# Who Cheats on a Cartel Agreement?

Catarina Marvão, SITE March 2015

Leniency policies, widely used by antitrust authorities, aim to deter and dissolve cartels by granting a fine reduction (up to immunity) to reporting cartel members. What are the characteristics of the reporting cartel members? Marvão (2014) addresses this question by developing and testing a model where cartel members are heterogeneous in terms of the value of the cartel fine they expect to receive. The author shows that the first reporting firm in a cartel tends to be the cartel leader (in the US) or a repeat offender (in the EU). Reporting is also shown to be more likely in cartels which affect a larger market (in the US) and in cartels which have a lower number of members but which affect a geographical area wider than the EEA (in the EU).

## **Analysis of Leniency Policies**

Cartels are a perennial problem and are one of the main concerns of the European Commission (EC) and the US Department of Justice (DOJ). As cartels are secret, measuring the rate of success of cartel detection is challenging. The increased number of detections in recent years may be the result of a higher desistance rate and/or a higher incidence of cartels. The US and EU Leniency Programmes (LPs) were thus designed to work as a device for the deterrence and dissolution of collusive agreements and have been in place since 1978 and 1996, respectively.

The DOJ's decision on cartel fines is made in accordance with the "U.S. Sentencing Guidelines" and is, in the vast majority of cases, followed by plea-bargaining. The US Leniency Programme grants full immunity to the first firm coming forward, whereas the other firms receive no leniency reduction. However, plea bargaining is present in over 90% of cartel offences and the settlements often lead to a reduced fine for the subsequent

cartel members. Firms are also liable for the damages caused by the cartel's activity. In addition, the Amnesty Plus Program benefits prosecuted cartel members who disclose previously undetected cartels.

EU fines are set in accordance with the "EU Guidelines on the method of setting fines" and are adjusted to account for aggravating and mitigating circumstances. The total fine is capped at 10% of the total worldwide turnover of the firm in the previous year. In the current LP, the first reporter receives immunity from fines and the subsequent firms receive a reduction of 10-75%, depending on their place in the reporting queue.

The empirical literature on LPs policies is relatively short and recent. It focuses on the adequacy of the leniency reductions and presents conflicting results. However, an understanding of the characteristics of the reporting firms, and of the cartels in which they take part, is vital to make policies provide the correct incentives for firms so as to dissolve and dissuade cartels.

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## The Issue of Repeat Offenders

The current EU fine guidelines state that a repeat offender is any firm that was previously found to infringe Articles 101 or 102 of the EU Treaty. The DOJ defines repeat offenders as any firm that "after release from custody for having committed a crime, is not rehabilitated". While repeat offenders are a serious issue, the LP Notices are not explicit as to whether or not they should receive a lower leniency reduction, if any.

Repeat offenders are also a highly debated issue. In Marvão (2012), it is shown that recidivism is one the factors which influence the granting and scale of EU leniency reductions. Connor (2010) has suggested that there is evidence of a significant incidence of recidivism, and identifies 389 recidivists worldwide in the period between 1990 and 2009. This number constitutes 18.4% of the total number of firms involved in 648 international hard-core cartel investigations and/or convictions. Werden et al. (2011) have contested Connor's definition of recidivism and his calculation of the numbers of multiple and repeat offenders. The main discrepancy between the two arguments appears to be in how cartel members who merge and form a new firm are dealt with. Werden et al. (2011) follow the legal practice (DOJ and EC) and suggest that no repeat offenders have been fined in the US, since 1999.

# The Model by Marvão (2014)

The aim of Marvão (2014) is to understand the specific characteristics of reporting cartel members and of the cartels in which they take part.

If firms are similar in everything but their own beliefs on the likelihood of being caught by the authorities, firms may have different incentives to report the cartel. Different beliefs may be generated from public statements issued by EU or US officials, knowledge of the budget allocated to the detection and conviction of cartels, and the proportion of convictions in cartel investigations, among others. Harrington (2013) formalizes this behaviour but his underlying assumption of homogeneity of firms only allows for symmetric equilibria.

Marvão (2014) extends the game in Harrington (2013) to include firm heterogeneity. In the first game stage, a two-firm cartel collapses for internal reasons. In the second stage, each firm receives a private signal on the expected probability of detection and conviction by the authorities. Given the signal received, and the expectations on the other firm's behavior, firms decide to report if the signal is above their threshold level. In addition to the individual fine, the cartel sanction includes a payment for overcharges and other costs inherent to being fined. These costs may include attorney fees, negative impact on consumer's perception (which may lead to lower sales), managers being fired, future punishment by other firms and possible future damage claims (from customers). Each cartel member can apply to the LP and receive a fine reduction.

The model shows that the cartel member with the highest expected fine will be the first to report the cartel, provided that it receives a sufficiently high and unbiased signal on the probability of being caught.

# Empirical Evidence in Marvão (2014)

The theoretical model is tested with the use of data on cartel convictions. The US data employed in the empirical analysis is an excerpt from John Connor's Private International Cartels dataset (1984-2009; 799 cartels). The EU data was self-collected by the author and includes 81 cartels in the period of 1998 to 2011.

#### **Cartel Leaders**

US data on the individual turnover are not available, but sales and overcharges are likely to be larger for the cartel leader. Although this creates a further incentive to report the cartel, the US DOJ guidelines state that leaders cannot receive immunity from fines. It is thus surprising that the results show that, in US cartels, the leader seems to be more likely to report and receive immunity from fines. The cartel leader is identified as the firm mentioned in the DOJ decision as a ringleader or mentioned in the history of the case as the cartel disciplinarian/bully. This result suggests that different definitions of ringleaders are used, or that the rule is not always enforced by the DOJ.

In the EU, it is only the coercer of the cartel who is not allowed, since the LP of 2002, to receive immunity from fines. Although the EU public statements on cartel convictions do not identify the leader or coercer of the cartel, it is likely that the coercer is also the leader of the cartel. However, with no explicit data on the leader, the results cannot be obtained.

#### **Repeat Offenders**

Surprisingly, the US results show that repeat offenders are more likely to receive immunity from fines. Even more concerning is the fact that this likelihood is larger with each additional repeat offender in the cartel.

The EU results show that firms that have colluded more than once are more likely to report the cartel and receive immunity from fines. This effect is particularly strong if the report occurs after the end of the cartel.

It may be that repeat offenders are larger in terms of sales or have better knowledge of how to interpret the signals received, perhaps due to their previous collusive agreements, and thus, are better at choosing the timing of the report and what evidence to provide the authorities with. Although it is in the authorities' interest to give incentives to the reporting of a cartel, legislation should ensure that the deterrence effect is not diminished by the existence of excessive leniency reductions.

#### **Additional Results**

Reports are more likely to occur in US cartels which serve markets with a moderate and, to a lesser extent, large number of buyers; as well as in cartels which are shorter and smaller. This is perhaps because collecting evidence is easier and/or quicker. In addition, firms which are convicted in both US and EU are more likely to be the first reporter in the US if they received a lower EU fine, perhaps because they are quicker to report the cartel to the DOJ.

EU Reports are more likely to occur in longer and smaller cartels. The latter result is noteworthy as it contrasts with the work done in Sjoerd (2005) and Brenner (2009), where the number of cartel members is never significant.

In EU cartels reported after their end, the reporter is less likely to have received other reductions. Although these reductions could be due to firms claiming not to know that the agreement was illegal, it could also be that firms apply for other reductions if they do not expect to receive a (large) leniency reduction.

#### **Conclusions**

When the perceived probability of conviction is high, firms are more inclined to report the cartel. This prosecution effect is magnified by the existence of the EU and US Leniency Programmes. In addition, a pre-emption effect exists as when firms believe that other firms will report, there is an incentive to be the first reporter and apply for a fine reduction within the LP. Therefore, identifying the most likely

reporter in a cartel is key to designing a successful LP.

Marvão (2014) shows that the main sources of fine heterogeneity are recidivism and leadership of the cartel, which illustrate the need for more proactive competition authorities.

Reports are also more likely in cartels that affect a larger market (in the US) and in cartels that have a lower number of members but which affect a geographical area wider than the EEA (in the EU). Leniency Programmes should thus be in line with these incentives, by focusing on dissolution of cartels in these markets and by increasing firm's beliefs on the likelihood of conviction. This could be done. example, through unannounced inspections, screenings and requests for information or for a meeting with a firm representative. These measures, provided that they are credible, would supplement and enhance leniency.

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