Successes and Challenges in the Fight against Cartels

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No modern development in antitrust law is more striking than the global acceptance of a norm that condemns cartels as the market's most dangerous competitive vice … [but] is modern antitrust cartel enforcement attaining its deterrence goals? - William Kovacic[1]

During the last 25 years, we have witnessed a sea change in the crusade against cartels. Many countries that previously lacked competition laws adopted them and, most critically, have actively enforced them. At the same time, competition authorities have had more instruments at their disposal to discover and prosecute cartels – in particular, leniency programs to lure cartel members to be cooperating witnesses – and to penalize cartels once convicted, with a rise in corporate fines and the criminalization of price fixing and bid rigging.

There are many reasons to believe that the environment is far less hospitable to firms forming and operating a cartel. Nevertheless, there is still the question for which we have yet to get an answer: Are there fewer cartels? Have the expansion of laws prohibiting collusion and the intensification of enforcement actually reduced the presence of cartels in the global economy? The purpose of this essay is to put forth some concerns emanating from the lack of an answer, suggest some policies while we wait for an answer, and encourage competition authorities to work with academic scholars to find an answer.

A Critical Examination of Enforcement Trends

In some jurisdictions, such as the United States and the European Union, government fines have tremendously increased in the last two decades. Prior to 1995, the Antitrust Division of

[1] OECD Policy Roundtable (2013), pp. 247-8.

the U.S. Department of Justice had not levied even a single fine exceeding US$10 million for a Sherman Act Section 1 violation. With the revision of the U.S. Sentencing Guidelines in the early 1990s, the upper bound on fines was raised and the DOJ has taken advantage of it to aggressively impose significantly higher fines. As of January 2016, 129 companies have been fined more than US$10 million and more than 25 companies have seen fines exceeding US$100 million. (These higher fines reflect both larger cartels as well as a higher fining rate.) The increase has been even more striking in the EU. Reflecting both higher fines and more convictions, the total amount of fines increased almost five-fold between 1995-2004 and 2005-14.

At the same time, it is not clear that financial penalties in the form of government fines (and customer damages in jurisdictions such as the U.S.) are sufficient to deter cartel formation. At a cursory level, it is obvious that they are insufficient because many cartels keep forming. It does not help that fines are often not designed to deter. In the EU and many other jurisdictions, fines are tied to the amount of revenue involved (typically, with a maximum of 10% of annual sales). While in any particular cartel case this could prove to be a large number, the failure to link the financial penalty to the incremental profit from collusion makes it more by accident than design if fines actually make collusion unprofitable in expectation.[2] Furthermore, fines remain at low levels in some jurisdictions so that conviction for collusion is more of a "cost of doing business" than a deterrent, perhaps no different from government fees and taxes that must be paid to operate any business (in this case, the business is a cartel). For example, the maximum penalty

[2] For an examination of this issue, see Katsoulacos, Motchenkova, and Ulph (2015).

in Chile is around US$25 million per defendant. By way of comparison, a recently convicted cartel in the wholesale chicken market involved annual sales on the order of US$1 billion. In sum, it is not at all clear that financial penalties, whether government fines or customer damages, are currently sufficient to deter many cartels from forming.

Turning to the people who are colluding, an important development in penalization is the expansion of criminalization. The U.S. DOJ has been putting price fixers behind bars for years and have been doing so at an ever increasing rate with ever more severe penalties. In the U.S., the fraction of individuals involved in a convicted cartel that went to jail rose from 37 percent during 1990-99 to around 70 percent since 2010, and the average sentence rose from eight months in the 1990s to where it is now two years (averaged over 2010-15). Due to legislation in 2004, the maximum sentence now stands at ten years and recently the DOJ succeeded in convincing the court to impose a five year sentence for a high-level executive in a domestic shipping cartel.

An enhanced emphasis on individual penalties is slowly starting to spread internationally as there are now 12 countries for which conviction of price fixing (or at least bid rigging, as in the case of Germany) can land a company employee in jail. Though many more countries have put incarceration on the table as a penalty, the reality is that the U.S. is the only place that routinely imprisons those implicated in unlawful cartels. Incarceration is a legitimate concern for those who collude in the U.S. but it does not appear to be that serious a threat in almost all of the rest of the world.

The most significant policy innovation has clearly been leniency programs. Once the DOJ revised its leniency program in 1993 and subsequently experienced a steady flow of cartelists coming to the door for amnesty, the rest of the world was quick to adopt their own leniency programs. The EU followed suit in 1996 and today more than 50 countries and unions have them. Many leniency programs have proven very active including those in the U.S., the EU, Brazil, and South Africa among others. But that is not universally the case. Leniency applications have been rare events in Estonia, Israel, Latvia, Lithuania, Poland, and Turkey (OECD Policy Roundtable, 2013) and it took several years before Chile received its first application. The leniency program has been moribund in some places and, as I argue below, it is not a panacea in those places where it has proven vibrant.

There are clearly encouraging signs in the fight against cartels: There are many leniency applications and many convictions. At the same time, there are some discouraging signs: There are many leniency applications and many convictions. Even in the U.S., which has been the most aggressive enforcer and doing it for the longest time, there is no obvious time trend in the caseload of the DOJ; it seems to be as busy as ever. If enforcement is working in terms of deterrence then the number of leniency applications and cases ought to start falling. I am unaware of that being the case in any country or union. Cartels continue to be discovered on a regular basis and we have recently witnessed some of the largest cartels ever, such as those in auto parts, LIBOR, and foreign exchange. Cartels keep operating in the U.S. in spite of aggressive enforcement, high government fines, serious prison sentences, and tenacious private litigation with its threat of treble customer damages. Given that cartels keep operating

in such an environment, what does this portend for jurisdictions with low corporate fines, an absence of private litigation, and no incarceration?

While the intensified enforcement of competition laws has led to more cartels being discovered and shut down, there is no compelling evidence (yet) of significant deterrence of cartel formation. We do not directly observe which firms would have formed a cartel in the old regime but are now deterred from doing so, nor do we know the fraction of cartels we are now catching. Underscoring the latter point, and contrary to an oft-stated claim, we do *not* know how many cartels go undiscovered. In a background paper for the Global Forum on Competition, the OECD Secretariat stated: "Cartel studies generally conclude that only about 10 to 30 percent of all such conspiracies are discovered and punished."[3] An Amicus Curiae Brief submitted to the U.S. Seventh Circuit Court refers to "estimates suggesting that more than two-thirds of conspiratorial activity goes undetected and unpunished."[4] These unwarranted claims are due to misinterpreting the estimated probability of a cartel's death to be an estimate of the probability of a cartel's discovery.[5] The fact is that we have no idea how many cartels are undiscovered.

In spite of the successes in enforcement, there is no compelling evidence that there are fewer cartels. It is an issue of first-order importance to assess whether there are fewer cartels and whether policies designed to fight cartels are actually working to reduce the cartel rate. Typically, the enforcement of laws prohibiting collusion is described as comprising three stages:

[3] Background paper for "Serial Offenders: Why Some Industries Seem Prone to Endemic Collusion," Global Forum Competition, October 2015, p. 17.
[4] "Amicus Curiae Brief of Economists and Professors in Support of Appellant's Petititon for Rehearing En Banc"- Motorola Motorola Mobility LLC v. AU Optronics, No. 14-8003, 2014 WL 1243797 (7th Cir. Mar. 27, 2014); p. 4.
[5] This claim is proven in Harrington and Wei (2015).

1) ***detection*** of cartels; 2) prosecution and ***conviction*** of cartels; and 3) ***penalization*** of convicted cartels. To that I would add: 4) ***evaluation*** of enforcement policies. For example, the determination of the extent to which a leniency program lowers the cartel rate is no easy task, but it is too important a task to ignore by virtue of its difficulty. Evaluation of policy is well-suited for collaboration between practitioners in competition authorities and scholars in universities and think tanks. The former bring institutional knowledge and data, and the latter bring the theoretical and empirical methods to extract crucial information from that data.

More Aggressive Policies to Detect and Shut Down Cartels

Given there is uncertainty as to whether enforcement is deterring cartels, it is then prudent to intensify efforts to shut down active cartels. If by chance they aren't being deterred then they must be disabled. While leniency programs are clearly valuable in aiding discovery and prosecution, here I will express some concerns about overreliance on them by competition authorities. I will also recommend the implementation of two other detection methods: screening and whistleblower rewards.

Many accolades have been bestowed on leniency programs and deservedly so. Leniency programs have been instrumental in prosecuting cartels – what is better than having a cartel member cooperate? – and one can point to specific cartels that were discovered through a leniency application. Though my remarks will largely be critical, that is only because many competition authorities have tended to focus exclusively on the virtues of such programs while not giving due attention to some potential concerns.

One issue that has been raised in some quarters is that leniency programs may be largely used by dying cartels. I first heard this concern voiced in June 2006 by EC official Olivier Guersent at the 11th Annual EU Competition Law and Policy Workshop in Florence. Subsequent research found that only 13 out of 110 EC cases with a leniency awardee over 1996-2012 involved applications before the death of the cartel (Gärtner and Zhou, 2012; private correspondence with Jun Zhou). That a dying cartel would be more inclined to apply for leniency makes perfectly good sense. If firms are able to effectively collude then applying for leniency means the loss of future collusive profits. However, if the cartel has collapsed then there is no cost in terms of foregone future profits; the objective at that point in time is to minimize the expected penalty. With collusion having ended, a leniency application becomes quite compelling.

The social value to receiving a leniency application from a dead cartel is that it enhances the chances of levying penalties on the other firms. If firms recognize this possibility when considering the formation of a cartel, they may be deterred by the prospect of a higher likelihood of paying penalties in the event of collapse. Still, if leniency programs are largely used by dying cartels then they are less effective than perhaps hoped for in destabilizing well-functioning cartels.[6] It is then an open question whether leniency programs largely serve to increase the conviction of dead cartels or whether they are also proficient at discovering active cartels and shutting them down.

[6] Though if a leniency program reduces the expected value of colluding because of the higher expected penalties, it can make internal collapse more likely as shown, for example, in Harrington (2008a) and Chen and Rey (2013).

The concern has also been raised that there may be overreliance on leniency programs and this could reduce the effectiveness of enforcement. While less than half of DOJ cases in 2000 had a leniency applicant, it exceeded 75 percent by 2010 (U.S. GAO, 2011). U.S. Senator Bill Blumenthal expressed a concern of overreliance when speaking to Assistant Attorney General William Baer:

> My concern is that most of the cases that are brought today are ... generated exclusively from firms that decided to come forward and seek a leniency application …. I'm worried that the success of the leniency program combined with budget constraints that your Division faces will, in effect, give you incentives to pursue only the companies that come forward … [A]s I know from personal experience, some of the most egregious and harmful of the cartels may have nobody coming forward. - U.S. Senate Hearing on "Cartel Prosecution: Stopping Price Fixers and Protecting Consumers" - November 14, 2013.

A deleterious effect of a competition authority's caseload being dominated by leniency cases is that it crowds out cases discovered and prosecuted through traditional non-leniency means. Possible detrimental side effects of a leniency program are explored in a theoretical analysis in Harrington and Chang (2015). Two findings are worth highlighting. First, a leniency program can make the environment less hospitable for relatively unstable cartels while making it *more* hospitable for relatively stable cartels. In their model, leniency is only used by dying cartels. Thus, when a cartel internally collapses, firms anticipate racing for leniency. As only one cartel member receives it, they expect to have higher penalties because of the presence of a leniency program. This effect serves to deter relatively unstable cartels from forming (or forming but having shorter duration) because firms recognize that collapse within a few years is likely and foresee having to pay penalties at that time.

That effect on marginally stable cartels is good for enforcement. However, relatively stable cartels do not expect imminent collapse so they are more concerned with discovery through non-leniency means such as a customer complaint. If a focus on handling leniency cases crowds out non-leniency enforcement then the changes of being caught and convicted without a leniency applicant could actually go down. This effect manifests itself in a higher average duration for relatively stable cartels when there is a leniency program. This theoretical finding resonates with a recent statement by António Gomes, President of the Portuguese Competition Authority, on European Competition Day in Athens (April 10, 2014):

> Cartels which have already become unstable ... are more likely to lead to a leniency application. On the other hand, cartels whose members are successful in maintaining stable collusion rules for several years ... are more difficult to be detected through leniency programs.

A second result in Harrington and Chang (2015) is that it is possible for a leniency program to actually cause there to be more cartels (and, at the same time, generate many leniency applications). Though there may be fewer marginally stable cartels, the longer duration of the more stable cartels can be of sufficient magnitude so as to raise the fraction of industries cartelized at any moment in time. Fortunately, it is shown that one can avoid having a leniency program raise the cartel rate by setting penalties sufficiently high and having leniency cases handled expeditiously so that the resources of a competition authority are not strained and non-leniency enforcement is not crowded out.

To be clear, the main takeaway from the analysis of Harrington and Chang (2015) is not that leniency programs are counter-productive but rather that: 1) the number of leniency applications is not a good measure of success (though can be an encouraging sign); 2) it is

unclear that leniency programs are effective at shutting down active cartels; and 3) competition authorities should not exclusively rely on leniency programs for detection.

Following up on the last point, let me discuss other methods of detection which some competition authorities have deployed and others should adopt. One of these detection methods is screening which is the use of market data – specifically, prices and quantities - to identify suspected episodes of collusion. Screening could involve looking for a sudden change in firm behavior ("structural break") that could be due to cartel birth or death, or looking for patterns in prices and market shares that are more consistent with collusion than competition ("collusive markers"). Screening has been performed with some success by competition authorities in Brazil, Mexico, The Netherlands, and South Africa. Private companies have also gotten into the game. Motivated by having been a victim of several input supplier cartels, Deutsche Bahn recently formed a cartel detection unit comprising lawyers and economists. I believe screening is a very promising avenue for cartel detection. As I have previously written about it, I will not elaborate any more upon it here.[7]

A program of offering rewards to whistleblowers is a natural extension of leniency programs. While a leniency program provides an incentive for those actively involved in a cartel to come forward and assist the government, a whistleblower program provide rewards to those who are (typically) not involved in a cartel and report suspected collusion to the government. The most common source of whistleblowers are employees of a colluding firm who are not themselves

[7] The interested reader is referred to Harrington (2007, 2008b) and to the slides for "Behavioral Screening" at Pre-BRICS International Competition Conference (Durban), November 2015 which can be downloaded at <assets.wharton.upenn.edu/~harrij/pdf/Harrington_BRICS_Screening_11.15.pdf>

engaged in the illicit activity but inadvertently uncover evidence of collusion. Sales representatives (and other employees) of cartel members may become suspicious because, for example, some employees express a lack of concern of competitors' reactions or seem to possess information about competitors' intentions. In the carbonless paper cartel,[8]

> A Sappi employee admits that he had very strong suspicions that two fellow employees had been to meetings with competitors. They would come back from trade association meetings with a very definite view on the price increases that were to be implemented and ... were relatively unconcerned by competitor reactions.

In the fine arts auction houses cartel,[9]

> some of [Sotheby's] personnel commented that they had a 'feeling' that the introduction of the fixed vendor's commission structure may have arisen out of some sort of understanding with Christie's.

Employees of Sappi and Sotheby's had information of value to the competition authorities but lacked the incentive to report their concerns. Indeed, there is a strong incentive not to do so because whistleblowers can be punished by their employer. Offering lucrative financial rewards can offset that disincentive to report and provide a competition authority with critical information.

Though leniency programs are ubiquitous, whistleblower programs are rare with only four countries at present having them. South Korea was the pioneer with the launching of its program in 2005 and is also the most generous with rewards up to 1 billion Korean Won (or

[8] *Official Journal of the European Union*, L 115/1, 21.4.2004, Case COMP/E-1/36.212 - Carbonless paper, Decision of December 20, 2001.
[9] *Commission of the European Communities*, 30.10.2002, Case COMP/E-2/37.784 Fine Art Auction Houses.

around US$870,000). The other countries are the United Kingdom starting in 2008 (with rewards of up to £100,000 or around US$140,000), Hungary since 2010 (with a reward of at least 1% of the government fine up to a maximum of 50 million forints or around US$180,000), and most recently Taiwan in 2015. These monetary values strike me as inadequate for a company employee to risk his or her job or perhaps career. In the case of the U.S. False Claims Act, whistleblowers who uncover fraud against the U.S. government (most commonly, Medicare fraud) can receive 15-30 percent of the government's recovery. That is the magnitude of compensation that is needed to incentivize employees to report unlawful collusion.

Rather surprisingly, the U.S. DOJ has expressed opposition to whistleblower rewards because "jurors may not believe a witness who stands to benefit financially from successful enforcement action against those he implicated."[10] This concern seems misplaced for several reasons. First, rewards are paid only on conviction and the evidentiary standards associated with a Sherman Act Section 1 violation are high (which, if not known to whistleblowers, could be explained to them at the time of their reporting). Second, a very small percentage of DOJ cases go to trial – most are settled with a guilty plea - so jurors are unlikely to ever hear the witness. (Though admittedly the prospect of a defendant's attorney discrediting a whistleblower on the stand could reduce the likelihood of obtaining a guilty plea). Third, if there is indeed a cartel, an investigation initiated by a whistleblower is likely to induce a leniency application. This last point leads to the following recommendation: The competition authority should invite the whistleblower's company to apply for leniency.

[10] U.S. GAO Report, 2011, p. 39.

Concluding Remarks

In spite of the concerns raised here, it seems beyond dispute that the world is a less accepting place for collusion. However, that is not a reason to conclude that we are winning the fight against cartels. Cartels continue to form and competition authorities typically find their resources stretched with a heavy caseload. To what extent cartel formation is substantively being deterred is an open question. To what extent there are fewer cartels now than five or ten or twenty years ago is similarly an open question. While these are highly challenging questions, they are not unanswerable. What they require is the dedicated attention of practitioners and scholars. Until that is done, we won't know if competition authorities are best viewed as the Red Queen from *Alice in Wonderland* who is running fast to stay in the same place or is instead the Pied Piper of Hamelin leading all of the rats to drown in the river.

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