Leniency programmes

An economic discussion

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Government regulation has always contained both positive and punitive incentives for firms. Punitive legislation is designed to deter anticompetitive behaviour and has historically represented an important feature of governmental regulation. Cartels represent one form of anticompetitive behaviour.

Detecting cartels is a notoriously difficult process. Competition authorities (CAs) are often at informational disadvantages when it comes to detecting and breaking cartels – often relying only on publicly available data and consumer complaints. As a result, leniency programmes have developed into an important tool for CAs to detect cartels. The costs associated with regulation and punishment of any abuse, as well as the scope to create distortions, mean that procedures designed to create positive incentives on firms to self-regulate, such as leniency programmes, can also represent a more efficient form of economic regulation.

The European Commission introduced leniency programmes into its cartel framework in February 2002, following the example (but with some significant differences) of American authorities where the current programme was first introduced in 1993. Such programmes have also been implemented across many other OECD jurisdictions and there are many instances where they have contributed to the successful break-up of cartel activity. As the website of the EC's directorate general for competition notes: "[it allows] it not only to pierce the cloak of secrecy in which cartels operate but also to obtain insider evidence of the cartel infringement".

What is perhaps less understood is the impact these programmes have on the economic incentives of firms and their employees. Is it the case that the existence of a leniency programme may stifle firms' behaviour or may collusion take different forms? Further, do the programmes accentuate the different incentives faced by employees and firm owners? It is these economic issues that this article seeks to review.

What are leniency programmes?

Of course, the main incentive for firms to engage in anticompetitive activities is the potential financial gain from reducing competition in whatever form it takes, for example through pricing strategies or collusive agreements. Assuming firms are profit maximisers, their only aim is to secure the best return possible on their assets. Forming a cartel with their rivals, firms can mimic monopolistic conditions and generate larger revenues using their collective market power. It is such arrangements that CAs seek to eliminate.

Leniency programmes can be defined as systems which exist to encourage a firm or an employee who is party to a cartel to come forward to the relevant authority and "self-report". Self-reporting can take two forms: ex ante (before the case has been detected by the CA) and ex post (after the case has been detected but no-one has been convicted). In return, the authorities can offer leniency. Leniency can be applied in varying degrees, but generally comes in the form of a reduction or even complete elimination of legal sanctions and/or fines. Table 1 below sets out some of the key features of the leniency programmes currently in force in the US and EU.

Table 1: Leniency programmes in the US and EC

US programme	EC programme
The first reporting firm gets full amnesty	Potential for complete immunity, though usually only a partial amnesty is granted for the first firm
The fine reduction does not depend on the evidence provided	Fine reductions do depend on the evidence provided
Subsequent self-reporting firms get no fine reductions	Fine reductions of between 50% and 20% can be granted for subsequent firms
Full immunity can also be granted if the case is already under investigation	Maximum fine reduction of 50% if the case is already under investigation

Adapted from Feess and Walz (2004)

A corollary of a leniency programme is the whistleblower – the actual person who does the self-reporting, who will have their own set of incentives and constraints. As discussed in Near and Miceli (1985), an important distinction to make is between internal whistleblowing (ie reporting misconduct of fellow employees to those within the firm able to act on it) and external whistleblowing, where the whistleblower (in this case, either a firm or an employee) passes the information on to an external body or organisation. The incentive structures and behavioural implications under the two variants may differ significantly (eg leniency programmes typically only apply to external whistleblowers). We focus on external whistleblowing here.

The competition authority's perspective

The CA's main concern is designing the leniency programme. It can choose the extent of leniency it wishes to offer, levels of fines for collusion and the opportunities for firms to self-report. To ensure an optimal design (in the sense that it represents the most effective approach for identifying/preventing cartels) the authority must examine the way in which such policies will impact on incentives.

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When assessing the economic impact of leniency programmes, commentators have often chosen a game theoretic approach (for example, see Harrington (2005)). This locates discussion of leniency programmes in the traditional oligopolistic framework. In a repeated game, collusion between firms will only be sustainable if the profits from it exceed those that can be derived from cheating (in one period) and then facing "punishment" by the other firm(s) thereafter. Mathematically, this can be shown as:

$$\frac{\pi_C}{1-\delta} \geq \pi_D + \delta\left(\frac{\pi_N}{1-\delta}\right)$$

Where π represents profits and the subscripts C, D and N refer to cartel profits, profits from deviation and non-cartel profits respectively. δ is the discount rate on future profits, which represents the firm's time preferences.

Harrington uses this basic framework to analyse how the possibility of leniency will impact upon incentives by introducing the CA into the system. He paints a picture of an active CA that can, at any particular time, launch an anti-cartel investigation into an industry. This investigation is on the basis of a hunch, and its success (as measured by convictions) is uncertain. If the investigation does not lead to any convictions, the CA ends up losing credibility and incurs a resource cost.

If the CA introduces a leniency programme, with the possibility of one firm applying for leniency, the probability of success is altered. If a firm does come forward, the probability that the investigation will result in a successful conviction increases significantly. But Harrington finds that a leniency programme that offers full amnesty to the first firm to come forward with evidence is not always the optimal policy. It is, he says, generally better for amnesty only to be awarded to the firm if the CA lacks sufficient evidence to result in a clear conviction without the information provided by the firm. Nonetheless, he acknowledges that it can also be desirable, ex ante, to award amnesty even when the probability of the authorities securing a conviction is quite high in order to destabilise a cartel.

In addition, Feess and Walzl (2004) illustrate in their model (discussed further below) that if the probability of a successful conviction is dependent on the quality of evidence provided, the fine structure should be based on the evidence provided to ensure those with higher quality evidence have a greater incentive to come forward.

The firm's perspective

Turning to the firm's perspective; not only do leniency programmes aid the discovery of abuses, they act as a deterrent. As explained by Becker (1968), all else being equal, as the probability of being caught engaging in anticompetitive activity increases, the less likely an individual is to engage in such behaviour. Kaplow and Shavell (1994) report that if a sanction for cartel activity arising from a leniency programme is only infinitesimally smaller than the expected fine from being detected, guilty parties will always choose to self-report. This is obviously true, but a more interesting question is why firms might have an incentive to self-report in the first place.

Following Feess and Walzl, we can imagine an industry with two firms who are thinking about colluding. The two firms differ in terms of the value of information they could provide the CA if they were to self-report once they have entered into a collusive arrangement: there are H types (can provide sufficient evidence to lead to a conviction) and L types (cannot provide sufficient evidence). The firms face two decisions: whether to collude and whether to self-report, and if so, when to self-report. Fees and Walzl note the multi-stage nature of this game

AUTHORITY POLICY ➔ NATURE DETERMINES INDIVIDUALS ➔ VIOLATION DECISION ➔ SPECIFIC TEAM DETECTION PROBABILITY ➔ PRE-DETECTION STAGE (EX ANTE) ➔ NON REPORTED STAGE ➔ CONVICTION STAGE ➔ DETECTION (EX POST)

In the first instance, the CA sets out its leniency programme. Nature then determines the type of evidence each firm can provide (H or L type). The violation decision refers to the decision firms face when deciding whether or not to violate competition law, ie collude. If firms collude, each firm has its own probability that it will be detected by the CA. There are two self-reporting opportunities: while the cartel is active (ex ante) and when it is caught (ex post).

There are a number of interesting implications of this model. In particular, the model implies that, in the case of H type firms, the greater the weight attached to future benefits of collusion the greater the firm's incentive to not self-report. So, the lower the company's discount rate, the more generous the leniency programme must be to create sufficient incentives for the firm to self-report. Given the lower quality of evidence, however, for L type firms full immunity will always be suboptimal.

Similarly, in order to create incentives for those firms with better evidence (ie H) to self-report ex ante, the fines imposed on firms engaged in collusive agreements should be higher at the conviction stage than at the pre-detection stage. Once again, however, given the different incentive structures, fines for firms that provide lower quality evidence (L) should be the same level ex ante as ex post. The model also suggests that a leniency programme that does not offer any reduction in the fine to a second self-reporter would be suboptimal.

Poorly designed leniency programmes may actually increase incidences of collusion. Buccirossi and Spagnolo (2006) argue that poorly designed leniency programmes can promote illegal activity and anticompetitive behaviour. In the context of a repeated game, leniency programmes allow those involved to use evidence of illegal activities as a credible threat to any firms that try to deviate from the agreed strategy and secure all the gains for themselves. Those engaging in anticompetitive practices no longer have a fear that by reporting illegal activity they will also leave themselves open to prosecution, because the leniency programme allows them to report the misconduct and in turn gain some form of immunity, and thus reporting abuses to the authorities becomes a credible punishment.

The employee's perspective

Consider now the impact on the incentives of employees within the firm. Within a firm there are owners (shareholders) and employees who will often have disparate incentives. For example, shareholders wish to maximise their return to their

investment, whereas employees seek to maximise their salaries. Sometimes, these interests will coincide, for example if employees are also shareholders or they receive some form of bonus linked to profits. What is interesting from the perspective of a leniency programme is whether one party will find it profitable to engage in collusive behaviour, given a belief that they would not face any risk of punishment.

To take an example, if a CEO of a firm receives a large bonus related to profits, they may be more inclined to engage in collusive behaviour with their rivals if they know that it is the firm that will be punished in the event of detection, not them. Thus, senior managers in particular may have an incentive to behave in a short-term way so as to maximise profits and benefit their careers. In contrast, shareholders may be more interested in the long-term future of the company and thus less inclined towards engaging in anticompetitive practices that may harm the reputation of the firm. Imposing criminal punishment for individuals, rather than financial penalties for firms, could create a (socially beneficial) principal-agent incentive problem in this case, whereby (even if it were in shareholders' interests to breach competition law) it would not be in the senior management's personal interests to engage in anticompetitive activity. However, this extends beyond the scope of this brief review.

Conversely, a junior employee may face a decision to self-report or whistleblow if they become aware of senior employees engaging in anticompetitive behaviour. The likelihood of an employee reporting an abuse will depend on the trade off between the cost of their actions, such as endangering their future career in the firm and losing their job or even the respect of colleagues, against the possible benefits. The introduction of criminal penalties for individuals may serve to increase the possible cost side of this assessment as individuals may perceive a fine imposed on the firm very differently from playing a role in sending someone to prison.

Such a decision will also be affected by the employee's perception of the potential for support they might receive from colleagues. For example, Schmidt (2005) argues that an individual might perceive themselves to be in a weaker position, that is less likely to be backed up by colleagues, if the firm pays employees relatively high salaries or if employees are tied to the firm over the long term, for instance via a pension plan.

The recent introduction of a trial scheme by the OFT to reward whistleblowers with financial incentives creates benefits that must also be factored into employees' decision-making processes. The impact on employee whistleblowing will depend on whether the amount offered is considered sufficient by the individual, in their cost-benefit analysis, to offset any losses in terms of reputation or future career opportunities. However, if the amount is too small or there is uncertainty ex ante about the actual amount that would be paid out, this would undermine the effectiveness of any financial incentives.

Leniency and whistleblowing programmes may also potentially create negative effects on the firm's performance. In particular, as set out in Schmidt, the increased probability of whistleblowing (in particular, external whistleblowing), while potentially having a positive impact in discouraging employees and the firm from engaging in illegal practices, may also increase the risk associated with a wider range of activities, and thus reduce the firm's involvement in them. This may have important implications for the efficiency of the firm.

How effective are leniency programmes?

It is hard to measure the effectiveness of such programmes. Their ability to deter firms from engaging in anticompetitive practices is inherently difficult to measure since it involves measuring something that did not occur. For similar reasons, undiscovered abuses are also not easily measured. So assessing whether the number of firms violating antitrust law has been affected by leniency programmes is not straightforward.

Consequently, the only way to try to gauge the success of these policies would be through the number of cases in which leniency programmes have been applied. It is debateable how good a proxy this would be since one would expect the number of cases as a whole to decline if leniency programmes are effective as an ex-ante deterrent to anticompetitive behaviour. So, although there are numerous cases of firms using leniency programmes to provide evidence, it remains unknown how influential the existence of leniency programmes has been in inducing cartels to collapse or deterring them from forming.

Thus, while there is a large body of theoretical literature examining the effectiveness of leniency programmes, empirical evidence is limited. Needless to say, without such evidence it will remain difficult to ascertain the ultimate impact of leniency programmes on cartel formation and duration.

Conclusion

Leniency programmes are an increasingly important part of the regulatory landscape. They have a significant role to play both in reducing regulatory costs and in undermining firms' incentives to engage in collusive agreements with competitors. The rationale for such policies is clear from the perspective of competition authorities, and economic analysis provides clear intuition about how such policies do or would be expected to affect incentive structures both at a firm and an individual level.

However, even though there is a large base of literature on the theoretical relationships, empirical analysis remains scarce. So the actual impact that such policies have on firm incentives and the general effectiveness of leniency programmes is less clear. Given the scope for distorting effects of poorly designed leniency programmes, quantifying the effectiveness of different types of programmes in reducing anticompetitive behaviour among firms remains an important area for further work.

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