosecution in different periods, where LPs were not adopted or after their introduction (or reform). When strong differences can be observed, or by controlling for other variables related to incentives to collude, we may try to some extent to understand if the prosecution activity has changed with LPs.

Keeping these caveats in mind, there are some recent processes that can shed some light on the usefulness of LPs. The first piece of evidence comes from the reform in the US regulation. The 1978 Leniency Program involved only leniency for reporting before an investigation had been opened, together with additional restrictions and a certain degree of discretion in the application of the rules. This regime proved to be too restrictive and unappealing to the companies,

producing an average of one application per year. Extending the application of leniency to late reporters, together with introducing penalty reductions for individuals, is among the main innovations of the very successful reform adopted in 1993: after these changes an average of 20 applications per year has been recorded, half of which occurring after the case had been opened.[9] With these figures, the sharp increase in the rate of application can be hardly explained by a parallel increase in the number of (undetected and unreported) cartels; hence, we can conclude that the new regulation adopted in 1993 in the US is by far more effective than the previous one. We cannot, however, assess on a purely empirical ground which of the many innovations adopted plays a major role in this result.

The more recent experience of the European regulation has been studied looking at different effects of LP regulation[10] by comparing cases in the period 1990-96, before the adoption of LP regulation, and cartels detected or reported after 1996. First, LPs help reaching a deeper and more complete assessment of collusive agreements: looking at the level of fines before the discounts are applied, that should be correlated to the amount of evidence collected, we observe (after controlling for other determinants of fines) an increase after the adoption of the 1996 regulation. However, the data do not confirm a shortening of the investigations comparing cartel cases with or without reporting: although the assessment of facts may be facilitated by reporting, there are other phases of the process, as the setting of penalties, that require more time. The evidence on the deterrence effect of LPs is much weaker in the analysis of the European experience due to our inability to observe the total number of cartels, including those that are undetected.

Hence, while the empirical evidence allows to establish certain correlations between LP rules, rate of application, types of applicants and information collected, the long run deterrence effect of LPs remains the more difficult element to assess.

5. Conclusions

Our review of the LP regulations adopted in the US and the EU, of the theoretical insights and of the evidence coming from the enforcement activity, suggests that there are some crucial features that are desirable in a Leniency Program:

[9] See Spratling G. (1998), The Corporate Leniency Policy: Answers to Recurring Questions, Spring ABA Meeting (Antitrust section)
[10] See Brenner S. (2005), An Empirical Study of the European Corporate Leniency Program, *mimeo*.

- The rules adopted should be as predictable and automatic as possible, in order to facilitate the potential applicants in assessing the consequences of reporting;
- Generous discounts to the first reporter should be given both before and after an investigation has been launched;
- Partial fine discounts should be granted also to late applicants when they provide sufficient value added to the investigation;
- When a judicial system involves personal liability in cartel cases, leniency should be extended to individuals as well as to corporations;
- Restrictions on private damages' requests should be set for firms that report evidence;
- The identity of reporters should be kept secret as far as possible;
- Rewards, in particular to individuals who report, might be considered.

We are confident that leniency programs designed according to these rule may become an important instrument in the prosecution activity of antitrust authorities against cartels.