

# LENIENCY PROGRAMS IN ANTITRUST: PRACTICE VS THEORY



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## “Leniency Plus” and its Potential Minuses

By Tara L. Reinhart



## The Future of Cartel Deterrence and Detection

By Rosa M. Abrantes-Metz & Albert D. Metz



## Leniency Will Remain an Essential Part of The EU’s Cartel Enforcement Toolkit

By Alexandros Papanikolaou



## The U.S. Corporate Leniency Policy: It is Time for a Renaissance

By Donald C. Klawiter



## Why Acpera isn’t Working and How to Fix it

By John M. Taladay



## Implications of Regional Cooperation on Country Specific Corporate Leniency Policies

By Mfundo Ngobese



## 25 Years of Leniency Programs: A Turning Point in Cartel Prosecution

By Joan-Ramon Borrell, Carmen García, Juan Luis Jiménez & José Manuel Ordóñez de Haro



## Leniency Carrots and Cartel Sticks – A Practitioners’ View on Recent Trends and Challenges Presented by The EU Leniency Program

By Christian Ritz & Lorenz Marx



## Leniency Programs in Antitrust: Practice vs Theory

By Evgenia Motchenkova & Giancarlo Spagnolo



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## I. INTRODUCTION

Antitrust policy instruments (such as monetary fines, leniency programs, and private damages) are designed and implemented in order to deter collusion, protect consumers and compensate the harm caused by the price-fixing activities of cartel members.

There has been much discussion by both academics and policy makers over the most appropriate design and combination of public antitrust penalties, leniency programs and private damages to impose on firms infringing antitrust law.<sup>2</sup> Academics and policy makers also admit that legal, financial, and informational restrictions imply that the first-best design of these instruments according to theory may neither be feasible nor optimal.<sup>3</sup> In practice, public antitrust fines, private damages, as well as leniency programs, have to be designed given the existing constraints and legal restrictions. As has been discussed by several academics this can sometimes cause additional distortions and imperfections in the form of even higher cartel prices, more stable cartels and more profitable collusive strategies.<sup>4</sup>

Indeed, there are several policy features in practice, both in the U.S. and the EU, which contradict predictions of theoretical models and seem to be sub-optimal. In particular, both the U.S. and the EU systems feature distortive fines based on revenues and insufficient legal ceilings.<sup>5</sup> The EU system, in addition to the above-mentioned problematic aspects,

2 The theoretical literature analyzing most appropriate design and combination of antitrust policy instruments began around 2000 with contributions by Massimo Motta & Michele Polo (2003), “Leniency programs and cartel prosecution,” *International Journal of Industrial Organization* 21, 347-379; Patrick Rey (2003), “Towards a Theory of Competition Policy.” In *Advances in Economics and Econometrics: Theory and Applications*, Cambridge University Press, 82–132; and Giancarlo Spagnolo (2004), “Optimal Leniency Programs,” Centre for Economic Policy Research, Discussion paper series, 4840. Other key contributions include Joe Harrington (2008), “Optimal corporate leniency programs,” *The Journal of Industrial Economics* LVI(2), 215-246, Chen, Z. & P. Rey (2013), “On the design of leniency programs,” *Journal of Law and Economics* 56, 917 -957. See also ICN Report (2008), *Setting Fines for Cartels in ICN Jurisdictions*, Report to the 7<sup>th</sup> Annual Conference, Kyoto.

3 See, Harrington, J. (2010), “Comment on Antitrust Sanctions,” *Competition Policy International* 6, 41-51, Katsoulacos, Y., E. Motchenkova & D. Ulph (2015), “Penalizing Cartels: The Case for Basing Penalties on Price Overcharge,” *International Journal of Industrial Organization*, 42: 70-80 and Houbia, H., E. Motchenkova & Q. Wen (2018), “Legal Principles in Antitrust Enforcement,” *The Scandinavian Journal of Economics*, 120: 859-893, or Spagnolo, G. & C. Marvaio (2018), “Cartels and leniency: Taking stock of what we learnt,” in: *Handbook of Game Theory and Industrial Organization*. Ch. 29.

4 See for example, Bageri, V., Y. Katsoulacos & G. Spagnolo (2013), “The Distortive Effects of Antitrust Fines Based on Revenue,” *The Economic Journal*, 123 (572), 545-557; Chen, Z. & P. Rey (2013), “On the design of leniency programs,” *Journal of Law and Economics* 56, 917-957; Houbia, H., E. Motchenkova & Q. Wen (2015), “The Effects of Leniency on Cartel Pricing,” *The B.E. Journal of Theoretical Economics*, 15(2), 351-389; or Bos, I., S. Davies, J. Harrington & P.L. Ormosi (2018), “Does enforcement deter cartels? A tale of two tails,” *International Journal of Industrial Organization*, 59, 372-405.

5 See e.g. Schinkel M.P. (2007), “Effective Cartel Enforcement in Europe,” *World Competition* 30 (4), 539-572; or Buccirossi, P. & G. Spagnolo (2007), “Optimal Fines in the Era of Whistle blowers - Should Price Fixers Still Go to Prison?,” in *The Political Economy of Antitrust*, by V. Goshal & J. Stennek (Eds.), Elsevier: Amsterdam.

features multiple fine reductions<sup>6</sup> and weak protection from follow-on private damage claims in cases of application for leniency. Furthermore, the information provided in leniency statements is “protected” by the EU 2014 Damages Directive from being used in follow-on private damage claims litigation.<sup>7</sup>

The disadvantages of sub-optimally designed policy instruments are numerous. For example, poorly designed monetary fines based on revenue may induce cartels that are not deterred to set higher prices than those that would be set in the absence of antitrust enforcement.<sup>8</sup> Poorly designed leniency programs may in turn enhance *ex-ante* collusion due to reduced expected fines. Likewise, giving fine reductions to several self-reporting firms reduces their incentive to “race to the courthouse,” which undermines the effectiveness of the leniency policy.<sup>9</sup> Sub-optimal procedures for recovering private damages, where leniency applicants are in no way protected from follow-on private suits, make leniency applications unattractive. Using the right method of damage calculation is also important. If damages are wrongly calculated, they can amplify the adverse price effects of wrongly designed revenue-based fines.<sup>10</sup>

In this piece we zoom into the issues related to the design of leniency programs and damage claims and the differences between the regimes implemented in the EU and U.S. We provide a systematic overview of costs and benefits for both designs and what the theory and empirical/experimental literature says about them. We identify a number of “sub-optimal” features in the design of the existing leniency programs, which may hinder the effectiveness of antitrust enforcement. We compare the two structures to the design derived from the theoretical literature and show that the EU design could be improved by modifying a number of features such as multiple fine reductions, limits to disclosure, and weak protection for immunity recipients from liability to follow-on private damage claims.

## II. CURRENT RULES FOR LENIENCY PROGRAMS AND DAMAGE CLAIMS IN THE U.S. AND EU

### A. The U.S. Legal Regime

The first Corporate Leniency Program in the U.S. was introduced in 1978, and modified in 1993. Currently, the U.S. leniency program allows for full amnesty for the first reporter and no fine reductions for subsequent reporters.<sup>11</sup>

Furthermore, in the U.S. victims of antitrust law violations are entitled to treble damages and cartel members are jointly and severally liable for these damages. Also, claimants in damages actions can obtain all relevant documents, including those contained in leniency statements.

In order to prevent the incentives to apply for leniency from being undermined by the possibility of follow-on private enforcement, the U.S. Antitrust Criminal Penalty Enhancement and Reform Act of 2004 removes joint and several liability from firms granted immunity under the leniency program and in addition reduces the liability of that firm to single damages. The Antitrust Criminal Penalty Enhancement and Reform Act of 2004 did not change the rules concerning the disclosure of relevant documents, so that claimants in a civil action still can rely on the evidence contained in leniency statements.

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6 The U.S. leniency program allows only complete immunity for the first reporting firm and no reductions for subsequent applicants. On the other hand, in the U.S. plea bargaining does something similar to the EU multiple reductions. See <http://www.usdoj.gov/aatr/public/guidelines/0091.htm> or DOJ (1993), U.S. corporate leniency policy.

7 In the U.S. Leniency recipient pay single damages instead of triple damages paid by those firm which did not get leniency and are not jointly liable. Information in LP statements is available for private damages litigation.

8 See Bageri, V., Y. Katsoulacos & G. Spagnolo (2013), “The Distortive Effects of Antitrust Fines Based on Revenue,” *The Economic Journal*, 123 (572), 545-557.

9 See, for example, Spagnolo, G. (2004), “Optimal Leniency Programs,” Centre for Economic Policy Research, Discussion paper series, 4840 and Harrington, J. (2008), “Optimal corporate leniency programs,” *The Journal of Industrial Economics* LVI(2), 215-246.

10 As shown in Katsoulacos, Y., E. Motchenkova & D. Ulph (2018), “Cartel penalties and private damage actions: An integrated assessment,” *mimeo*, paper presented at CRESSE 2018 conference.

11 See OECD Report (2002) “Fighting Hard-Core Cartels: Harm, Effective Sanctions and Leniency Programs” or US corporate leniency policy rules at <http://www.usdoj.gov/aatr/public/guidelines/0091.htm>.

Finally, the Antitrust Division of the U.S. Department of Justice has a long history of settling cartel cases with plea agreements. Ann O'Brien (2008)<sup>12</sup> stresses that over 90 percent of the hundreds of defendants charged with criminal cartel offenses during the last 20 years have admitted to the conduct and entered into plea agreements with the Division. Scott Hammond (2006) characterizes the U.S. model of negotiated plea agreements as “a Good Deal With Benefits For All.”<sup>13</sup>

## B. The EU Legal Regime

In Europe, the first leniency programs were introduced in 1996. The modified leniency program adopted by the EC in 2002 (and revised in 2006) gives complete immunity from fines to firms that were first to submit evidence about the cartel to the antitrust authority, and partial immunity to the subsequent applicants.<sup>14</sup> The Commission encourages companies that are involved in a cartel to come forward with evidence to help the Commission detect cartels and build its case (Leniency Notice (OJ C298, 8.12.2006, p.17). The first company to provide sufficient evidence of a cartel to allow the Commission to pursue the case can receive full immunity from fines; the next applicant can receive reductions of up to 50 percent on the fine that would otherwise be imposed. 20-30 percent reductions are available for the third applicant and up to 20 percent for others.<sup>15</sup>

The EU 2014 Directive on private damages (Directive 2014/104/EU) contains provisions aimed at facilitating private actions and compensation for victims of EU competition law infringements.<sup>16</sup> With regards to liability, the Directive provides “*that an immunity recipient is jointly and severally liable as follows: (a) to its direct or indirect purchasers or providers; and (b) to other injured parties only where full compensation cannot be obtained from the other undertakings that were involved in the same infringement of competition law*” (Art. 11(4)).<sup>17</sup> Which implies that leniency applicants are not protected from private damage liability to the extent that they are in the U.S.

The 2014 Directive also changes the rules concerning the disclosure of relevant documents. It states that national courts cannot at any time order a party or third party to disclose neither leniency statements, nor settlement submissions. As a result, the information in leniency statements becomes unavailable for claimants in private damages actions.

The system of settlements was introduced in the EU in June 2008 (Regulation 622/2008). It enables the EC to close investigation faster by eliminating or reducing several procedural steps. Firms that admit liability and waive these procedural rights receive a discount of 10 percent on the final fine imposed.

Table 1 gives a summary of the legal rules described above

The U.S. regime	The EU regime
100% immunity for first applicant, no reduction for subsequent applicants (apart from plea bargains)	100% fine reduction for first applicant, up to 50% reduction for second, 20-30% reduction for third and up to 20% reduction for others
Immunity recipients pay single damages instead of triple	Leniency applicants are not protected from private damage liability

<sup>12</sup> See Ann O'Brien (2008), Cartel Settlements in the U.S. and EU: Similarities, Differences & Remaining Questions, available at <https://www.justice.gov/atr/file/519681/download>.

<sup>13</sup> See Scott D. Hammond, “The U.S. Model of Negotiated Plea Agreements: A Good Deal With Benefits For All,” address before the OECD Competition Committee, Working Party No. 3 (October 17, 2006) (hereinafter “The U.S. Model of Negotiated Plea Agreements”), available at <http://www.usdoj.gov/atr/public/speeches/219332.pdf>.

<sup>14</sup> Commission Notice on Immunity from Fines and Reduction of Fines in Cartel Cases, Official Journal of the European Commission, C 45, 2002, 3–5.

<sup>15</sup> Commission Notice on Immunity from Fines and Reduction of Fines in Cartel Cases, Official Journal of the European Commission, C 298, 2006, 17–22.

<sup>16</sup> Directive of the European Parliament and of the Council on certain rules governing actions for damages under national law for infringements of the competition law provisions of the Member States and of the European Union. *Official Journal of the European Union*, Ch. PE-CONS 80/14; RC 8, 2013/0185 (COD).

<sup>17</sup> See Buccrossi, P., Marvao & C., Spagnolo, G. (2015), “Leniency and damages,” *CEPR Working Paper DP 10682*.

Joint and several liability removed for immunity recipients	Partial joint and several liability, where full compensation cannot be obtained from other undertakings
Information in leniency statements is available for private damages	Information in leniency statements is “secreted”
Plea bargaining system	Settlements: 10% reduction

### III. THEORY AND EMPIRICAL EVIDENCE

#### A. Number of Fine Reductions, Exploitability, and Litigation Costs

The majority of theoretical contributions argue in favor of single reduction system (the U.S. system). The theoretical literature generally finds that restricting leniency to the first informant is strictly better than granting leniency to all or many informants.

The aim of introducing a leniency program is to destabilize the cartel. Under leniency programs, firms who broke the law are allowed to report their illegal activities in exchange for reduced fines. While leniency programs introduce additional incentives for the firms to break the cartel agreement, they also broaden the range of cartel strategies. Specifically, the cartel may exploit these programs if they are too generous. As discussed in Spagnolo (2004) and Chen & Rey (2013), this may manifest itself in the form of a “collude and report” strategy that generates adverse effects.<sup>18</sup>

These contributions show that allowing more than one firm to benefit from amnesty makes a “collude and report” strategy more attractive, which reduces the effectiveness of the leniency program. Leniency programs thus perform less well in the absence of a first-informant-wins rule. Houba, Motchenkova & Wen (2015) extend this result and show that granting full immunity to single-reporting firms achieves the largest reduction in the maximal cartel price.<sup>19</sup> These results may explain why the original version of the U.S. leniency program did not contribute much to defeating cartels before the 1993 revision, which introduced the first-informant rule. This is also in line with previous insights discussed by Giancarlo Spagnolo (2004) and Joe Harrington (2008). Furthermore, Giancarlo Spagnolo shows that the “first informant rule” maximizes deterrence through strategic risk and the fear of being betrayed by somebody else,<sup>20</sup> and Joe Harrington shows that the rule generates a “race to the courthouse effect” in the case of investigations, which increases the expected sanctions inflicted on cartel members.<sup>21</sup>

Empirical work by Miller (2009), based on DOJ data of between 1985 and 2005, shows that the pattern of cartel discoveries around the revision in 1993 of the U.S. leniency program is consistent with enhanced cartel detection and deterrence capabilities.<sup>22</sup> By contrast, using European data Brenner (2009) shows that the introduction of a leniency policy in Europe in 1996 (without a first-informant rule and full leniency) had no effect on deterrence.<sup>23</sup>

The arguments in favor of the EU structure, with its multiple fine reductions, have been articulated in Blatter et al. (2018) and Charistos & Constantatos (2016),<sup>24</sup> who point out that in the setting where firms possess asymmetric evidence, information provided by a single firm may not

<sup>18</sup> Chen, Z. & P. Rey (2013), “On the design of leniency programs,” *Journal of Law and Economics* 56, 917 -957.

<sup>19</sup> Houba, H., E. Motchenkova & Q. Wen (2015), “The Effects of Leniency on Cartel Pricing,” *The B.E. Journal of Theoretical Economics*, 15(2), 351-389.

<sup>20</sup> Spagnolo, G. (2004), “Optimal Leniency Programs,” Centre for Economic Policy Research, Discussion paper series, 4840. Giancarlo Spagnolo also acknowledges that in a richer environment when the information held by the first applicant is not sufficient to lead investigations and convict the whole cartel, then partial leniency to a second applicant could be optimal.

<sup>21</sup> Harrington, J. (2008), “Optimal corporate leniency programs,” *The Journal of Industrial Economics* LVI(2), 215-246.

<sup>22</sup> Miller, N. (2009), “Strategic leniency and cartel enforcement,” *American Economic Review* 99, 750-768.

<sup>23</sup> Brenner, S. (2009), “An empirical study of the European corporate leniency program,” *International Journal of Industrial Organization* 27(6), 639-45.

<sup>24</sup> Blatter, M., Emons, W. & Sticher, S. (2018), “Optimal leniency programs when firms have cumulative and asymmetric evidence,” *Review of Industrial Organization* 52, 403-427 and Charistos, K. & C. Constantatos (2016), “On Leniency and Markers in Antitrust: how many informants are enough?,” Discussion Paper No. 2/2016, University of Macedonia. See also OECD, 2012, Leniency for subsequent applicants. Policy roundtable report.

be sufficient to convict the entire cartel, while obtaining additional information from other applicants can increase the likelihood of convicting the entire cartel. Theoretical analysis presented in these papers shows support for the European practice of allowing multiple informants to benefit from lenient treatment. Similar opinions have been articulated in the OECD 2012 Policy roundtable report on “Leniency for subsequent applicants.” The problem then is how many subsequent applicants obtain leniency and whether too many of them obtain leniency before the whole cartel is convicted. The large reduction in fines can make such conviction counterproductive: firstly, because it would be ineffective from the point of view of deterrence and, secondly, because it would be distortive due to the way how fines are currently designed.

Another related issue is that litigation costs are obviously higher under the U.S. structure compared to the EU. So, a plausible explanation for keeping the EU structure could be that allowing for lenient treatment of several applicants helps save on litigation and enforcement costs, as otherwise CA would have to investigate (carry out dawn raids) and prosecute (take to court) every cartel participant except of the one applying for leniency and admitting their wrongdoing. Having several other cartel participants admitting wrongdoing in exchange for partial fine reductions allows for savings in the above-mentioned costs. However, this reduces the amount of fines paid by the cartel in a situation of already very weak sanctions compared to the U.S. (no jail time, no treble damages). If this further reduces deterrence, it will increase the number of cartels, the distortions in the economy, the number of cartel cases to prosecute, and thereby again enforcement costs. A better way to reduce prosecution costs is to deter cartels, so that there will be very few of them to prosecute.

One may argue that the plea bargaining system in the U.S., in a sense, compensates for a lack of information due to the absence of subsequent immunity recipients and helps to reduce litigation costs. But one should not forget that a similar system of settlements was introduced in the EU in June 2008 (Regulation 622/2008). It enables the competition authority to close investigation faster by eliminating or reducing several procedural steps. The obvious benefit of settlements is related to the conservation of economic resources, i.e. saving time and costs for the CA.<sup>25</sup> However, an important argument against both European settlements and the U.S. plea bargaining system is that they can reduce expected fines and deterrence.<sup>26</sup> Catarina Marvao & Giancarlo Spagnolo (2018) also point out that multiple leniency reductions in the EU could be used as a substitute for plea bargaining.<sup>27</sup>

In addition, the same authors (Marvao & Spagnolo, 2018) document the “leniency inflation” phenomenon in the EU. They estimate that the average leniency reductions granted per year increased over the period between 1998-2014, reaching 60 percent higher in some years. This may indicate a trend towards an excessive use of leniency in the EU as a substitute for investigative efforts. CA authorities have to be cautious as this may not be just an innocent substitution. In fact, in a recent paper Marvao & Spagnolo, 2018 stress that:

While the information obtained from the first or second leniency applicant may help increase sanctions for the whole cartel, further leniency does not. Excessive leniency reduces expected sanctions and thus, potentially, deterrence. . . Ideally, one and only one firm should be granted leniency in exchange for important information to be used against other cartel members. Every additional firm receiving leniency tends to further reduce overall sanctions and – most importantly – reduce the push to rush and report first, as firms may think that they do not need to be first to “run” to the antitrust authority.

Saving enforcement costs is not optimal if it comes with a substantial loss of deterrence, as that would then increase the number of cartels, the number of cases, and with them, again, prosecution costs, not to mention increasing the size of distortions and the number of victims.<sup>28</sup>

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25 See e.g. Landes, W. (1971), “An Economic Analysis of the Courts,” *Journal of Law and Economics*, 14, 61-108.

26 See e.g. Miceli, T. J. (1996), “Plea Bargaining and Deterrence: An Institutional Approach,” *European Journal of Law and Economics*, 3, 249-264 and Ascione & Motta (2010), “Settlements in cartel cases,” *MPRA Paper No. 24416*, posted September 22, 2010.

27 See Marvao, C. & G. Spagnolo (2018), “Should price-fixers (finally) go to prison? – leniency inflation, Damages directive and Criminalization in the EU,” *mimeo*. Based on Data from Marvao (2015b) and Connor (2008), Marvao & Spagnolo (2018) estimate that in the U.S., pleas account for 30 to 35 percent of the fine reduction in over 90 percent of cases. In the EU, the average LP reduction (excluding the first reporting firm) is 30 percent, which corresponds to 296 fines reductions in a total of 708 fines imposed between in 1998-2014. In the cases where settlements were also in place, this number increases to 32 percent, in addition to a 10 percent fine reduction from the settlement. Although the numbers are comparable, it is unlikely that this is the intention of the EU legislator.

28 Note also that if instead extending leniency to many or all cartel members would not reduce deterrence, for example because sanctions are already too small to produce deterrence then the best solution to save enforcement costs would be to give leniency to everybody, that is, not prosecuting anybody and saving the full costs of the competition authority.

## B. Interaction with Private Damages

In 2014 European Commission introduced the Directive on private damages (Directive 2014/104/EU). The Directive aims at improving deterrence by facilitating damage claims by cartel victims, which are added to antitrust fines in terms of expected sanctions. The way the directive is implemented is different from the legal rules on damages in the U.S. Firstly, in the EU damages are limited to the harm caused, while the U.S. has treble damages. Secondly, in the EU the information provided by the leniency applicant is “secreted” (i.e. leniency statements are not available for civil law suits) so cannot be used by the claimants in the damage action to prove the existence and effects of the infringement. Combined with the EU practice of multiple leniency applications this implies that there will be very little information available for damage claimants. This is not the case in the US, where the evidence contained in leniency statements is available for claimants. Finally, in the EU leniency applicants are not protected from future civil liability. In the U.S. there is partial protection as leniency recipients have to pay only single damages, instead of the usual triple.

The recent legal debate stresses the conflict between Leniency Programs and the new Damages directive in Europe. It is argued by several scholars<sup>29</sup> that private action for damages may jeopardize leniency programs, since a leniency application increases the risk of a successful damage claim by the cartel’s victims. Moreover, leniency applicants who do not challenge the decision in court become the preferred target of the damages action and due to joint and several liability may end up paying even higher damages than those in the absence of leniency application. This poses a problem for a firm requesting immunity as any benefits from reduced fine may be outweighed by the additional private liability. This reduces (or may even remove) the incentives to apply for leniency in the first place. In the view of this legal debate it may seem logical that the 2014 EU Directive tries to protect the effectiveness of a leniency program by restricting access to information contained in leniency statements in subsequent actions for damages. But is this policy optimal?

The theory states that this policy is suboptimal, as it hinders both deterrence and the ability of victims to obtain compensation. Furthermore, it increases private litigation costs. Recent theoretical work by Buccirosi, Marvao & Spagnolo (2015) shows that “protecting” the information in leniency statements from being available for follow-on private damages actions is not necessary to preserve the effectiveness of a leniency program.<sup>30</sup> Their analysis shows that a legal regime in which the immunity recipient’s liability is minimized (even eliminated), and which grants victims full access to all files held by the competition authority, including leniency statements (as it is done in the U.S.), maximizes the effectiveness of public antitrust enforcement in terms of deterrence. The ability of victims to obtain damages compensation is also maximized in this regime, provided that other cartel members (those who did not receive immunity) are able to jointly cover the private damages caused by the cartel. Since the cartellists are jointly and severally liable, victims who have access to all the information can claim their loss from other cartel members (non-lenieny applicants).

Their results also help compare the EU and U.S. systems. Buccirosi, Marvao & Spagnolo (2015) show that the U.S. system is superior to the EU system. The U.S. design does not limit the information available to the victims, and so does not increase private litigation costs and also maximizes deterrence. Further, it protects immunity recipients from follow-on civil liability to a larger extent compared to the EU 2014 Directive as it removes joint and several liability from a firm granted immunity and immunity recipients pay lower damages compared to a situation with no leniency (only single damages instead of triple). This stronger protection for immunity recipients enhances incentives to deviate and apply for such programs (compared to those under the EU structure). While the 2014 EU Directive aims to protect the effectiveness of a leniency program by restricting access to leniency statements in subsequent actions for damages, the move actually harms the effectiveness of leniency programs in terms of deterrence.

As we discussed above, under the EU’s design and its multiple opportunities for fine reductions, “collude and report” strategies can become very attractive. Combining this with the EU phenomenon of “leniency inflation” (when almost all cartel members can get some partial immunity and all the leniency statements are “secreted”) can result in a situation where it becomes very hard for claimants to recover damages, making exploitative “collude and report” strategies even more attractive. Likewise, protection for immunity recipients from follow-on civil liability is almost absent in the EU, which undermines the effectiveness of leniency programs in the first place. Modifying the design of the EU leniency programs (moving towards the U.S. structure characterized by the “first-informant rule,” availability of information and partial protection from civil liability) could not only help to enhance deterrence and consumer benefits from LPs in Europe, but also help to avoid the conflict between private damage actions and leniency programs, the idea of which culminated in Europe with the introduction of the 2014 Damages Directive.

29 See e.g. Cauffman, C. (2011), “The interaction of leniency programs and actions for damages,” *The Competition Law Review* 7 (2), 181–220; Komninos, A. (2011), “Relationship between public and private enforcement: quod dei deo, quod caesaris caesari,” 16th Annual EU Competition Law and Policy Workshop, European University Institute, Florence, 17-18 June 2011, p. 18; MacCulloch, A. & B. Wardhaugh (2012), “The baby and the bathwater - the relationship in competition law between private enforcement, criminal penalties, and leniency policy,” *Working paper*; or Buccirosi, P., Marvao, C. & Spagnolo, G. (2015), “Leniency and damages,” *CEPR Working Paper* DP 10682.

30 Buccirosi, P. C. Marvao & G. Spagnolo (2015), “Leniency and damages,” *CEPR Working Paper* DP 10682.

## IV. SUMMARY OF COSTS AND BENEFITS

In Section 3 we identified several criteria on the basis of which the benefits and costs of various designs can be assessed. These criteria are related to Cartel stability (race to the courthouse); Welfare implications in terms of deterrence and pricing; Level of private litigation costs and availability of information for victims in private law suits; Amount of evidence obtained by competition authority through leniency applications; Level of public (competition authority) litigation costs.

Table 2 summarizes the performance of both (U.S. and EU) designs on each of the criteria.

Criteria	Performance U.S. design	Performance EU design
Incentives to race to the court house	High	Low
Cartel deterrence	High	Low
Avoiding high cartel overcharges	High	Low
Availability of information for victims' compensation	High	Low
Private litigation costs	Low	High
Public litigation costs	High	Low
Evidence obtained through leniency applications	Low	High

There are numerous reasons (legal, cultural, historical) which may explain why the design of the EU and U.S. leniency programs differ. In this article we discussed the welfare and deterrence implications of both designs as well as the costs associated with each. The analysis implies that the U.S. system performs better in terms of deterrence and welfare enhancement, as well as in terms of increasing victims' ability to obtain compensation. The EU system allows for more evidence to be obtained through multiple leniency applications, which increases the likelihood of conviction of the entire cartel and allows for savings on investigation and litigation costs required by each conviction.

The question is whether obtaining additional evidence and saving on litigation costs is so much more important that it outweighs the four other arguments (race to the courthouse, welfare implications due to improved deterrence, pricing, and higher damages recovered)? Remember that if saving litigation costs per conviction by awarding leniency reduces sanctions and deterrence, it will increase the number of cartels, the number of cases, and thereby the total amount of prosecution costs, besides undermining the very reason why we do prosecute cartels: to prevent their formation.

It is probably an empirical matter to estimate whether the costs saved on information collection and enforcement or litigation activities on behalf of the competition authority are higher than improvements in consumer welfare achieved due to higher deterrence and consequently fewer cartels, lower prices set by existing cartels, and higher compensation obtained by consumers in private law suits. But let us keep in mind that there are no criminal sanctions nor triple damages in the EU, so there is a risk that extended leniency will undermine deterrence completely, in which case the optimal solution would be to save all prosecution costs by not prosecuting any cartel, and forgoing the cost of operating a cartel division within the competition authority.



## V. HOW TO ENHANCE THE EFFECTIVENESS OF ANTI-CARTEL ENFORCEMENT

The above overview of theoretical and empirical contributions shows that the preferable combination of leniency programs, fines and damages claims would have the following features:

- (i) It allows only the first applicant to get 100 percent immunity. As a rule, subsequent applicants get no reductions in fines. Exceptionally, a limited number (the fewer the better) of additional applicants may receive a fine reduction if the information provided in addition to the first applicant is essential to convict other cartel members.
- (ii) Information in leniency statements is available for private damages
- (iii) The immunity recipient's liability for private damages is eliminated, while other cartel members remain jointly and severally liable for the entire cartel damages.

There are, unfortunately, substantial gaps between this design and the way the main antitrust policy instruments are designed in practice. And it is not clear whether policy makers see the need to close these gaps.

Nevertheless, the above overview shows that current knowledge in antitrust economics and competition policy provides a number of recommendations on how each of the main instruments (leniency programs, fines, damages procedure) can be modified in order to minimize the corresponding costs and distortions. Several contributions also analyze the interaction between different antitrust policy instruments, and propose modifications which would allow their joint performance to be enhanced.<sup>31</sup> The analysis in the above contributions allows us to conclude that these main dimensions of antitrust policy can be harmonized in a way which would reinforce each other's positive effects, while reducing negative effects if properly and jointly designed.

In particular, the U.S. design for leniency programs and damages seems to be closer to the design implied by theoretical and empirical studies. Yet a modification, which would provide more protection from follow-on private damages to leniency recipients, could be an improvement. While the EU design seems less advanced, the effectiveness of its leniency programs in terms of improved deterrence, lower cartel prices and higher victims' compensation can be enhanced if:

- (i) only the first reporting firm is granted leniency, and this is strictly obeyed. This will enhance incentives to "race to the courthouse" and further destabilize cartels. At the moment it is not clear what prevents the EC from implementing this policy.
- (ii) leniency programs, fines and rules for damages (victims' compensation) are designed in such a way that possibilities for exploitability are minimized. Namely, avoiding too generous fine reductions for many applicants, making information in leniency statements public, or designing both full and reduced fines in a way which does not make collusive strategies more attractive and does not lead to upward price distortions.
- (iii) if sufficient protection from follow-on private damage claims is promised to leniency applicants. In the U.S. it is guaranteed by allowing claim for only single damages from the leniency recipients, as opposed to triple damages from non-cooperating firms. Furthermore, according to Buccirosi, Marvao & Spagnolo (2015) the optimal solution is to limit as far as possible (or eliminate) the damage liability of the immunity recipient. Their proposed regime is close to what is done in the U.S. and it is practically the same regime that has been valid in Hungary since 2011. There, an immunity recipient is only liable to pay his (direct only) damages in the very unlikely event that all other cartel members go bankrupt.

In this paper we provide an overview the welfare and deterrence implications of the EU and U.S. design of the leniency programs and damage claims as well as costs associated with each of the designs. The analysis indicates that there are substantial gaps between the design implied by economic theory and the way the main antitrust policy instruments are implemented in practice. We argue that the US system performs better in terms of deterrence and welfare criteria as well as in terms of increasing victims' ability to obtain compensation. The EU system allows prosecutors to obtain more evidence through multiple leniency applications not disclosed to victims. The EU design may increase the likelihood of conviction of the entire cartel and helps to save on investigation and litigation costs, at the price of lower fines and much lower expected damages, which casts doubt on the possible deterrence effects.

<sup>31</sup> The recent examples are Buccirosi, P., Marvao, C. & G. Spagnolo (2015), "Leniency and damages," *CEPR Working Paper* DP 10682; Katsoulacos, Y., E. Motchenkova & D. Ulph (2018), "Cartel penalties and private damage actions: An integrated assessment," *mimeo, paper presented at CRESSE 2018 conference*.

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