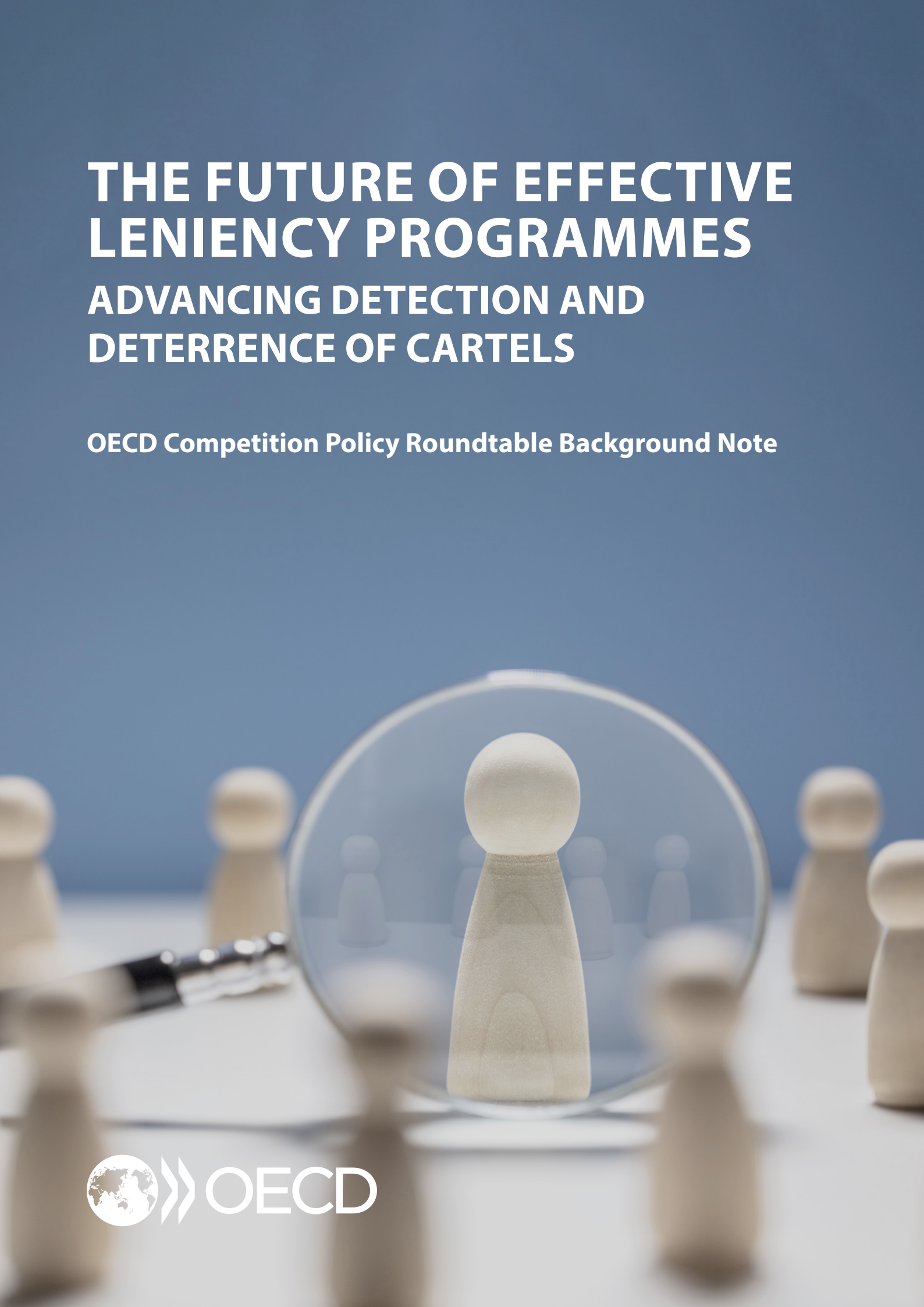
THE FUTURE OF EFFECTIVE LENIENCY PROGRAMMES

ADVANCING DETECTION AND DETERRENCE OF CARTELS

OECD Competition Policy Roundtable Background Note



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Foreword

Leniency programmes are a powerful detection tool for competition authorities. Over the period 2015-2021, the number of leniency applications in OECD jurisdictions dropped by 58% and the same trend can be observed across most regions. This Note explores whether and to what extent the drop in leniency applications may constitute a threat to cartel enforcement and the possible reasons behind the declining trends. It also investigates how complementary detection tools such as cartel screens or whistleblowing positively affect the effectiveness of leniency programmes. It concludes that a wide range of reactive and proactive detection tools (thus avoiding overreliance on leniency), coupled with severe sanctions, and consistency with other competition instruments and non-competition policies are key to ensure effective cartel detection and enforcement.

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1 Introduction

Leniency programmes are a powerful tool for competition authorities, as they do not only enhance cartel deterrence, by breaking internal trust and destabilising agreements, but they also ease their prosecution, bringing anticompetitive secret conducts and evidence to the authorities' attention. Broad consensus exists around the factors that ensure the success of leniency programmes, to which some authors refer as the "6Cs criteria" (Volpin and Chokesuwattanaskul, 2023[1]). These include (i) clarity; (ii) commitment from both sides (i.e., authorities' limited discretion and firm's duty of full co-operation); (iii) credibility (in terms of credible threat of detection irrespective of leniency); (iv) confidentiality; (v) co-operation and co-ordination between authorities; and (vi) context and culture.

Despite widespread awareness of these factors and several reforms to implement them, the number of leniency applications has significantly declined between 2015 and 2021. OECD jurisdictions saw the number of leniency applications drop by 58%, and this trend is also confirmed when looking more closely at specific regions (Asia-Pacific, Europe, Latin America and Caribbean, Middle East and Africa). Most recently, some jurisdictions have experienced a resurgence in leniency applications, but it is still too early to determine whether this is an actual reverse of the declining trend, or a non-statistically significant one-off event.

Although the number of leniency applications is a highly imperfect proxy to measure the success of leniency programmes, competition authorities' (heavy) reliance on leniency applications raises the question as to whether and to what extent the observed declining trend constitutes a threat for cartel enforcement.

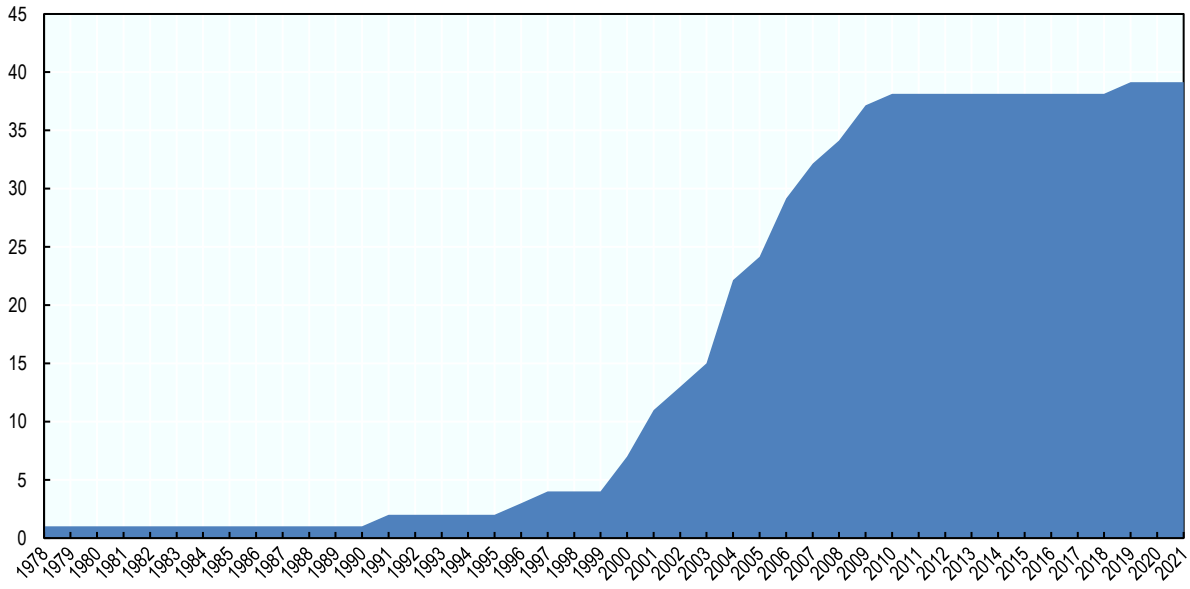
This Background Note aims to answer three questions:

- Has the effectiveness of leniency programmes decreased since 2015 and to what extent the drop in leniency applications constitutes a threat to cartel enforcement? (**Section 2**)
- What are the possible reasons behind the declining trends in leniency applications? (**Section 3**)
- How can complementary detection tools (such as cartel screens or whistleblowing) positively affect the effectiveness of leniency programmes and compensate for the decline in leniency applications? (**Section 4**).

2 The past and present of leniency: recent trends

An increasing number of jurisdictions have a leniency programme in place today (Figure 2.1).

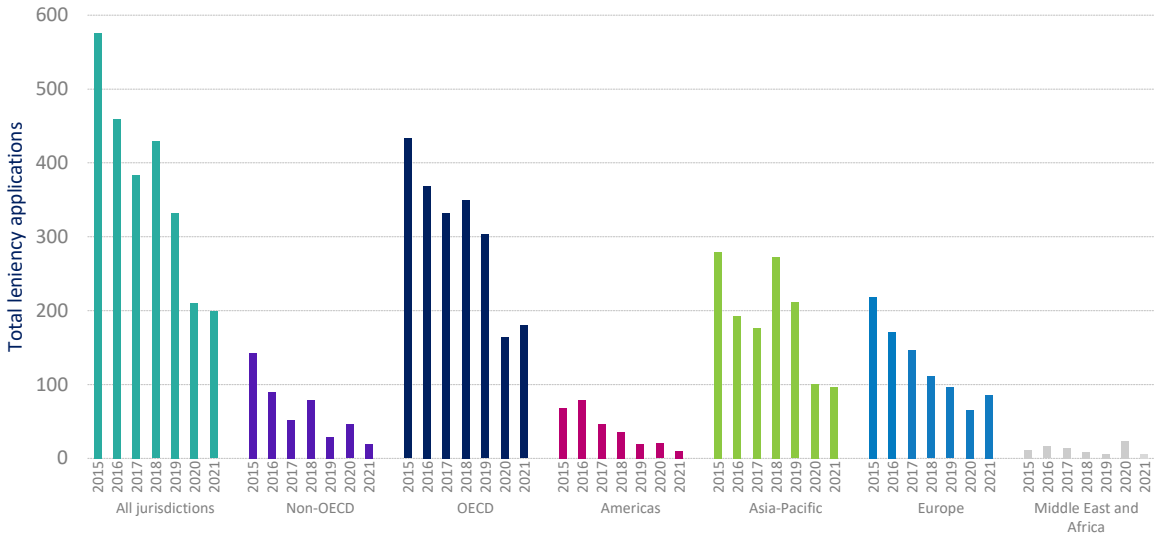
Figure 2.1. Number of OECD jurisdictions with leniency programme (1978 – 2021)



Source: (OECD, 2022[2]).

Yet, the number of leniency applications at the global level showed a **sharp decline** between 2015 and 2021. Figure 2.2 below shows the total number of leniency applications in 51 jurisdictions since 2015, grouped either by region or by OECD membership.

Figure 2.2. Total number of leniency applications, by region (2015-2021)



Note: This figure includes 51 jurisdictions that provided complete leniency applications data for the OECD CompStats database for all seven years and have a leniency programme in force. The number of applications includes those filed by first immunity applicants and subsequent leniency applicants. As not all jurisdictions have provided their data, the figure might underestimate the number of leniency applications by region.
Source: (OECD, 2022[2])

The global trend ("all jurisdictions") shows a decline by 65% over a period of seven years. OECD jurisdictions saw the number of leniency applications drop by 58%. This trend is also confirmed when looking more closely at specific regions. Europe experienced an overall 60% decline. The Asia-Pacific region observed a less smooth decline, with an overall drop of 65% but significant spike increases in 2018 and 2019, mainly driven by a single jurisdiction. The Latin America and Caribbean (LAC) region also experienced a drop of 66% since 2015, although out of 13 jurisdictions with a leniency programme, only three had at least one application per year, indicating more generally an underuse of leniency programmes in the region (OECD, 2022[3]). As regards jurisdictions that had at least one leniency application and reported data for the OECD CompStats database (OECD, 2022[2]) for the whole period (thus excluding jurisdictions with a programme in force but no applications), 82% of them had a lower number of leniency applications in 2021 than in 2015.

It is worth noting that the number of leniency applications was already declining before the Covid-19 onset, with an average number of applications 42% lower in 2019 than in 2015, although the pandemic may have reinforced the trend by affecting detection and investigations (Meester, Garcia Pabon and Westrik, 2023[4]). Most recently, some jurisdictions (e.g., Brazil, EU, Italy) have experienced a resurgence in leniency applications (OECD, 2023[5]), although it is still too early to determine whether this is an actual reverse of the declining trend, or a non-statistically significant one-off event.

The data on leniency applications by regions are helpful to understand the overall trends *across* jurisdictions but do not provide any insights on their distribution *within* jurisdictions. When looking at data from the OECD ComptStats database about leniency applications in OECD countries (OECD, 2022[2]), it appears that only four jurisdictions have not received any leniency applications at all since 2015, while six have been able to benefit from more than 100 leniency applications over the same period. **70% of OECD countries, however, have received fewer than 50 applications in total**.

Subject to the caveats below on the use of the number of applications as a proxy to measure the effectiveness of leniency programmes, this shows two important general points:

- The number of OECD jurisdictions whose leniency programme has not brought any applications at all is very limited.
- However, **the dispersion of leniency applications is significant across OECD jurisdictions**, with only few countries being able to benefit from a very large number of leniency applications.

The data in Figure 2.2 clearly show a declining trend, around the world and across regions (although there are some limited exceptions at national level, as mentioned above). However, based on such trends, it would be unfair to conclude that leniency programmes are not an effective detection tool. Ideally, the success of a leniency programme should be measured not only in light of the overall number of leniency applications but also based on the extent to which it contributes to opening and facilitating investigations, enhancing deterrence and lowering cartel formation. Faced with the difficulties to quantify such effects and lacking publicly available data on the number of leniency applications for each cartel decision, **the number of leniency applications is an easier but imperfect proxy to measure the success of the leniency programme**. It suffices to consider two aspects:

- the extent to which competition authorities can rely on leniency applications also depends on the **quality** of the latter, in particular the amount and quality of the information provided. If well substantiated, even a single leniency application can change the dynamics of a cartel and the subsequent investigations, although such quality parameters are not captured by the data above.
- While the number of leniency applications has undoubtedly declined, this only tells part of the story. As the proportional decline in leniency applications has been larger than the corresponding drop in the number of cartel decisions (OECD, 2022[2]), theoretically this could suggest that leniency programmes (alongside other detection tools) have led to effective enforcement, which in turn has increased deterrence effects and reduced the pool of existing undetected cartels. Yet, this conclusion seems overly optimistic and is difficult to sustain based on the data, as it is not possible to see the other side of the coin on how many cartels still remain undetected. In other words, while the data show a decline in leniency applications, it is difficult to measure with certainty whether the **proportion of undetected cartels** has also decreased thanks to successful leniency programmes. Although based on strong assumptions, some studies conducted both in the EU and the US seem to suggest that the ratio of undetected cartels is high, and it has been relatively stable over the last decades, thus contradicting the (optimistic) argument whereby leniency applications have dropped because the proportion of undetected cartels has also decreased.[1]

With these two caveats in mind, it is worth investigating whether the decline in the number of leniency applications may constitute an issue for competition authorities, considering that the latter usually dispose of different proactive and reactive detection tools.

Leniency programmes are a powerful tool for competition authorities, as they not only enhance cartel deterrence, by destabilising cartels, but they also ease their prosecution by authorities, bringing anticompetitive secret conducts and evidence to their attention. Therefore, some jurisdictions (e.g., EU, UK and Japan) have **heavily relied on leniency applicants** to detect and investigate cartels and a significant number of their cases benefited from this tool (Allen & Overy, 2020[6]).

This holds true also when looking at some specific jurisdictions **over a long period**. For instance, (Ysewyn and Kahmann, 2018[7]) conducted a review of the European Commission's cartel decisions issued between 2006 (when the Commission's Leniency Notice became applicable) and 2017 and found that, with two exceptions,[2] 100% of investigations were sourced from immunity applicants. Similarly, in Spain, between 2010 (when the first leniency applications were received) and 2022, out of 86 cartel decisions, 36 (42%) were based on leniency applications, to which eight additional decisions should be added as they

originated from information on other offences gathered during inspections carried out following the filing of a leniency application (CNMC, 2022, pp. 3-4[8]).

In a survey conducted among OECD member States in 2017, the majority of respondents considered their leniency programme as their **most effective tool** for detecting cartels, with 57% deeming it "very effective" and 7% as "effective" (OECD, 2019[9]). The same survey showed that the percentage of cartel cases detected through leniency applications ranged from 45-55% for countries like Canada, Germany, Korea and New Zealand to 80% in the EU.

The heavy reliance on leniency for cartel investigations does not necessarily imply that non-leniency tools are not important. On the one hand, it is plausible that the introduction of leniency programmes leads authorities to **shifting their attention from non-leniency to leniency cases**, as these are less resource intensive (e.g., in terms of detection efforts) and do not require any proactive initiative. On the other hand, however, this does not correspondingly and necessarily imply that enforcement based on other detection tools has become weaker. Some authors explain indeed that the drop in non-leniency cases could also be the result of a successful leniency programme that has led to fewer cartels (Harrington and Chang, 2015, p. 419[10]). The interplay with non-leniency tools is an important factor to consider, as it also affects the success of the leniency programme by influencing firms' incentives to come forward (see sub-section 3.2 below).

Yet, in light of competition authorities' heavy reliance on leniency applications and although other detection tools could be strong enough to compensate their fall, the sharp decline in their number may constitute a **serious threat** for cartel enforcement and this may require investments in other detection tools (see section 4 below) as well as possible reforms of leniency programmes, in order to counter this declining trend and ensure their continuous effectiveness (see section 3 below).

Before moving to these topics, however, it is worth enquiring on the underlying reasons that may explain the fall in leniency applications.

3 Possible reasons behind the declining trends in leniency applications

Section 2above showed that most jurisdictions around the world are experiencing a decline in the number of leniency applications. Although this is does not inevitably put cartel enforcement in danger, to the extent that other detection tools are sufficiently effective to compensate for the fall, authorities' heavy reliance on leniency applications means that, at least in the short term, the drop in leniency applications could constitute an issue for cartel detection and investigations.

This section explores possible reasons for the decline and what jurisdictions have put in place to reverse this trend. It is worth highlighting at the outset that none of these explanations, taken individually, is sufficiently significant to determine by itself a drop in leniency applications**. It is rather the sum of them, also depending on each jurisdiction's specificities, that affects the trends**.

3.1. The impact of time on leniency programmes

Leniency programmes are a powerful detection tool. However, when they are first introduced, it may take time before the authority starts receiving leniency applications and is able to rely on its programme as a valuable complement to other detection tools. This is because both authorities and businesses need to learn how to handle such a new instrument and balance pros and cons stemming from several factors even beyond the leniency programme itself. Once the authority starts relying on its leniency programme, **the effectiveness of the latter is not stable over time** and may in fact vary for a number of reasons, most importantly because the success of the leniency programme may lead to shifting authorities' limited resources away from non-leniency detection tools.

Businesses find ways to avoid cartel members' defection. Their incentives and disincentives to come forward vary according to authorities' detection rate over time, their perception of the likelihood of being sanctioned, or changes in the broader legal framework.

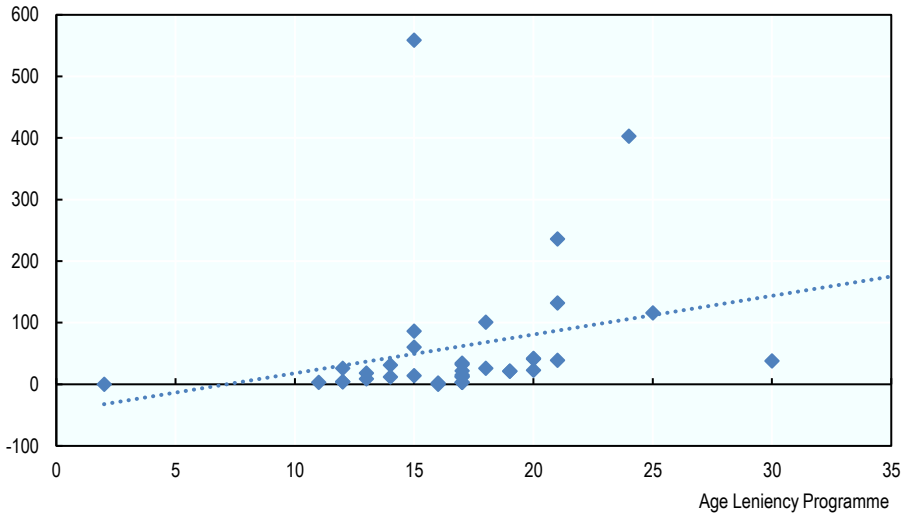
On the long term, the success of the leniency programme may result in more cartel decisions being based on leniency applications and prompt authorities to shift their limited resources to leniency cases rather than investing in non-leniency detection tools. Over the long term, by reducing the threat of detection, this may affect firms' incentives to apply for leniency.

Is it possible to identify, across jurisdictions, a common life cycle of leniency programmes based on available data?

Data from OECD *Competition Trends* seem to reflect a correlation between the number of leniency applications and the age of the leniency programme, showing that, once introduced, leniency programmes may take some time before becoming a valuable complement to other detection tools.

Figure 3.1 below is drawn from data reported by OECD jurisdictions and shows the number of applications as a function of the age of the leniency programme.

Figure 3.1. Number of applications according to age of the leniency programme in OECD jurisdictions



Note: The figure includes data on the number of leniency applications reported by OECD countries for the period 2015-2021.
Source: (OECD, 2022[2]) (OECD, 2022[3]).

With caution due to the limited sample of jurisdictions and data, the number of leniency applications seems to be low when the programme is first introduced, then it increases between 12 and 24 years after its introduction before decreasing again. More specifically, the average age of the programme is between 14 and 17 years for the top-20 jurisdictions in terms of number of leniency applications, while it is on average 6 years old for the least active leniency programmes (taking the number of applications as an imperfect proxy for effectiveness). This holds true even when looking more closely at specific regions. For example, in LAC, the number of leniency applications is higher for jurisdictions with an over 10-years-old leniency programme, while programmes younger than 10 years typically have a relatively low number (less than five) applications (OECD, 2022, p. 28[3]).

A possible hypothetical explanation could be that leniency programmes bring a significant number of leniency applications when, after some time has elapsed from their introduction, both authorities and businesses have acquired sufficient knowledge on their functioning and confidence in the way the authority handles applications and information. When they are first introduced, they **add indeed a new powerful detection instrument to an authority's toolbox, without immediately affecting the resources devoted to and the effectiveness of other detection tools**. This last aspect is important, as the incentives to apply for leniency also depend on the risks that firms face to be found guilty and fined if they do not come forward and co-operate. In other words, the effectiveness of the leniency programme (taking the number of applications as an imperfect proxy to measure it) also depends on the **effectiveness of other detection tools**, which, in the short term, is not immediately affected when the leniency programme is introduced.

By contrast, in the longer term, the situation may change. After some time has elapsed, leniency applications may decrease due to a number of different reasons.

One possible explanation is that, in light of the success of the programme, authorities may rely more and more on them for their investigations, thus causing a shift in their limited resources dedicated to non-

leniency/proactive detection tools (Harrington and Chang, 2012[11]). If, as a result, the overall perceived likelihood of being detected and fined decreases, this may negatively affect the incentives for firms to come forward and apply for leniency.

An alternative (optimistic) explanation could be that, in the long run, leniency programmes increase deterrence, thus leading to fewer cartels. As regards this point, (Miller, 2009[12]) investigated the question of the impact of leniency programmes on cartel detection and deterrence, by looking at the trends of leniency applications and cartels over a long period of implementation of the US Department of Justice's (DOJ) corporate leniency programme. Based on information from the US decisional practice over a 20-year span, he examined whether the number of cartel discoveries increases immediately after the introduction of leniency programmes. He found that leniency led to an **immediate increase in cartel discoveries**, and this is consistent with enhanced detection capabilities brought by this reactive tool. In order to check the robustness of this conclusion, he controlled for potentially confounding influences, namely the countercyclical nature of the DoJ's caseload, the Antitrust Division's budget allocation and the fines it imposed and found that the result is still robust when accounting for these variables.

This finding seems to be consistent with the above-mentioned hypothesis that when leniency programmes are introduced, they (more or less) immediately enhance detection capabilities, without instantaneously affecting the resources devoted to and the effectiveness of other detection tools, such as *ex officio* investigations or cartel screens. Therefore, the overall result on detection capabilities is positive.

What happens in the longer term? (Miller, 2009[12]) tested whether the number of cartel discoveries due to leniency decreases after a certain period. He found that, following the post-leniency spike in discoveries, the values quickly fell to pre-leniency levels. In his view, this is consistent with enhanced deterrence, indicating that the leniency programme may have achieved the intended effects of lowering cartel formation. However, this finding is subject to an important caveat, which makes it less easy to generalise as a robust conclusion. This theoretical model draws inferences about the pool of undiscovered cartels based on information on discovered cartels (which is an imperfect measurement, as it assumes that discovered cartels are somehow representative of the overall number of anticompetitive agreements).

Thus, the second finding concerning the long-term scenario needs to be investigated further. In other words, based on available data, is it possible to affirm (and under which conditions) that, in the long term, leniency programmes result in a lower number of applications as they enhance deterrence and lower cartel formation rates?

(Harrington and Chang, 2015[10]) have investigated this question, examining whether leniency programmes are successful in increasing deterrence and reducing the number of cartels, which could theoretically explain the decrease in the number of leniency applications found by (Miller, 2009[12]) and also revealed in Figure 2.2. Their research finds that **leniency programmes lower indeed the cartel rate if non-leniency enforcement remains unaffected**. By contrast, when the intensity of non-leniency enforcement factored in (endogenized), a leniency programme can either decrease or increase the cartel rate, depending on the extent to which leniency applications shift authorities' resources away from pursuing non-leniency cases. Since the decision to come forward depends on a number of factors, including the overall likely risk of being caught and convicted, **non-leniency enforcement is key** to increasing incentives to apply for leniency (see section 3.2 below).

A further reason explaining the changes in the number of applications over time could lie in the **trial-and-error process** which is intrinsic to the development of leniency programmes. Once authorities have introduced their programmes, they need to observe their effectiveness and whether any adjustments are needed, to take into account cultural aspects, change in the incentives to come forward, amendments to the broader legal framework, and international practice and trends.[3] These adjustments may require some time before they become effective and bring actual results, thus affecting the number of leniency applications in the long term.

In sum, looking at the data from *Competition Trends* and based on the referenced literature, it seems that there exists a positive correlation between the age of the leniency programme and the number of applications, at least up to a certain time. When they are introduced, they give authorities a powerful detection tool without immediately affecting other detection instruments in the toolbox. The time-lapse between their introduction and the surge of leniency applications may depend on several factors, including businesses' knowledge of and trust in the programme as well as the competition authority's credibility and enforcement rate. The literature seems less conclusive when examining the reasons whereby the number of leniency applications decline in the longer run. Potential though non-exhaustive reasons explaining the changes in the number of applications could include the increase in the deterrence effect, resulting in fewer cartels (Miller, 2009[12]), the trial-and-error process leading to adjustments of the programme over time, or the authorities' overreliance on leniency to the detriment of other detection tools, which affects the probability of firms getting caught and thus their incentives to apply for immunity (Harrington and Chang, 2015[10]).

3.2. General deterrence and overreliance on leniency

Firms' incentives to apply for leniency depend, among other things, on their perception of the threat of being caught and heavily sanctioned. This, in turn, depends on several factors, including

- The perceived reputation of the authority as a strong enforcer; and
- The effectiveness of non-leniency detection tools, such as cartel screens or other methods of ex officio investigations.

The **perceived reputation of the authority as a strong independent enforcer** is difficult to measure, as it stems not only from its enforcement rate (e.g., the number of cartel decisions, the number and amount of imposed fines) but also from the perception of its strength and credibility within the broader institutional framework. Building such a reputation requires time and broad support over time, both from the legislator as well as from society, although time as such is not sufficient to establish a reputation, as it may well be the case that long-established authorities still are weak enforcers with little support. Yet, the age of the agency seems to be a possible (despite highly imperfect) proxy to measure the extent to which the authority is well established within the broader institutional framework. Without any intention to draw direct causality, when looking at the number of applications and the age of competition authorities, it appears that authorities start receiving applications once they are more than 12-14 years old and this increases alongside the age of the authority.

The second aspect mentioned above which influences firms' incentives to apply for leniency is related to the **likelihood that they will be caught and fined even when no leniency application is filed**.

Competition authorities have limited budgetary and human resources. What occurs regarding leniency (e.g., how many leniency applications the authority receives) has a significant impact on the allocation of such resources, namely how many prosecutorial staff or budget are allocated to pursuing cases with leniency applications as opposed to cases where no leniency applicant is present. Since authorities do not control the number of leniency applications they receive, there is a **risk that a successful leniency programme, which brings numerous applications, shifts authorities' limited resources away from other non-leniency detection instruments** (e.g., ex officio investigations).

Studies show that having a leniency programme in an environment where leniency cases take up comparable resources to that of non-leniency (and penalties are low) will result in more cartel formation as it increases the authority's caseload (by bringing additional cases to its attention without the need to immediately add new resources, unlike non-leniency detection tools that require pro-active staff) and weakens non-leniency enforcement by crowding out non-leniency cases (Harrington and Chang, 2012[11]). In other words, the leniency programme can become "*bourreau de soi même"* (**victim of its own success**)

and, in the long term, reduce its own effectiveness by comparatively reducing the resources devoted to non-leniency detection tools.

In sum, authorities' **overreliance on leniency** to the detriment of other detection tools may produce the unwarranted consequence of reducing overall deterrence and in turn negatively affecting the effectiveness of the leniency programme. By contrast, the authority's reputation as a strong independent enforcer, which effectively detects cartels and imposes significant fines even when there is no leniency applicant, will positively reflect on the effectiveness of the leniency programme.

3.3. The impact of private enforcement

Private enforcement enables victims of anticompetitive practices to bring claims before courts, in order to obtain compensation for the damages they suffered. Such actions, however, may negatively affect the incentives of cartelists to apply for immunity from administrative and criminal fines in two ways, namely by raising the risk of disclosure of business information that can be relied on in private litigation and by increasing the overall amount of their liability under public and private enforcement.

The main issue for leniency applicants is that, though immune from fines imposed under public enforcement, they incur the **risk that courts eventually order them to pay damages**. This risk is even more significant for them compared to other cartelists, since leniency applicants typically have little interest in appealing the competition authority's decision, which therefore becomes final against them earlier than for appealing parties, making them the first and easiest target for all damages for which they are jointly and severally liable with other cartelists. (ICN, 2019, p. 9[13]). (OECD, 2015[14]) noted that if the exposure to easier damage claims is the direct consequence of entering the leniency programme, this will affect the incentives of potential leniency applicants in the first place. For these reasons, legislators tend to **limit the civil liability of leniency applicants**. For instance, in the EU, leniency applicants are not jointly and severally liable with other cartelists and will only be responsible for the harm caused to their direct or indirect purchasers or to other injured parties to the extent that other undertakings involved in the infringement cannot fully compensate the victims.[4] Similarly, in the US the Antitrust Criminal Penalty Enhancement and Reform Act of 2004 limits liability of leniency applicants to single (actual), rather than treble, damage payments. More recently, Brazil exempted leniency applicants from the obligation to pay double damages introduced for cartel offenders in 2022,[5] and Colombia excluded joint liability of successful leniency applicants, thus limiting the latters' liability to the proportional damages caused by their participation in the cartel.[6]

Even irrespective of the applicants' final overall liability, private damages pose a (though less serious) risk that contractors acting as plaintiffs obtain **disclosure of leniency statements**. Claimants can indeed request courts to order disclosure of leniency documents (which can be helpful to assess responsibilities and quantify the harm and the overcharges). The risk stems from the fact that leniency statements may include not only information about infringements by other cartelists, but also by the applicants themselves, alongside their internal discussions, business and pricing strategies, management decisions, supply networks, etc. In other words, plaintiffs may opportunistically use private damages claims as a way to obtain disclosure of leniency statements and thus gain insights into firms' behaviour and strategies.

The OECD *Recommendation concerning Effective Action against Hard Core Cartels* of 2019 recommends **protection of leniency statements from disclosure**, as a way to ensure the right balance between public and private enforcement and preserve the incentives to apply for leniency. Based on these considerations, some legislators deny access to leniency statements for the purposes of damages actions.

Box 3.1. Protecting leniency statements and confidential information from disclosure before courts

To avoid interference with ongoing investigations and ensure continued willingness to submit evidence, including self-incriminating documents, in leniency applications, Article 6(6) of the EU Damages Directive exempts leniency statements from disclosure before courts dealing with private damage claims.

Article 5(1) of the EU Damages Directive establishes further limits on disclosure of confidential information besides leniency statements. On 20 July 2020, the EC adopted a Communication on the protection of confidential information by national courts in private enforcement proceedings, identifying measures for protecting such information, when courts deal with disclosure requests. Measures include redactions, confidentiality rings, the appointment of experts, and in camera hearings. Although it is not binding, the Communication provides courts with some guidance to strike the right balance between the right to access relevant evidence and the need to protect confidential information (Strouvali & Pantopoulou, 2021).

Source: Article 6(6) of the Directive 2014/104/EU of the European Parliament and of the Council of 26 November 2014 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 (hereinafter, "EU Damages Directive"); ICN. (2019). Development of Private Enforcement of Competition Law in ICN Jurisdictions - Subgroup 2 of the Cartel Working Group; Communication from the Commission Communication on the protection of confidential information by national courts in proceedings for the private enforcement of EU competition law, OJ C 242, 22.7.2020, p. 1–17, Strouvali, K., & Pantopoulou, E. (2021). Balancing Disclosure and the Protection of Confidential Information in Private Enforcement Proceedings: The Commission's Communication to National Courts. Journal of European Competition Law & Practice

Yet, while this provides leniency applicants with some safeguards as to the use of their leniency statements against them, it does not protect them in full. Although access to leniency statements may be forbidden as such, competition authorities enjoy some discretion as to what they consider covered by professional or business secrecy and what can be published in the final decision. Furthermore, after a certain period, which is shorter than the limitation periods for bringing damages claims, information is usually regarded as historical and does not remain secret or confidential, unless immunity applicants prove otherwise.[7] Finally, some legislators have adopted a different model and made the choice of not limiting disclosure of documents, enabling plaintiffs to access the authority's full file including information provided under the leniency programme.[8]

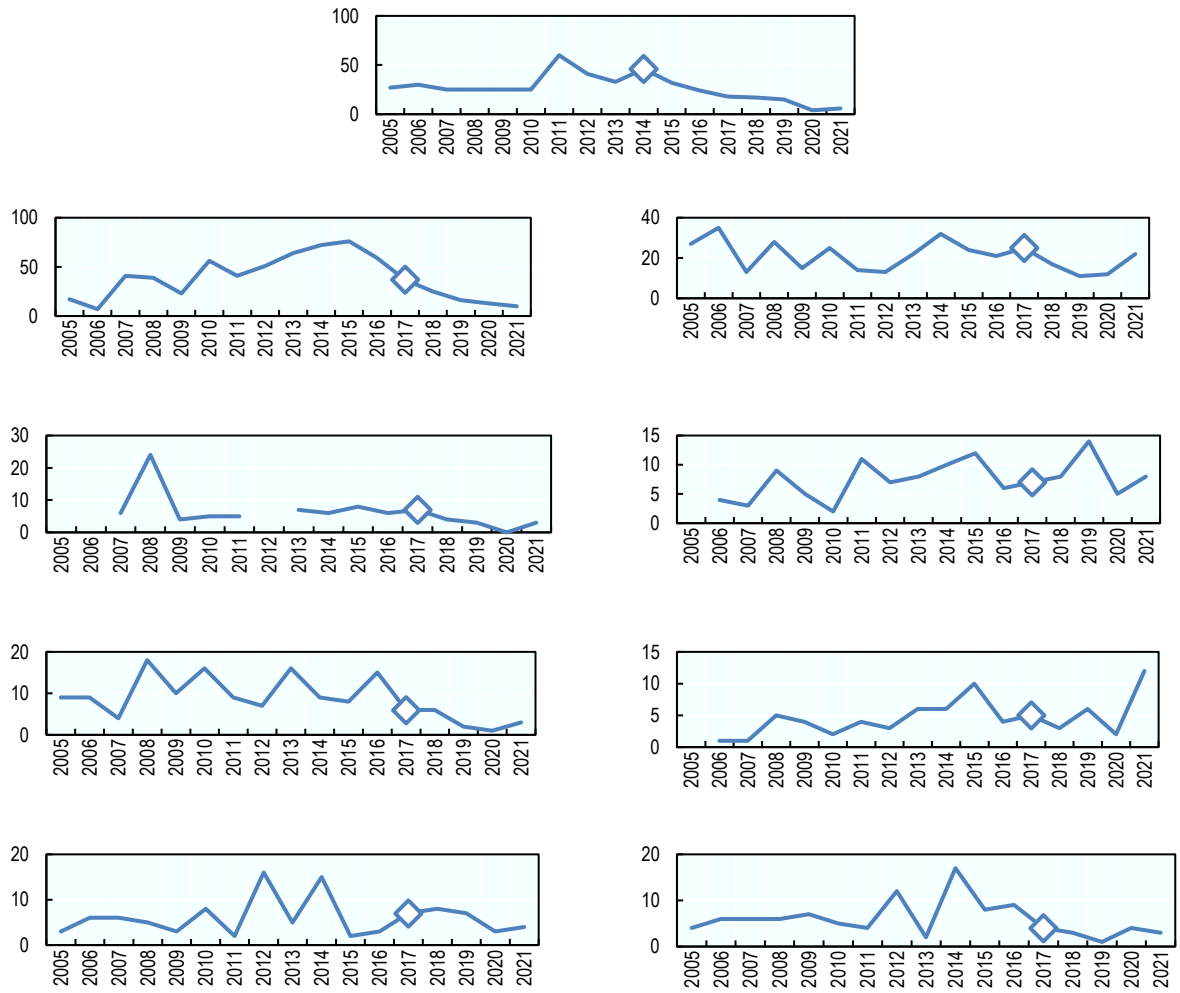
In light on the above-mentioned potential risks incurred by leniency applicants and the approaches adopted by legislators, it seems *prima facie* plausible to assume that cartelists take potential litigation costs and private enforcement damages into account when deciding whether to apply for leniency. Even when private damages are limited for leniency applicants (e.g., exclusion of joint and several liability, limitation to single rather than treble damages), they may still be costly and involve long and complex litigation.

Do empirical studies confirm the hypothesis that the implementation of private enforcement negatively affects the effectiveness of leniency programmes (measured in terms of leniency applications or cartel detection and deterrence)**?** When looking at the top-20 jurisdictions in (OECD, 2022[2]) in terms of number of leniency applications, 11 show a clear overall declining trend in the period 2007-2020, while 16 show a decreasing trend between 2015 and 2020.

Figure 3.2 shows the evolution of leniency applications in nine jurisdictions, namely those that have more recently introduced private enforcement among the top-20 jurisdictions in terms of leniency applications. The dot in the figure indicates the year of introduction of private enforcement.

Figure 3.2. Evolution of leniency applications in selected jurisdictions

Top-20 jurisdictions (in terms of leniency applications) that recently introduced private damages (all EU).



Source: (OECD, 2022, p. 48[2])

After the introduction of private enforcement, most of these nine jurisdictions experienced a declining trend in the number of leniency applications, although it is not possible to establish a causal link based on available data. For some jurisdictions the decline started before the actual introduction of private enforcement (though this might be due to the time lag between the approval of the EU Damages Directive and its transposition into national legal orders), whereas for others a short-term decline was followed by an increase in leniency applications. More broadly, these figures suggest that, at the very least, there are likely other additional factors causing the decline in leniency applications (OECD, 2022[2]). This is also confirmed when looking at jurisdictions, such as the US, that have not recently introduced any changes to private enforcement provisions, that have also observed a similar decline over the same timeframe.

Empirical studies have further investigated this causal link. (Bodnar et al., 2021[15]) conducted an experiment in which the subjects played a repeated homogeneous-goods Bertrand triopoly game and decided whether to collude on prices and then apply for leniency. They investigated settings both with and without private enforcement and they empirically found that, when private damages claims become

possible, leniency applications decrease notably (although not significantly) and, as a result, cartels become more stable.

While only experimental and relying on specific assumptions, this exercise seems to confirm the initial hypothesis but is subject to an important caveat. With very few exceptions (see *infra*), all the literature on the topic only considers private enforcement in the form of follow-on claims (i.e., private damages actions that are brought to court following an infringement decision by a competition authority), leaving aside standalone claims (i.e., actions that do not rely on a prior infringement decision by a competition authority).

Standalone claims can enhance cartel detection and expand overall enforcement activities, by compensating for authorities' limited resources or by prosecuting cartels on which private claimants, being directly affected, have the most proximate information that competition authorities may not possess (Knight and Ste. Claire, 2019[16]). As mentioned in section 3.2 above, increased non-leniency cartel detection positively affects firms' incentives to apply for leniency. Furthermore, the increased probability of facing standalone actions, by increasing the amount of the overall sanction to infringers, may enhance cartel deterrence and desistence, although this may not translate into an increased number of leniency applications, especially by those firms cautious not to alert others of their past behaviour (Knight and Ste. Claire, 2019[16]). This will in turn contribute towards the ultimate goal of leniency programmes, which is to limit cartel formation, as opposed to the merely short-term intermediate objective of having a high number of leniency applications. The study by (Knight and Ste. Claire, 2019[16]) seems to infer that promoting private enforcement in the form of standalone claims will positively reflect on the effectiveness of leniency programmes.

What happens when both forms of private damages actions are considered? Do the previous findings regarding the negative effects of private damages on leniency programmes hold true?

As noted by (Lai, 2021[17]), although Knight's and Ste. Claire's study uses a simple dynamic model of collusion including both follow-on and standalone claims, it assumes that a cartelist will always face follow-on actions when the cartel is detected by competition authorities or if the cartelist seeks leniency. This is far from being the case, as follow-on actions are still limited, notably in the EU. It is therefore unclear whether the finding of a positive correlation between standalone claims and leniency applications still holds when the uncertainty as to whether victims will bring follow-on actions is factored in.

To address this limitation, (Lai, 2021[17]) proposes a model with both follow-on and standalone actions similarly to Knight and Ste. Claire, but, unlike the latter, also assumes that cartel members can be sanctioned by public or private enforcement, but not (necessarily) under both. In other words, he makes a (more realistic) assumption about the uncertainty of private actions and assumes that, even when authorities sanction cartels or firms apply for leniency, victims might not bring follow-on damage claims. He empirically finds that **private enforcement does not reduce leniency applications in all circumstances**. More specifically:

- As regards **follow-on actions**, these *could* have a negative impact on leniency applications when the legislator provides incentives without making any distinction according to the defendant. By contrast, when legislators only incentivise victims bringing actions not resulting from leniency applications, this will provide leniency applicants with some sort of shield (or at least avoid that they are more exposed to damages claims compared to other cartelists, see above) and thus decrease cartelists' costs of applying for leniency, making them more keen to come forward.
- As regards **standalone actions**, (Lai, 2021[17]) confirms previous findings on their positive impact on leniency programmes (Knight and Ste. Claire, 2019[16]), through increased detection capabilities (bringing more leniency applications) or increased deterrence and desistence (reducing cartel formation).
- Concerning **private enforcement in general**, when legislators do not discriminate between individuals bringing follow-on or standalone actions, its impact on leniency is indefinite.

Yet, in light of the current legal frameworks as to leniency applicants' civil liability (see above under this sub-section) and given the predominance of follow-on compared to standalone actions, the dominant view is that private enforcement negatively affects the incentives to apply for leniency and thus the effectiveness of leniency programmes (OECD, 2018, pp. 8-10[18]) (ICN, 2019[13]). (Ysewyn and Kahmann, 2018[7]) notes, with regards to the EU system, that, while deterrence may have increased thanks to private enforcement, it is now at risk of becoming **victim of its own success**, resulting in companies being better off not co-operating rather than incurring the risk of long and costly damages litigation.

To avoid that an effective private enforcement system undermines leniency programmes, some authors propose to grant leniency applicants total immunity from private damages actions, while still applying joint and several liability to other non-leniency cartelists as a way to ensure as much as possible full compensation for victims (Buccirossi, Marvao and Spagnolo, 2020[19]). However, this would bring the risk of victims not being able to obtain full compensation for the harm suffered if non-leniency cartelists are unable to fully pay for the damages. To counter this risk, some authors have proposed introducing in the competition field solutions, such as Fair Funds, already applied in other policy areas (Hornkohl, 2022[20]).

Box 3.2. Ensuring full compensation in other policy fields: Fair Funds in US securities law

In order to ensure full compensation of investors harmed by securities violations, Section 308(a) of the 2022 Sarbanes-Oxley Act introduced the concept of Fair Funds.

Following the amendments, 15 US Code § 7246(a) reads:

> *If, in any judicial or administrative action brought by the Commission under the securities laws, the Commission obtains a civil penalty against any person for a violation of such laws, or such person agrees, in settlement of any such action, to such civil penalty, the amount of such civil penalty shall, on the motion or at the direction of the Commission, be added to and become part of a disgorgement fund or other fund established for the benefit of the victims of such violation.*

This means that when SEC collects the fines, it distributes them to investors harmed by securities law violation, such as fraud. Empirical research by (Velikonja, 2015) has shown that they are quite successful, as they are the same size as the average class action disbursement and have compensated investors more effectively than private securities litigation.

Sources: Velikonja, U. (2015). Public Compensation for Private Harm: Evidence from the SEC's Fair Fund Distributions. Stanford Law Review, 67, 331-395. Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2400189; Hornkohl, L. (2022, February 18). A Solution to Europe's Leniency Problem: Combining Private Enforcement Leniency Exemptions With Fair Funds. Retrieved from Kluwer Competition Law Blog: https://competitionlawblog.kluwercompetitionlaw.com/2022/02/18/a-solution-to-europes-leniency-problem-combining-private-enforcement-leniency-exemptions-with-fair-funds/

In sum, while the **trade-off between private enforcement and leniency programmes** can be reduced (e.g., by incentivizing only certain private damage actions, by limiting leniency applicants' civil liability while increasing it for other cartelists, by limiting disclosure of leniency statements), it cannot be totally avoided. The choice between favouring full compensation through private enforcement and strengthening leniency programmes is ultimately a **policy maker's decision**. Several authors seem generally more inclined to accord priority to preserving the effectiveness of leniency programmes, given their significant contribution to enhancing cartel detection and enforcement, as opposed to pursuing a full compensation objective which is in any case difficult to achieve (Crave, 2015[21]). Furthermore, this will not necessarily be to the detriment of (potential) victims' full compensation: preserving effective leniency programmes will enhance deterrence, preventing allocative inefficiency brought about by cartels, which ultimately (directly and upfront) will prevent damages to consumers (Buccirossi, Marvao and Spagnolo, 2020[19]).

3.4. The risk of criminal sanctions

As of 2022, 21 OECD jurisdictions have criminal sanctions in place for anticompetitive conducts, although their application and scope vary significantly (see Box 3.3).

Box 3.3. Criminalisation of anticompetitive conducts

An increasing number of jurisdictions have adopted criminal sanctions for certain anticompetitive conducts.

Criminalisation is often limited to hardcore cartels or solely to bid-rigging, since rule-of-reason cases or restrictions by effect are "*unsuitable for criminal prosecution*" (Wagner-von Papp, Viros, Zimmer , Kovacic, & Stephan, 2016) as this would risk lowering the standard for incarceration compared to other criminal laws (Sokol, 2019).

While the US are at the forefront of cartel criminalisation, this has also its roots in Europe and elsewhere. Jurisdictions that criminalised hard core cartels include, among others, Australia, Brazil, Canada, Chile, Denmark, Estonia, France, Greece, Ireland, Israel, Japan, Korea, Mexico, New Zealand, Norway, Oman, the Philippines, Romania, Russian Federation, Slovak Republic, Slovenia, South Africa, and the United Kingdom.

Many other jurisdictions (including Austria, Belgium, Finland, Germany, Hungary, Italy, Poland, Portugal, and Türkiye) limit the scope of criminalisation to bid rigging.

Finally, even in administrative systems that do not contemplate any criminal sanctions for anticompetitive behaviour, antitrust fines are deemed of *de facto* criminal nature by the European Court of Human Rights.

Sources: Wagner-von Papp, F., Viros, D., Zimmer , D., Kovacic, W., & Stephan, A. (2016). Individual Sanctions for Competition Law Infringements: Pros, Cons and Challenges. Concurrences Review, 2, 14-44; Sokol, D. (2019). Reinvigorating Criminal Antitrust? William & Mary Law Review, 60(4). Retrieved from https://scholarship.law.wm.edu/wmlr/vol60/iss4/12; OECD. (2020). Criminalisation of cartels and bid rigging conspiracies: a focus on custodial sentences - Background note by the Secretariat.

The criminalisation of cartels may theoretically have a twofold impact on the effectiveness of leniency programmes.

On the one hand, criminal sanctions may **add "clout to the stick"**, increasing the incentives to apply for leniency and thus making the carrot of immunity more attractive (Beaton-Wells, 2014[22]). When cartelists face the risk of criminal sanctions, the decision to apply for leniency is no longer a business choice based on an economic balancing exercise, but rather a personal decision on whether to risk imprisonment, with the societal and moral stigma attached to it. This may in turn increase the incentives to apply for leniency, in order to escape such severe personal sanctions. This assumes, however, that business representatives have knowledge about the sanctions and perceive them as a likely threat. By contrast, empirical evidence suggests that a significant proportion of the business community has very little knowledge of the risk of imprisonment for anticompetitive behaviour (Beaton-Wells and Parker, 2012[23]).

On the other hand, in light of the societal stigma attached to criminal sanctions, cartelists facing the threat of imprisonment may be **more vigilant and adopt strict internal punishment** (e.g., boycott, disruption of contractual relationships, retaliation) to avoid deviation and defection, given that the (personal) stakes of detection are higher. Furthermore, several jurisdictions only grant immunity from criminal sanctions to the first immunity applicant, which may have a chilling effect on the willingness of subsequent applicants for leniency from administrative fines to provide valuable information (OECD, 2018, p. 11[18]).

Considering these two potential opposite effects, what is the interplay between criminalisation of cartels and leniency programmes in light of empirical evidence?

Figures in Australia show that, over the four years following the introduction of jail sanctions in 2009 for individuals found guilty of cartel offenses, the ACCC received fewer leniency applications. While this could be due to enhanced cartel deterrence (and thus fewer cartels to report), it seems more likely that, at least in the short term, the introduction of criminal sanctions in fact stabilised existing cartels (Beaton-Wells, 2014, p. 137[22]). Similarly, in a study conducted in the UK, lawyers reported "*a real concern that the criminal offence may be discouraging firms from applying for leniency*" (Stephan, 2014[24]). Furthermore, considering more broadly the effectiveness of leniency programmes besides the number of applications, even when first leniency applicants are immune from criminal sanctions, employees of subsequent applicants may be less inclined to co-operate with leniency investigations, as they face the risk of (though mitigated) imprisonment, especially in common law systems with trial by jury, where the latter may be sceptical towards witnesses who have admitted their involvement and have an incentive to blame others in order to escape (more severe) punishment (Beaton-Wells, 2017[25]).

Empirical evidence in the US seems to show opposite trends. Following the revision of the corporate leniency programme in 1993, which, amongst others, clarified that all officers, directors and employees coming forward are protected from criminal prosecution, the DoJ's Antitrust Division saw a twenty-fold increase in the leniency application rate (Hammond, 2010[26]). Although it is difficult to control for the influence of jurisdictional differences and other variables when making such comparisons, the different conclusions could be due to the specificities of the US antitrust system. The criminal nature of antitrust violations underpins the whole US antitrust law, reflecting a widespread conviction regarding the harmfulness of such business behaviour and the fact that cartelists should be treated as serious criminals, "*in the same way as embezzlers, stock swindler and other economic thieves*" (Baker, 2011[27]). The adoption of the new leniency programme came at a time when criminal enforcement in the US ramped up and this, together with the already widespread perception of the criminal nature of this behaviour, may have boosted leniency applications. However, such perception and awareness may not be common to other jurisdictions, which, as noted above, is a factor that may affect the extent to which criminal sanctions increase the incentives to come forward and seek leniency.

The relationship between criminal regimes and leniency programmes still needs to be fully investigated and understood and there is **no conclusive evidence yet**. However, recent research finds that the empirical evidence to support the view that criminalisation increases the quantity or quality of leniency applications is limited (Beaton-Wells, 2017[25]). On the contrary, outside the US experience, certain empirical evidence seems to suggest that criminal sanctions may reduce the number of leniency applications and individuals may be less inclined to co-operate when facing the risk of criminal prosecution (albeit with reduced sanctions) (Beaton-Wells, 2017[25]) (OECD, 2022[28]).

3.5. The costs arising from administrative burden

When considering whether to apply for leniency, firms take into account not only the likelihood of immunity or reduced fines, but also the **costs involved in the application**. Indeed, when firms seek immunity or leniency, they are under an obligation to provide evidence and co-operate with the competition authority. They need to collect evidence about conduct that possibly took place several years before, often in secrecy, and need to interview employees, including those that may have left the firm in the meantime. This process may involve significant costs and time before the company can go back to business-as-usual, especially when the investigation concerns complex cartels, possibly with proceedings across different jurisdictions.

In a survey conducted by the French Competition Authority in 2014, 10% of businesses and 22% of lawyers complained about the administrative hurdles and costs of leniency applications (Autorité de la concurrence, 2014[29]). When listing the main disincentives to seek leniency in order of importance, both lawyers and

businesses considered the **administrative burden of the procedure** (in terms of formalism and deadlines) as the main reason not to come forward (Autorité de la concurrence, 2014, pp. 6-7[29]). More recently, a survey conducted between December 2019 and March 2020 shows that 17% of practitioners and 13% of regulators consider that, over the last five years, the very high administrative burden and co-operation requirements constitute the main reason for the decline in immunity applications (Covington and the Brussels School of Competition, 2020[30]).

Competition authorities have tried to reduce the burden on firms in different ways, as shown in the Box 3.4.

Box 3.4. Authorities' recent initiatives to reduce administrative burden for leniency applicants

eLeniency tool

In 2019, the EC introduced a secure online tool called eLeniency to allow companies to provide leniency statements and responses to RFIs online, including submitting documents and evidence. The tool has been upgraded in 2022 to allow parties to have easy and secure access to the file, including corporate statements, and notified documents that until then were only accessible at the EC's premises.

Leniency officers

Applying for leniency can be a burdensome process, especially for smaller firms that are not necessarily used to dealing with such procedures and have no in-house competition counsel. To facilitate this process, authorities have created the figure of Leniency Officers, tasked with providing informal advice on the process, engaging with prospective applicants to discuss potential applications. The Netherlands established a leniency officer in 2006, while France has had a *conseiller de clémence* since 2011. In 2022, the EC also introduced the figure of leniency officer, acting as first point of contact for any potential leniency applicant. Their informal advice will be particularly helpful where the behaviour is novel, and the potential applicant is uncertain about whether its conduct qualifies for a leniency application.

Source: *Antitrust: Commission upgrades eLeniency tool to grant companies online access to leniency and settlement documents* (EC's press release, 30 September 2022); EC's *Frequently Asked Questions (FAQs) on Leniency* (version updated in October 2022).

Increasing administrative costs, also justified by the increasing complexity of cartels and long investigations (see section 3.6 below), may have affected the willingness to apply for leniency.

3.6. Cartel complexity and predictability of the leniency process

It is fair to assume that the **growing complexity of cartels** may have resulted in higher co-operation costs and unpredictability for companies over time, affecting the incentives to apply for leniency. Firms are increasingly developing more sophisticated ways of colluding and such practices involve not only agreements on traditional competition parameters (e.g., prices), but also other aspects of competition (e.g., innovation). Reflecting a more complex business reality, the border between lawful and anticompetitive practices is often more blurred and certain investigated conducts, such as hub-and-spoke arrangements, buyer cartels or exchanges of information, are **not necessarily clearcut** and require careful investigations and analysis.[9] Furthermore, the recourse to **digital tools**, such as algorithms, to reach collusion may make investigations more complex, as interactions between competitors may not be straightforward and direct evidence of (the intention of) collusion may not be immediately available, which in turn will require additional efforts by leniency applicants to provide relevant and valuable evidence (e.g., on the internal functioning of algorithms, data they use, proof to distinguish between lawful parallel behaviour and anticompetitive tacit collusion, etc.). In addition, as confirmed by the 2019 OECD/ICN survey, enforcement co-operation between jurisdictions on cartel matters has increased since 2012 (OECD, 2022, p. 16[31]), and investigations involving **multiple jurisdictions and authorities** have become more widespread, resulting in more burdensome proceedings for companies, which may need several legal advisors and may need to

conduct internal due diligence and investigations in several jurisdictions. Finally, according to empirical studies, leniency has increased the duration of investigation procedures (Vanhaverbeke and Buts, 2020[32]) (and thus time and costs of co-operation) and (even irrespective of the impact of leniency) the **duration of cartel proceedings** has become very unpredictable (Ysewyn and Kahmann, 2018, p. 54[7]), reflecting a more complex and sophisticated business reality. Courts have also progressively strengthened the conditions of their review and developed a more intense scrutiny in competition cases (da Cruz Vilaça, 2018[33]), increasing the likelihood for firms to win upon appeal but also expanding the time before firms can go back to their normal business life.

All these elements contribute to increasing time and costs of co-operation for leniency applicants, which in turn have a significant impact on the incentives to apply for leniency. Some competition authorities have taken action to simplify the procedures, making them more predictable and transparent (see Box 3.5 below).

Box 3.5. Improving intrinsic characteristics of leniency programmes: transparency and predictability

Predictability is key to ensuring the success of a leniency programme. Companies must be aware of the existence and the features of the leniency programme, in particular on what they may expect in return for their co-operation.

On the one hand, transparency allows companies to understand ex ante the benefits of coming forward. The ICN Anti-Cartel Enforcement Manual emphasises that "*competition agencies should ensure that their leniency policies are clear, comprehensive, regularly updated, well publicised, coherently applied, and sufficiently attractive for the applicants in terms of the rewards that may be granted*." The OECD *Recommendation concerning Effective Action against Hard Core Cartels* recommends providing clarity on the rules and procedures governing leniency programmes and the related benefits, as well as establishing clear standards for the type and quality of information that qualifies for leniency.

On the other hand, some uncertainty is necessary to preserve firms' incentives to submit as much information as possible. Precisely because companies cannot calculate ex ante the exact amount of the fine discount or whether information they submit will meet the "significant value" evidentiary threshold, they will be encouraged to co-operate fully (Forrester & Berghe, 2015).

In order to enhance transparency, predictability and accessibility of its leniency programme, in October 2022, the EC issued guidance in the form of a Frequently Asked Questions (FAQ) document. Amongst others, it clarifies the details of legal protections and benefits and signals the EC's intention to discuss potential leniency applications on a "no-names" basis.

With the same goal of boosting transparency, in 2022, Austria's Federal Competition Authority published a new Leniency Guideline, following a public consultation. The new guidelines provide information on:

- the general leniency application requirements:
- the specific requirements both for immunity from fines and for applying for a reduced fine;
- the procedure to be followed during a leniency application;
- the protection of employees of leniency companies in criminal prosecutions;
- the protection of leniency applications in damages proceedings, and the authority's handling of leniency statements.

Source: Commission's Frequently Asked Questions (FAQs) on Leniency, version of October 2022, available at https://competition-policy.ec.europa.eu/system/files/2022-10/leniency_FAQs_2.pdf; Austria's Federal Competition Authority's New Leniency Guidelines, https://www.bwb.gv.at/en/news/detail/afca-publishes-new-leniency-guideline ; Forrester, I., & Berghe, P. (2015). Leniency: The Poisoned Chalice or the Pot at the End of the Rainbow? In C. Beaton-Wells, & C. Tran, Anti-Cartel Enforcement in a Contemporary Age. Hart Publishing.

3.7. The impact of settlements on leniency applications

Over the period 2017-2021, approximately 40% (on average) of cartel investigations in OECD countries closed with settlements (OECD, 2022[2]). Settlement procedures bring indeed significant benefits to competition authorities, in terms of cost savings and more expedited closing of proceedings. Cartelists also obtain corresponding benefits in terms of lower litigation costs and lower fines.

However, **overly generous settlements** may negatively affect the effectiveness of leniency programmes. The main concern is that the expected fine reduction obtained via settlements may reduce the incentives to apply for leniency, by reducing the threat of heavy fines. Rather than coming forward and providing information on the existence of an anticompetitive agreement, cartelists may adopt a "wait and see" strategy, waiting for the authority to detect and build a case against them and only then, based on the strength of the case, decide whether to co-operate and settle and thus obtain a fine reduction (although of possibly lower amount compared to the one they would have obtained via leniency). In the framework of a recent peer review of competition policy in Ecuador, it was found that commitments had actually undercut the effectiveness of the cartel leniency programme, by providing firms with incentives to wait for the opening of investigations and disclosure of confidential leniency information gathered by the authority (OECD-IDB, 2021, p. 101[34]).

Furthermore, settlement procedures may have a more indirect impact on leniency programmes, by reducing deterrence effects in the first place. By lowering the expected punishment, settlements may decrease deterrence (stemming from the threat of severe fines) and increase cartel formation, which in turn will reduce the effectiveness of leniency programmes.

For these reasons, the reduction of fines under the settlement procedure must be **sufficiently low** to preserve the incentives to apply for leniency (especially for the lower bands of the leniency programmes, namely for subsequent applicants), and at the same time it must be **sufficiently high** to attract companies into settlements.

The issue of fine calculation, considering leniency and settlements, has been further investigated by (Dijkstra and Seifert, 2022[35]). The authors have studied how a competition authority with limited budgetary resources can determine an optimal fining policy in the presence of both leniency and settlement procedures. With the goal of maximising frequency of co-operation (which should be a priority of competition authorities and is one of the main goals of leniency programmes and settlement proceedings), leniency applicants should obtain maximum fine reductions and settling firms only minimal fine discounts when the incentives to apply for leniency are high. When such fine discounts (alongside the additional factors assessed in the sections above) do not provide sufficient incentives to apply for leniency, an optimal policy would offer maximal fine reductions to settling firms, thus securing their (though subsequent) co-operation. However, the overall fine must take into account the reductions under both procedures, to avoid that subsequent applicants practically obtain immunity from fines, by summing up leniency and settlement reductions, which could undermine the incentives to race for immunity and thus the effectiveness of leniency programmes (Ascione and Motta, 2008[36]).

In sum, given the interplay between settlements and leniency programmes, the size of the fine reduction under the former strictly depends on whether cartelists may be persuaded to apply for leniency, which in turn depends on a number of factors, as described in Sections 3.2, 3.3, and 3.4 above. While priority should be accorded to leniency (as it both helps detection *and* eases investigations), when parties settle, the fine reductions under settlement proceedings should also be determined, so as to avoid undermining the effectiveness of leniency programmes. **Taking into account the effects of settlements on leniency programmes** is particularly important in light of the increasing recourse to settlement and commitment procedures, as shown by (OECD, 2023, p. 20[5]).

3.8. Multi-jurisdictional investigations and the risks of uncoordinated leniency programmes

The increasing number of OECD jurisdictions with an antitrust leniency programme in place (see Figure 2.1 above) raises the question of their co-ordination (or lack thereof).

The risk of being sanctioned by several competition authorities around the globe may increase incentives for firms to self-report. This may be particularly true for younger competition authorities that do not necessarily have a strong enforcement rate to support their leniency programme.

However, as a result of the absence of a one-stop-shop, when applying for leniency in one country and self-reporting an international cartel, firms run the **risk of being prosecuted in other countries**, as their immunity application with one antitrust authority will not automatically grant immunity in other jurisdictions (OECD, 2018, p. 13[18]) and they might not be the first to apply for leniency in all jurisdictions. This is the reason whereby there have been proposals to establish **one-stop-shops for leniency applicants**, following successful models in other policy fields (see Box 3.6 below).

Box 3.6. One-stop-shop models: the experience of the International Patent Co-operation Treaty (PCT) for summary applications and marker systems for global cartels

To secure immunity in a global cartel, cartelists may need to submit several applications before different competition authorities. This process may be burdensome and, once they have broken the trust among cartelists and begun a race to apply for leniency, they may run the risk of not being the first immunity applicant before one or more authorities.

To reduce such burden and avoid that members of EU-wide cartels expose themselves to liability across several jurisdictions and thus face disincentives to apply for leniency, building on the ECN Model Programme, the ECN+ directive allows applicants who have applied for leniency to the Commission to submit summary applications to NCAs in relation to the same cartel. The Commission will assess the case and, if it does not pursue the case further, the NCA must allow the firm to submit a full application, that will be deemed to have been submitted at the time of the summary application, provided the latter covers the same affected products and geographies and the same duration of the cartel as the application before the Commission.

At the global level, building on the use of one-stop-shops in patent law, OECD (2022) proposes a model in which a cartelist can set a marker with one body or designated jurisdiction, which would notify all affected jurisdictions. The marker would establish priority in all jurisdictions.

This model draws inspiration from the International Patent Co-operation Treaty (PCT) adopted within the World Intellectual Property Organisation (WIPO). A PCT application can be sent to any of the participating patent offices and replaces a potential multitude of national applications, securing priority for the patent application in all participating jurisdictions. Only once the applicant decides to continue the patenting process, individual national applications will be necessary and national decisions on granting the patent will be taken.

Sources: Directive (EU) 2019/1 of the European Parliament and of the Council of 11 December 2018 to empower the competition authorities of the Member States to be more effective enforcers and to ensure the proper functioning of the internal market; OECD. (2022). Thinking out of the competition box: enforcement co-operation in other policy areas - Background note by the Secretariat.

The risks from leniency applications concerning international cartels increase as competition authorities enhance their bilateral and multilateral co-operation. This is not only a theoretical risk. For example, following the filing of leniency applications and the exchange of information between Chile, Colombia,

Ecuador and Peru, several cartel investigations were initiated against members of the same cartel across Latin America (OECD, 2016[37]) and the General Secretariat of the Andean Community (SGCAN) issued a fining decision based on information obtained (and passed on to SGCAN) by Ecuador through a leniency application.[10]

Certain bilateral and multilateral co-operation agreements between competition authorities take into account the risk that the exchange of information obtained via leniency applications may undermine the effectiveness of leniency programmes, as it may increase firms' risk of facing multiple investigations across jurisdictions when they seek immunity before one authority. The OECD Recommendation concerning international co-operation on competition investigations and proceedings (2014) acknowledges this risk, by excluding any special regime adopted at national level for the exchange of information received from leniency applicants from the scope of its provisions on information exchange. Other bilateral or multilateral agreements are further proof of how relevant this issue is.[11] Such provisions from several co-operation agreements regarding the exchange of leniency information are gathered under the OECD inventory of international co-operation agreements on competition.

3.9. The interplay between different policy fields

While competition leniency programmes grant immunity (or fine reductions) from antitrust proceedings to firms providing information on their misconduct, co-operating companies run the **risk of triggering investigations in other enforcement fields**, within the same jurisdiction or in a different country. This is particularly the case for **corruption and bid-rigging**, as the latter is often accompanied by bribery of public officials. In the same vein, failing to take into account the **externalities of sanctions** imposed under different enforcement areas may affect the incentives of firms or individuals to come forward with information and evidence in the context of an antitrust leniency programme (OECD, 2022, p. 36[28]), for example when jurisdictions foresee bidder exclusion as a sanction imposed by public procurement authorities or contracting agencies pursuant to their procurement laws (OECD, 2022, p. 29[28]).

The risk is bi-directional, as when leniency programmes under different policy areas exist and they are not co-ordinated, incentives to apply for leniency under one programme may be reduced as the leniency recipient will be exposed to the risk of conviction under the other policy field. This might be the case in those regulatory fields involving multi-agent offences, for instance when cartelists infringe environmental regulations as part of their profit-maximizing strategy (Spagnolo and Luz, 2017[38]).

This is not just a theoretical risk. For instance, in the *YIRD* cartel, UBS was granted immunity and escaped a EUR 2.5 billion antitrust fine, but was then prosecuted for wire fraud by the DoJ and paid fines to the US Commodity Futures Trading Commission and the then UK Financial Services Authority (Ysewyn and Kahmann, 2018, p. 55[7]).

Several jurisdictions, such as Brazil, Mexico and the US have recently introduced leniency programmes for corruption offences. However, they are seldom integrated with antitrust leniency and are handled by different bodies that do not necessarily co-operate with competition authorities (Spagnolo and Luz, 2017[38]). The DoJ's Antitrust Leniency Program, for instance, explicitly provides that its conditional leniency letter does not protect applicants from criminal prosecution by other agencies for offences other than antitrust violations, even when bribes were made in furtherance of the reported antitrust violation.[12] In other words, a perpetrator of a bid-rigging that also bribed a public official will not have the guarantee of immunity from (or reduction of) criminal sanctions for its managers and employees for the corruption charges when applying for antitrust leniency, and will have to negotiate separately with different prosecuting agencies, when this is provided for by the national legal framework.

The lack of co-ordination becomes even more important when considering international cartels which involve bribery and foreign corruption. The OECD Convention on Combating Bribery of Foreign Public Officials in International Business Transactions requires parties to criminalise bribery of foreign public

officials and sets standards thereof. This adds to the complexity of cartel cases, possibly involving a large number of antitrust and other prosecuting authorities, thus reducing the incentives to report cartels when this brings the risk of prosecution on the grounds of bribery of foreign officials (Spagnolo and Luz, 2017, p. 757[38]).

Box 3.7. Co-ordination of enforcement authorities dealing with distinct corporate misconducts

Collaboration and integration of authorities dealing with corporate misconduct is key to achieving effective enforcement and avoiding that their respective actions undermine each other. When different enforcers lack coordination of their policies and programmes, a risk exists that by applying for leniency under one rule set, a firm runs the risk of providing information on other corporate misconducts and being prosecuted by a distinct regulator without the benefit of immunity or lenient treatment. As clearly put by Auriol, Hjelmeng, & Søreide (2017):

> *Governments need to make sure that the different tools work together, in the same direction, instead of opposing each other. As a minimum, the different law enforcement institutions need to consider various possible reactions following detected corporate misconduct, and align their own reactions in a planned, principled and strategic manner.*

To achieve co-ordination and avoid that distinct leniency programmes undermine each other, Spagnolo & Luz (2017) suggest a one-stop-point enabling wrongdoers to report different misconducts simultaneously and receive lenient treatment for all of them at once, if they meet the different conditions. In their proposal, firms may report their crimes before any authority, which will then call the others that may be competent over the potential reported infringement, so that they can participate in the process. This system would not only save time and money both for authorities and applicants, by avoiding multiple applications, but would also facilitate self-reporting by smaller companies that may lack the resources and expertise to deal with several regulators at the same time.

Though not exactly a one-stop-shop model, in the UK, the CMA and the Serious Fraud Office (SFO) have signed a Memorandum of Understanding in 2020. The SFO has agreed that if a person has been granted leniency via a no-action letter by the CMA, the SFO will not attempt to prosecute the individual for other offenses related to cartel infringements. However, the latter may still (theoretically) decide not to comply with the no-action letter granting immunity and decide to prosecute the offender, for instance when it had already started its investigations.

Similarly, in Brazil, CADE has developed extensive collaboration with other enforcers, such as State and federal prosecutors, including as regards their respective leniency programmes (Menčík, 2021).

Sources: Auriol, E., Hjelmeng, E., & Søreide, T. (2017). Deterring Corruption and Cartels: In Search of a Coherent Approach. Concurrences(1); Spagnolo, G., & Luz, R. (2017). Leniency, collusion, corruption, and whistleblowing. Journal of Competition Law & Economics, 729-766; Menčík, J. (2021). United we stand, divided we fall - The role of inter-agency cooperation in enforcement of bid rigging conspiracies. Acta Universitatis Carolinae - Iuridica 1, 57-74. Retrieved from https://karolinum.cz/data/clanek/8904/Iurid_67_1_0057.pdf; OECD authors.

4 The future of detection: beyond leniency programmes

Section 3 above explored the possible reasons underpinning the decline of leniency applications and how jurisdictions have tried to address them by reforming leniency programmes. A question arises, however, as to whether these reforms will be sufficient to reverse the declining trend or if it is even possible to counter the underlying reasons for the decline.

In fact, the effectiveness of leniency programmes depends not only on their intrinsic characteristics, such as transparency and predictability, but also on **external factors that are beyond the control of legislators and competition authorities**. If this is true, it is legitimate to investigate whether trying to reverse the declining trend by reforming leniency programmes themselves is the right strategy or whether jurisdictions should acknowledge that competition authorities need to **rely to a big(ger) extent on other complementary tools** in order to detect and investigate cartels (Meester, Garcia Pabon and Westrik, 2023[4]).

Traditionally, when defining incentives and disincentives to cartelise and then seek immunity, most leniency programmes have considered firms as collective entities rather than a sum of individuals not necessarily taking rational decisions aimed at maximising their firms' profits. However, socio-economic, personal, demographic, and cultural factors, beyond the control of competition authorities, play a major role in the decision to apply for leniency (see Box 4.1 below).

Box 4.1. Behavioural economics considerations on leniency programmes

Individuals' decisions to cartelise depend not only on the perspective to gain profits for the company but also on personal, cultural or psychological factors. For example, the company's culture and in particular the goals it sets for its managers is of utmost importance. When firms define remuneration based on the achievement of short-term objectives (e.g., bonuses based on turnover targets), managers may be prone to choose the quickest way to achieve them, including collusive behaviour, rather than working on uncertain long-term strategies for product innovation or gaining new customers. This is even more true when considering that the potential negative costs of such behaviour (e.g., fines for infringements) may occur far in the future, as opposed to concrete gains that materialise in the short term. Corporate culture and the importance attributed to compliance play a fundamental role in avoiding anticompetitive conducts.

Besides corporate cultural factors, demographic (gender, age, education), socio-economic (income, occupation) and personal (attitude, morality, risk aversion) attributes also play a role in the decision on whether to collude and whether to report such conduct (Combe & Monnier, 2020). Cartels create indeed **informal networks and frequent social interactions**, **develop interpersonal knowledge and common professional circles**. Seeking leniency means breaking the trust intrinsic to such networks and giving up such interpersonal relationships. In a study on 15 German cartels, Haucap & Heldman (2022) found that **individuals in cartels show a high level of homogeneity** in terms of age, gender, geographic origins, and experience in the industry. These elements create a "*sense of group affiliation which positively impacts beliefs and expectations*", thus stabilising cartels and making the decision to break that trust and report more difficult.

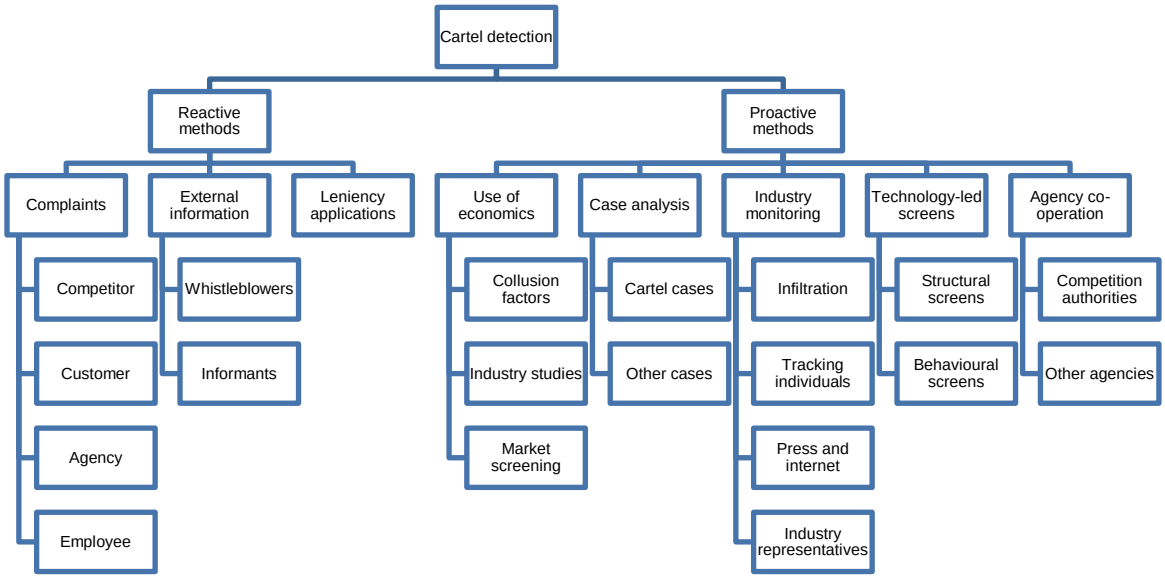
Sources:
Combe, E., & Monnier, C. (2020). Why Managers Engage in Price Fixing? An Analytical Framework. World Competition, 43(1), 35-60
Haucap, J., & Heldman, C. (2022). The Sociology of Cartels. CESifo Working Papers
OECD authors.

In other words, rather than a pure balancing exercise of economic benefits and losses, the decision to apply for leniency depends on **several (inter-)personal factors that cannot be changed by law**. While leniency programmes can increase the economic and rational incentives for firms to come forward, they cannot strongly affect the purely personal angle of such decisions.

Therefore, a question arises as to whether it is possible, in the short to medium term, to reverse the decline of leniency applications, in order to preserve the effectiveness of leniency programmes as a powerful detection tool. In the negative, a question arises as to whether leniency should continue to be the main tool for cartel detection or whether authorities should invest more in other complementary detection instruments. Besides increasing detection capabilities, in the long term, complementary detection tools such as cartel screens or whistleblowing can also positively reflect on the effectiveness of leniency programmes, by increasing the threat of detection and thus the rational incentives to come forward.

Figure 4.1 below provides an overview of pro-active and reactive detection methods beyond leniency.

Figure 4.1. Pro-active and reactive cartel detection methods



Source: OECD adapted from (Hüschelrath, 2010[39]).

Most of these detection tools have been discussed in previous OECD roundtables (OECD, 2013[40]) (OECD, 2016[41]) (OECD, 2017[42]) (OECD, 2018[43]) (OECD, 2020[44]) and will not be discussed in this Note, unless they have experienced recent and significant developments. Therefore, without any intention to be exhaustive, this section provides a short overview of recent initiatives and innovative detection tools on which there have been significant developments over the last years. It also highlights challenges faced by competition authorities to enhance detection tools that can act as substitutes or complements to leniency programmes.

4.1. Facilitating complaints

Complaints about potential antitrust violations are a main source of information. Some authorities report that these are still the predominant method of cartel detection (ICN, 2021, p. 16[45]). Complaints may come from different parties, including direct or indirect purchasers of cartelised goods, competitors, disgruntled members of a cartel or disgruntled employees of one of the cartelists, or members of the general public who are aware of an issue or suspect cartel activities.

In order to **facilitate the filing of complaints** and the way in which competition authorities handle them (e.g., filtering complaints without any legal grounds and those that require further and more thorough investigations, responding efficiently to complainants), the ICN recommends as a good practice to have a formal complaint system in place for receiving, handling and responding to complaints (ICN, 2021, p. 14[45]).

As an example, with a view to boosting antitrust complaints, CADE has recently remodelled its *Clique Denúncia* platform to make it more user-friendly and offer a safer environment to witnesses, also allowing the latter to monitor the status of their reports.[13] After the new version of the platform was made available, the number of complaints to CADE reached a record number in 2020.[14]

Imposing reporting obligations upon national authorities (e.g., procurement authorities) or facilitating exchanges of information, when they have suspicions of cartel activities, is another way to boost complaints that may lead to opening investigations, as also recommended by the *OECD Recommendation concerning Effective Action against Hard Core Cartels*.

4.2. Cartel screens

More and more authorities have recourse to screening methods to detect anticompetitive behaviour. These consist in empirical methods, using digital datasets, to evaluate markets and firms' behaviour with a view to identifying characteristics and patterns and then draw conclusions about the likelihood, risk or existence of anticompetitive conducts.

Similarly to (OECD, 2013[40]), when discussing screens, (OECD, 2022[46]) classifies them into two categories:

- **Structural screens**, which identify markets with traits that are conducive to collusion based on structural characteristics, such as market concentration, entry barriers, frequent interaction between a small number of firms, product homogeneity, low pace of innovation, symmetry and commonality of costs.
- **Behavioural screens**, which look for firm activity that might indicate collusion, by identifying patterns of unusual and unexplained behaviour that could show the existence of a cartel.

When looking at their goals, the main difference between the two types of screens is that structural screens seek to identify markets for which it is more likely that a cartel *will form*, while behavioural screening seeks to identify markets for which a cartel *has formed* (Harrington and Imhof, 2022[47]).

The increasing availability of data and data-collecting methods as well as the emergence of new technologies to collect and analyse them in an automated fashion have enabled authorities to develop new screening methods.

Although authorities may decide not to advertise their detection methods to avoid firms adjusting their behaviour to beat the screen, publicly available information shows that more and more authorities have developed screens in particular to detect bid-rigging (see Box 4.2 below).

Box 4.2. Digital screens to detect bid-rigging conducts

Brazil

The Brazilian competition authority CADE has developed *Cérebro* (the "Brain"), a tool that relies on data-mining and statistical tests to detect suspicious bidding patterns in public procurement markets. *Cérebro* includes:

- a data warehouse that combines public and private databases into a single searchable database;
- data mining on i) patterns and similarities in competitors' behaviour, ii) suspicious facts, iii) signs of simulation of competition;
- statistical tests (models) based on i) academic literature on statistical cartel screens, ii) previous cartel cases, iii) microeconomic theory.

The data mining tools allow automating analyses that formerly required work by investigators and case handlers. *Cérebro*'s objectives are, on the one hand, to find indications of cartels in public bids, like implausible facts or behavioural patterns and provide evidence for dawn raids, and, on the other, to support and enhance investigations.

Colombia

The Superintendencia de Industria y Comercio (SIC) developed a tool, Sherlock, which analyses public procurement data to assist investigators in the identification of signs or patterns that suggest collusive behaviour.

The tool allows investigators to access public data retrieved from the web in a useable format. SIC is now automating implementation of screens for markers identified by international organisations such as the OECD, using machine-learning and deep machine-learning techniques.

Singapore

The Competition and Consumer Commission of Singapore ("CCCS") has a Bid Rigging Detection Tool ("BRDT") that it developed in-house. The BRDT analyses bid prices and patterns based on quantitative indicators that flag suspicious bidding behaviour.

The CCCS, in collaboration with the Government Technology Agency, is also designing document similarity software that allows deep dives into bid documents submitted in "suspicious" tenders. The software uses text analytics techniques to generate similarity scores for sentence- and document-level comparisons. Investigators can thus focus on similar sentences and documents instead of having to comb through large volumes of documents, thereby significantly reducing the time and effort that goes into evidence review, as well as minimising the risk of overlooking relevant documents through human error.

Source: Reproduced from OECD. (2022). Data screening tools for competition investigations - OECD Competition Policy Roundtable Background Note.

Despite their utility, cartel screens bring the risks of false positive and false negatives, thus possibly shifting authorities' limited resources to the wrong targets. Moreover, different screens are tailored to different potential types of violations and different markets, therefore no single perfect screen exists that is able to identify all violations in any markets. Further technological developments, such as machine-learning, may help address this shortcoming (OECD, 2022[46]). Since machine learning is less structured and more data-driven, inferring classification rules from a training data set and making predictions on new data, it can allow combining different screens depending on changing circumstances, with a view to flagging collusive activity in different cases.

During the November 2022 OECD Competition Committee roundtable on *Data Screening Tools for Competition Investigations,* authorities shared their perspectives on the challenges of collecting data for cartel screening, the different methods they use, the skills and resources needed to implement them, and the importance of international co-operation in developing cartel screens.

4.3. Strengthening authorities' internal skills on the digital economy

As noted already by (OECD, 2013[40])

> *Pro-active detection measures should be implemented not only because of their intrinsic detection capabilities, but also because they may produce positive externalities in terms of improving the efficacy of amnesty/leniency programmes.*

Pro-active detection tools may include more traditional methods (the use of economics, case analysis, industry monitoring and authorities' co-operation) or more advanced digital and technological instruments (see sub-section 4.2 above).

The latter in particular, however, require investing in knowledge and skills. Similarly to the pattern observed in the 1980s when authorities established chief economist teams in order to implement a new economic approach relying on economic evidence, more and more authorities today are hiring data scientists, engineers, and technology experts. In 2022, 19 out of the 32 authorities surveyed by Global Competition Review established a data unit, and 15 of them had a Chief Data Scientist (Meester, Garcia Pabon and Westrik, 2023[4]). Some authors have described this technology-led transformation as "*one of the top five developments in competition over the last three decades, up there with the introduction of leniency programmes*" (Kovacic, 2022[48]).

While sometimes these new figures only consist in a **chief technology or data scientist officer**, in many instances they take the form of **fully-fledged specialised units** encompassing diversified IT-related expertise, from machine learning to data science and cartel screens. These dedicated units are also entrusted to work with external providers to develop new investigation tools, based on algorithmic technology, big data and artificial intelligence.

Among their main roles, data units acquire and analyse data to detect potential wrongdoings and provide insights for cases. Rather than only relying on traditional requests for data capture, authorities have started building their own datasets, assembling new types of data from different sources (e.g., firms through bespoke data requests, public and non-public sources, data scraping).

In 2021, the Hellenic Competition Commission published a report on computational competition law and economics, which includes a detailed table on digital and forensics teams across OECD Members and BRICS countries (Brazil, Russia, India, China and South Africa) (Hellenic Competition Commission, 2021, p. 119[49]). Box 4.3 below includes some examples of recently established technology figures.

Box 4.3. Examples of technology teams in competition authorities to detect anticompetitive behaviour

UK: The CMA's DaTa team

The CMA's Data, Technology and Analytics (DaTa) unit aims to integrate data engineering, machine learning and artificial intelligence in antitrust investigations. The unit has already built an analytics platform allowing it to store, process and analyse bids and complex data speedily and flexibly. It has also built software enabling it to detect potential problems, such as data scraping to identify RPM or price surges (Hunt, 2022). These tools are already bringing insights into the CMA, to identify possible breaches of competition law.

Denmark: Data scientists to detect cartels

The Danish Competition Authority has integrated data scientists in their investigation and cartel division as well as in the market analysis and economics division. In 2019, it launched a project to detect cartels and bid rigging by screening public procurement data. The tool (called BidViewer) uses machine learning combining multiple indicators in a single model to identify suspicious behaviour. The tool has been made available to other authorities (Spain, Sweden, UK).

Greece: The Hellenic Competition Commission's forensic IT unit

The Hellenic Competition Commission (HCC) established a forensic IT unit in October 2020, which is headed by an economist and co-operates with several data scientists, who are acting as external experts for the authority. The HCC is also in the process of setting up an expandable Big Data Management Infrastructure Platform/dashboard, tailor-made by an external contractor where real-time public data from different sources (price observatory of supermarkets, fuel prices, vegetables and fruits prices, public procurement data, etc.) will be automatically uploaded. The HCC appointed experts to design a programme drawing raw data from unstructured information available on the internet in pdf

and other formats and extract them in csv (comma-separated values) editable files. The data are intended to be used mainly for cartel detection but also offer an integrated data analytics environment with various bespoke tools or off-the-shelf software that allow visualising and analysing data. The HCC also employed contractors to develop an integrated data template and dashboards as well as bespoke software programmes.

Canada: The Chief Digital Enforcement Officer

In 2019, the Competition Bureau of Canada hired a Chief Digital Enforcement officer to support its work on monitoring the digital landscapes as well as identifying and evaluating new investigative techniques. Amongst other duties, the officer will advise on tools and skills development in order to boost the Bureau's investigations in the digital economy.

Sources:
OECD. (2022). *Data screening tools for competition investigations - OECD Competition Policy Roundtable Background Note;* Hunt, S. (2022). The technology-led transformation of competition and consumer agencies: The Competition and Markets Authority's experience. Discussion paper; Hellenic Competition Commission. (2021). Computational Competition Law and Economics: Issues, Prospects - Inception Report.

Thanks to the new digital expertise of competition authorities, as witnessed during the November 2022 OECD Competition Committee roundtable on *Data Screening Tools for Competition Investigations*, there are now several known successful cartel enforcement cases that relied on screening results in Brazil, Italy, Korea, Mexico, and Switzerland.[15]

4.4. Whistleblowing programmes

Whistleblowing tools enable firms' employees to report anonymously antitrust wrongdoings without fearing any retaliation by their employer. Similar programmes exist in other policy areas, such as public procurement, tax avoidance and financial crimes, and empirical studies show that they have been highly effective in leading to higher monetary and jail sanctions as well as in facilitating investigations by providing valuable information (Spagnolo and Nyreröd, 2019[50]). As they do not require any admission of involvement in illegal activities, whistleblowing tools may also **help tackle a significant shortcoming of leniency programmes**. Indeed, when a practice is considered as "immoral", it may be more difficult for managers to come forward and openly admit their behaviour (Combe and Monnier, 2020[51]). By contrast, the rejection of what is socially perceived as immoral may be an incentive for employees to blow the whistle, as it does not require any admission of responsibility or involvement.

Whistleblowing tools are often associated with **financial rewards in exchange for reporting and co-operation**. Such rewards act as an automatic counterweight to the retaliation costs faced by co-operative employees (e.g., firing, blacklisting from the industry, reallocation, or demotion) which are difficult to causally link to blowing the whistle.

Competition authorities have recently introduced digital whistleblowing tools for antitrust violations. For example, Italy recently set up a **platform to submit encrypted information** through a third-party service provider that guarantees anonymity while allowing exchange of information with the competition authority. Protection of persons who report breaches of antitrust rules is ensured by the Whistleblower Protection Directive, for instance through minimum protection requirements against retaliation or through the obligation to establish internal reporting channels ensuring that a whistleblower's identity is kept confidential.[16] The Commission launched its own tool in 2017, which has been recently reformed and expanded.

While such tools have brought (or are expected to bring) valuable information to the authorities, observers have highlighted two potential shortcomings.

First, if employees report potential violations to competition authorities, firms' ability to obtain immunity under the leniency programme could be compromised, as authorities would already be in possession of evidence about the infringement. In other words, effective whistleblowing programmes may undermine leniency programmes and reduce incentives for the firm to come forward.

Second, with some notable exceptions (e.g., Hungary, South Korea, Slovakia, the UK), most whistleblowing tools do not provide for financial incentives to reporting employees. When sufficiently significant, such **rewards have proven effective in increasing detection and sanctions** against corporate fraudulent behaviour. In the US, for example, from 1986 to 2022, 69% (USD 50.4 billion) of the USD 72.6 billion the US DoJ recovered through civil fraud cases involving government funds resulted from whistle-blowers' insights. In 2022 alone, 86% of the USD 2.2 billion in settlements and judgments recovered by the DoJ through civil cases involving fraud and false claims against the US government were based on information received under whistle-blower reward schemes.[17] By contrast, the absence of rewards or their insufficient size may not offer the necessary insurance to employees to offset upfront the risks of retaliation measures.

In light of these considerations, US senators recently introduced a bill that would allow granting financial rewards to individuals reporting antitrust violations.[18] While in the field of antitrust this is still only a proposal, similar rewards have been recently introduced or revamped in other policy areas (see Box 4.4 below).

Box 4.4. Designing rewarding schemes for whistleblowers: recent experiences in the US

The Securities and Exchange Commission (SEC) can provide monetary awards to individuals who come forward with high-quality original information leading to enforcement action imposing a fine of more than USD 1 million. This award is between 10% and 30% of the money collected. In order to increase financial incentives, recent amendments were introduced to pay whistleblowers the maximum amount (30% of the collected proceeds in an enforcement action) when the potential award amount is less than USD 5 million and there are no negative factors, such as delayed reporting or culpability.

In the fight against money laundering, the US recently enacted a new AML program (31 U.S.C. § 5323), with respect to Bank Secrecy Act Title II and III violations, included as a substantial section in the National Defense Authorization Act of 2020/2021 (NDAA). The AML programme requires Congress to make annual appropriations to pay whistleblowers up to 30% of the sanctions obtained.

Source: Nyreröd, T., & Spagnolo, G. (2021). A Fresh Look at Whistleblower Rewards. Stockholm Institute of Transition Economics - Working Paper.

4.5. Close international co-operation to enhance cartel detection

Cartels are often made up of companies that operate across borders, and their illegal activities can have a significant impact on competition and consumer welfare in multiple countries. Enhanced co-operation among competition authorities, either formal or informal, may increase detection. First, it allows smoother exchange of information, increasing the ability to detect and prosecute cartels, even more when information is exchanged spontaneously and has not been previously requested. As a proof of its effectiveness, it suffices to look at other policy areas where international co-operation has enabled stronger detection of wrongdoings.

Box 4.5. Spontaneous exchanges of information to detect tax wrongdoing

The OECD *Manual on Exchange of Information for Tax Purposes* provides practical assistance to officials dealing with exchange of information for tax purposes. It considers spontaneous exchanges of information as a valuable tool to uncover cases of tax evasion. This possibility arises when an auditor or investigator comes across details of income or transactions that appear to be taxable in another jurisdiction but where tax due may not have been paid. By spontaneously exchanging information, tax authorities may discover tax evasion in specific cases, e.g., when a person liable to tax obtains a reduction in, or an exemption from, tax in one jurisdiction which would give rise to an increase in tax or to liability to tax in the other jurisdiction. The OECD Manual includes an Annex form for spontaneous exchanges of information.

Sources:
OECD *Manual on Exchange of Information for Tax Purposes*, 2021; OECD. (2012). Improving Internation Co-operation in Cartel Investigations - Background Note by the Secretariat for the Global Forum on Competition. Retrieved from https://www.oecd.org/daf/competition/ImprovingInternationalCooperationInCartelInvestigations2012.pdf.

Second, besides exchanges of information about potential wrongdoings, closer international co-operation may enable authorities to implement efficient intelligence gathering, for example by proactively profiling product markets that are subject to cartel investigations in other countries, with a view to detecting and deterring similar conducts in national markets (OECD, 2012[52]).

The 2014 OECD Recommendation Concerning International Co-operation on Competition Investigations and Proceedings recommends that

> *in co-operating with other Adherents, where appropriate and practicable, Adherents should provide each other with relevant information that enables their competition authorities to investigate and take appropriate and effective actions with respect to anticompetitive practices and mergers with anticompetitive effects.*

According to an OECD/ICN joint survey in 2019, 56% of the responding adherents have used this section of the OECD Recommendation (OECD, 2022, p. 56[31]). However, the confidential nature of information is still an obstacle to co-operation in several jurisdictions, especially in those that lack a legal basis for information exchanges. Many jurisdictions use **waivers** as an instrument for disclosure of this type of information, not only in merger control proceedings but increasingly in the context of leniency applications. Absent the consent of the source of information, some national laws provide for **gateways** to confidential information sharing, while others allow authorities to enter into **second-generation international agreements** (OECD, 2022[31]). Recent examples of the first type of solution include Australia,[19] New Zealand,[20] Canada,[21] the United Kingdom,[22] and Germany.[23] As regards second-generation agreements allowing the exchange of confidential information, these have increased and include agreements by Canada and Japan (2017), Canada and New Zealand (2016), Australia and Japan (2015), Australia and New Zealand (2013), European Union and Switzerland (2013), and United States and Australia (1999).

5 Conclusions

This Background Note has shown that over the period 2015-2021, the number of leniency applications have **dropped across most OECD jurisdictions and regions**. OECD jurisdictions saw the number of leniency applications drop by 58%. Looking at specific regions, Europe and the Latin America and Caribbean region experienced an overall 60% and 66% decline respectively. The Asia-Pacific region observed a less smooth decline, with an overall drop of 65% but significant spike increases in 2018 and 2019, mainly driven by a single jurisdiction. Most recently, some jurisdictions have experienced a resurgence in leniency applications, but it is still too early to determine whether this is an actual reversal of the declining trend, or a non-statistically significant one-off event.

It is important to bear in mind that the number of leniency applications is a highly imperfect proxy to measure the effectiveness of leniency programmes, as it does not reflect the quality of the applications received and the impact of leniency programmes on cartel formation and deterrence. However, faced with the unavailability of data on the proportion of undetected cartels and in light of some empirical studies, it seems plausible to assume that the **decline of leniency applications may constitute a threat for cartel enforcement**, especially for those authorities that have heavily relied on this detection tool.

The Note investigated the possible reasons behind this declining trend, relying on available data and empirical studies. The introduction of **private enforcement** and authorities' alleged **overreliance on leniency programmes** with the subsequent shift of their limited resources away from non-leniency detection tools seem to have played a major role. In particular, a successful leniency programme may become "*bourreau de soi même"* (**victim of its own success**) and, in the long term, reduce its own effectiveness by comparatively reducing the resources devoted to non-leniency detection tools.

However, it is not possible to draw definitive conclusions as to the isolated impact of specific policy changes on the number of leniency applications. Therefore, it is important to consider them alongside other factors, such as the application of criminal sanctions, the costs arising from administrative burdens and the growing complexity of cartels, the impact of settlements, the risks arising from un-coordinated leniency programmes across jurisdictions, and the interplay with other policy areas sanctioning multi-agent offences (e.g., corruption, public procurement).

Strengthening **complementary proactive detection tools** is important for two reasons. First, it will increase the likelihood of detection and thus, as a result of such enhanced threat, it will reflect positively on firms' incentives to apply for leniency. Second, certain socio-economic, personal, demographic, and cultural factors play a major role in the decision to apply for leniency. These factors are beyond the control of competition authorities and cannot be easily influenced by reforming leniency programmes. Thus, proactive detection tools remain essential irrespective of the (lack of) success of leniency programmes.

Without repeating discussions and findings of recent OECD roundtables, this Background Note has provided a short overview of novel initiatives and innovative detection tools on which there have been significant developments over the last years, and highlighted challenges faced by competition authorities to **enhance detection tools that can act as substitutes or complements** to leniency programmes. Cartel screens, accompanied by strong internal digital, data science and IT expertise, are a fundamental detection tool. Alongside investments in such innovations, authorities have also reformed traditional instruments, such as complaint systems, whistleblowing programmes, and national and international co-operation.

A **wide range of reactive and proactive detection tools**, coupled with **severe sanctions**, and **consistency with other competition instruments (e.g., private enforcement, criminal sanctions) and non-competition policies** are key to ensure effective cartel detection and enforcement.

Endnotes

[1] Some (though not recent) studies have attempted to calculate the ratio of undetected cartels and have found that the likelihood of cartels not being detected is very high. (Combe, Monnier and Legal, 2008[53]) estimated that the annual likelihood of a cartel getting caught in the EU is about 13%, while detection rates are between 10 to 20% when accounting for leniency programmes. A limitation of this study is that it is based on detection duration (duration between birth and detection) of cartels convicted by the EC, as no data exist on undetected cartels or non-convicted ones. Subsequent studies have shown that cartel detection in the EU remained between 10% and 20% most of the time between 1985 and 2009 (Ormosi, 2014[54]). Similarly, in the US, (Bryant and Eckard, 1991[55]) estimated that in the period between 1961 and 1988 the annual probability of cartel detection was approximately 13 - 17%.

[2] Yet, the only two investigations that were not based on an immunity application (Case AT.39780 - *Envelopes* and Case AT.39952 - *Power exchanges*) were both decided under the settlement procedure, meaning that the parties acknowledged their participation and liability in the cartel.

[3] https://globalcompetitionreview.com/article/korean-leniency-applications-directly-affected-us-decline-lawyer-says

[4] See Article 11(4) of the EU Damages Directive.

[5] Brazil's Law No. 14.470 of 16 November 2022.

[6] Article 66 of the Colombian Act No. 2195 of 2022.

[7] See judgement in Case C-162/15 *Evonik Degussa v. European Commission* [2017].

[8] The US Antitrust Criminal Penalty Enhancement and Reform Act (ACPERA) of 2004 has limited leniency applicants' liability and requires cooperation with civil plaintiffs, but has not changed the rules concerning disclosure of the DOJ's investigative files. In Canada, the law is unsettled and, while the Bureau's general policy is not to disclose information, it will do so if required by court order.

[9] https://globalcompetitionreview.com/article/eu-reviewing-leniency-policy-amidst-drop-in-first-in-applications-enforcer-says

[10] https://globalcompetitionreview.com/article/andean-enforcer-reissues-cartel-fines-based-controversial-leniency-application

[11] See examples from the Australia-Japan agreement (2015) and the EU-Switzerland agreement (2013).

[12] See US DoJ, Antitrust Division, Frequently Asked Questions about the Antitrust Division's Leniency Program (published on 3 January 2023), question 13.

[13] https://www.gov.br/cade/en/matters/news/complaints-to-cade-about-antitrust-violations-surged-after-the-remodelling-of-the-clique-denuncia-platform

[14] *Ibid.*

[15] Detailed information at www.oecd.org/competition/data-screening-tools-for-competition-investigations.htm.

[16] Directive (EU) 2019/1937 of the European Parliament and of the Council of 23 October 2019 on the protection of persons who report breaches of Union law (the "Whistleblower Protection Directive").

[17] https://www.justice.gov/opa/pr/false-claims-act-settlements-and-judgments-exceed-2-billion-fiscal-year-2022.

[18] See Proposal to the Senate to reform the antitrust laws to better protect competition in the American economy, to amend the Clayton Act to modify the standard for an unlawful acquisition, to deter anticompetitive exclusionary conduct that harms competition and consumers, to enhance the ability of the Department of Justice and the Federal Trade Commission to enforce the antitrust laws, and for other purposes. The bill is available at https://www.klobuchar.senate.gov/public/_cache/files/e/1/e171ac94-edaf-42bc-95ba-85c985a89200/375AF2AEA4F2AF97FB96DBC6A2A839F9.sil21191.pdf.

[19] Section 155AAA, www.australiancompetitionlaw.org/legislation/provisions /2010cca155AAA.html

[20] Section 99I, and 99J, Commerce (International Co-operation, and Fees) Amendment Act 2012, Public Act 2012 No. 84, date of assent 23 October 2012, www.legislation.govt.nz/act/public/2012/0084/latest/DLM1576307.html.

[21] Section 29 Canadian Competition Act, https://laws-lois.justice.gc.ca/eng/acts/c-34/page5.html#docCont; Information Bulletin on the Communication of Confidential Information under the Competition Act, Competition Bureau, 10 October 2007, www.competitionbureau.gc.ca /eic/site/cbbc.nsf/eng/01277.html.

[22] Section 243 UK Enterprise Act 2002, www.legislation.gov.uk/ukpga/2002/40/section/243.

[23] § 50d (1) and 50e of the German Competition Act – GWB, available at: http://www.gesetze-iminternet.de/englisch_gwb/.

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