



## How to Fight Hard Core Cartels? Comments on Collusion in Industrial Economics

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**Abstract.** Industrial economics has successfully clarified the mechanism of collusive conduct and its facilitating factors. But policy implications for remedial actions are less straightforward. This paper provides some supplementary comments from the viewpoint of enforcement issues against price-fixing agreements. There are some disagreements among practitioners concerning the probative value of circumstantial (or economic) evidence. Information exchange may be a possible clue to elucidate the evidentiary standard. On the other hand, there seems to be a unanimous agreement, if appropriately designed, on the desirability of leniency programs. Necessity of leniency programs must be a reflection of stricter standard of proof in court decisions, resource constraints of antitrust enforcer, or increasingly defensive acts of conspirators.

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**JEL Classification:** L13, L44

### 1. Introduction

Individual incentive to deviate from a cooperative arrangement is a natural market force by which competition insures lower prices and higher output. The most important role of competition authority is to deter conspiracies to fix prices or share markets. Feuerstein (2005) provides a lucid and comprehensive survey on collusion in industrial economics, and I would like to make some supplementary comments from the viewpoint of enforcement issues. As is succinctly summarized by Feuerstein (2005), industrial economics has successfully clarified the mechanism of collusive conduct and its facilitating factors. But policy implications for remedial actions are less straightforward.

It is almost certain that there are some conditions under which price-fixing agreements will facilitate better economic performance than unfettered competition. However, as is pointed out by Scherer and Ross (1990, p.335), “[t]he key question is not whether such cases exist, but how frequently they occur and whether the social benefits realizable through a policy that seeks to allow restrictive agreements only in those cases exceed the social costs of the policy.” Then, Scherer and Ross suggest that “...the gains from permitting restrictive agreements on a selective basis would be modest.” I agree to this thoughtful remark, but a moot point in practice is how to set evidentiary standard of per se illegality in restrictive horizontal agreements.

## 2. Evidentiary requirements

### 2.1. *Parallelism plus*

Oligopoly pricing in a concerted manner (tacit collusion or *conscious parallelism* in legal term) does not constitute an unlawful agreement in itself. That is not because such pricing is always desirable, but because it is almost impossible to devise a judicially enforceable remedy for such an interdependent pricing.

A lot of cases in the U.S. indicate that a conscious commitment to conspiracy can be proved by using direct *or* circumstantial evidence of price fixing agreement. In absence of direct evidence of conspiracy, competition authority may support its claim by using circumstantial evidence of conscious parallelism. When quite a few competitors in highly concentrated market act separately but in parallel fashion, this may provide probative evidence of *mutual understanding* by competitors to fix prices. Except for cases with hard evidence, however, there is no simple answer to the question of how much circumstantial (or economic) evidence is needed.

In antitrust cases based on theory of conscious parallelism, which has been mainly developed in the U.S., evidence of parallel pricing must be supplemented with *plus factors*, showing that alleged conduct is conscious and not the result of independent business decisions. Such factors may include evidence demonstrating that (i) defendants act contrary to their economic interests, and (ii) are motivated to enter into price fixing conspiracy. That is, acts that would be contrary to the actor's self-interest in the absence of a conspiracy, but which make sense as part of a conspiracy, may provide crucial evidence necessary to exclude the possibility of independent action.

In a nutshell, a conspiracy case based on circumstantial evidence must be economically plausible. "Market structure, incentive and opportunity play an important role in establishing plausibility of plus factors. On the other hand, acts that would be irrational or contrary to the defendant's economic interest if no conspiracy existed, but which would be rational if the alleged agreement existed, do tend to exclude the possibility of innocence" (a dissenting opinion in *Blomkest Fertilizer, Inc. v. Potash Corp. of Saskatchewan, Inc.*, 203 F. 3d 1028, 8th Cir. 2000).

### 2.2. *Circumstantial evidence*

It is ambiguous from recent cases in the U.S. that to what extent evidentiary standard should be robust where direct evidence is lacking. In recent U.S. antitrust cases, competition authorities tend to utilize econometric technique to provide circumstantial evidence as to collusive pricing, although in most cases econometric evidence is treated as necessary but not sufficient to prove the existence of collusive prices. As is pointed out by Motta (2004, p.189), "econometrics is more likely to give complementary evidence, rather than conclusive proof, of collusion... inferring illegal collusive behavior... from market data (that is, looking only at the outcomes) would not be

desirable, and the legal approach which requests some hard evidence as proof of collusion is sensible practice.”

This is a sensible policy stance on antitrust enforcement. Strict requirement of hard evidence, however, may be a double-edged sword. Most leading cases in the U.S. required “direct *or* circumstantial evidence that reasonably tends to prove ... a conscious commitment to a common scheme designed to achieve an unlawful objective” (*Monsanto v. Spray-Rite Service Corp.*, 465 U.S. 752, 1984; italics by the author). If competition authorities can only rely upon hard evidence such as confessions or signed agreements memorializing conspiracies, requirement for such direct evidence will substantially eliminate the capability of competition authorities to prove antitrust conspiracy.

Recent U.S. cases in which circumstantial evidence was not sufficient to prove conspiracies are: *Baby Food Antitrust Litigation*, In re, 166 F. 3d 112 (3rd Cir. 1999); *Blomkest Fertilizer, Inc. v. Potash Corp. of Saskatchewan, Inc.* (2000); and *Williamson Oil Co. v. Philip Morris USA* (11th Cir. 2003). On the other hand, *High Fructose Corn Syrup Antitrust Litigation*, In re, 295 F.3d 651 (7th Cir. 2002) was the case which proved conspiracy by circumstantial (i.e., economic) evidence. This case was headed by Judge Richard Posner.

It is almost certain that, in some cases, conspiracy was implausible and the risk of judgmental error was great. Even in recent leading cases, it was less clear that what type of evidence was indispensable for assessing unreasonable restraint of trade. Also unclear was the evidentiary standard and whether it meant the same in different cases. These recent cases illustrate current disagreement in terms of evidentiary requirements in the U.S. court decisions (Gellhorn et al., 2004, pp.266–282).

According to the leading Japanese case (*Twelve Petroleum Companies' Price Fixing Agreements*, Japanese Supreme Court Decision, February 1984, S55, No.2153), mutual understanding among competitors constitutes sufficient evidence to prove price fixing, and no circumstantial evidences of facilitating devices are needed. However, evidentiary standard of mutual understanding in itself is relatively high. Murakami (2005, pp.84–7) indicates that there are two salient characteristics of Japanese evidentiary requirement: that is, according to Japanese case law, (i) total market share of conspirators should be more than 50% in order to support valid inference of illegal conspiracy; and (ii) the probative evidence of bid-riggings requires clear definition of the relevant market.<sup>1</sup> Moreover, there were no compulsory measures for criminal investigations by JFTC.<sup>2</sup> Thus, the probative value of circumstantial (or economic) evidence is much lower and less noticeable in Japanese courts' decisions.

1 The number of conspirators involved in bid-riggings is usually quite large. Furthermore a single conspiracy tends to consist of a lot of bids which are made in different occasions, thereby bidders rotate among conspirators. Therefore it is often difficult for JFTC to define the relevant market clearly.

2 From January 2006, compulsory measures for criminal investigation will be introduced where a criminal prosecution is being pursued.

### 2.3. *Information exchange*

As is pointed out by Feuerstein (2005), *information exchange*, in particular exchange of *individual* information, makes collusion easier to sustain, because defection from the agreement can be quickly detected. Therefore, transparency on prices need not enhance competition, and antitrust authorities must consider such practices as a facilitating device. In my opinion, this proposition which is distilled from the recent literature is really suggestive of evidentiary standard.

Information exchange should not be treated as per se violation, since such practices can in certain circumstances increase economic efficiency and render markets more competitive. Information exchange may reduce price dispersion, thereby enhance competition. However, if there are only few competitors, it may be easier to keep prices high, and in that case, the inference may be stronger that information exchange as to individual transaction prices is sought primarily to facilitate price fixing agreements.

Secret price-cut by a competitor generally yields competitive advantage if secrecy can be maintained; when the terms of price reduction are made publicly known, other competitors are likely to follow and any advantage to the initiator is lost in the process. Thus, if one seller offers a price reduction for the purpose of increasing its market share, it is highly unlikely that the same seller will inform its competitors of the detail of pricing scheme.

Accordingly, the relevant question is: what type of information exchange should be prohibited and which might be tolerated? Motta (2004, p.191) enumerates a *black list* of facilitating practices: (i) announcements about future price and quantity conduct; (ii) exchange of disaggregate information about individual prices and outputs; (iii) any co-ordination among firms aimed at harmonizing business practices that increase price observability among sellers (without increasing transparency for buyers), such as resale price maintenance, basing point pricing, and best price clauses; and (iv) minority shareholdings among competitors that should be authorized only if efficiency effects can be shown.

These conducts can be regarded as pro-collusive factors since they facilitate the exchange of *individual* information among competitors. Therefore, as suggested by Feuerstein (2005), antitrust enforcers should prohibit these practices (except for the case of (iv) with efficiency defense as Motta suggested). Moreover, if there is strong complementary evidence, these conducts may provide sufficient probative evidence of price fixing agreements as was adopted in the case of *High Fructose Corn Syrup Antitrust Litigation*.

## 3. Leniency program and resource constraint of antitrust enforcer

### 3.1. *Leniency program*

Since evidentiary requirement tends to be stricter in recent cases, it is more and more difficult for competition authorities to prove conspiracy. Competition authorities are

subject to resource constraints and cannot freely increase the number of investigators. Therefore an alternative means to overcome the lacking of hard evidence is to provide incentive to conspirators to confess and implicate its co-conspirators with first hand evidence through *leniency programs*. Recent surge in the number of countries which have adopted leniency programs may be a reflection of stricter standard of proof in court decisions, as well as increased defensive acts of conspirators.

As is explained by Feuerstein (2005), “leniency programs change the rule of the game of forming cartels, but they do so in a complex way that depends crucially on their exact design.” Experiences in the U.S., EU and some other OECD countries, however, show that, if appropriately designed, leniency programs work well. One reason for the recent successful performance of leniency programs is that the penalties for cartel agreements have increased (OECD, 2001). That is, ease of detection is positively associated with the level of punishment. This is an impressive contrast with the *topsy-turvy* principle, i.e., the threat that competition will be particularly fierce if collusion breaks down actually stabilize collusion.

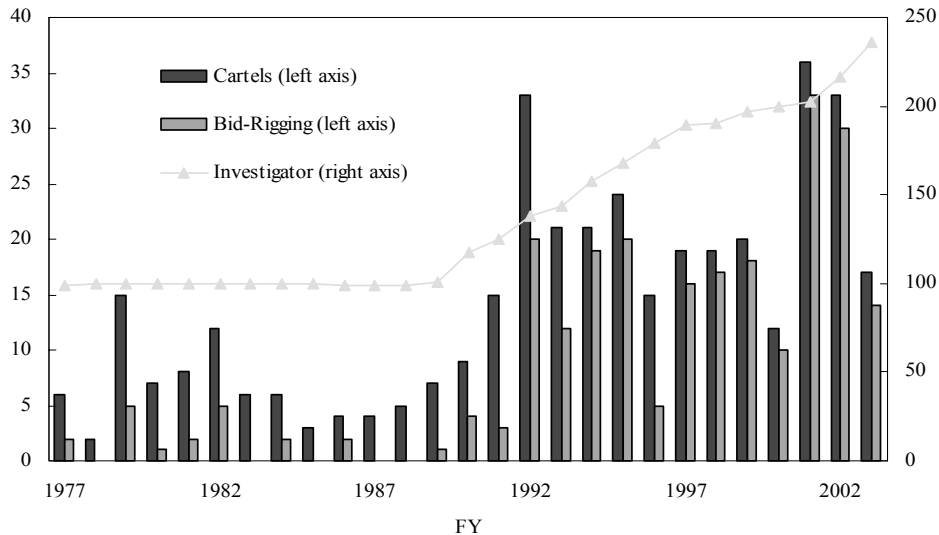
### 3.2. Japanese experience

In April 2005, the bill to amend the Japanese Antimonopoly Act was approved by the Diet. The most salient point of the amendment is that the JFTC implement a leniency program for the first time in Japan. At the same time, the amendment significantly increases the range of conduct against which the JFTC will be able to levy a surcharge, and the amount of surcharge is also significantly raised. These amendments are expected to become effective on January 1, 2006.<sup>3</sup>

The resources of the JFTC were historically limited, as is shown in Figure 1. Through the 1980s, the number of investigators was more or less one hundred. Since 1990, however, the investigators have steadily increased with the assist of hard pressure from the US government. At the same time there was (and has been) a considerable opposition from the Japanese business community against stricter enforcement. With the increase of investigators, the number of *recommendation* has dramatically surged in 1990s.

The salient characteristics of the Japanese experience are sharp increase in recommendation in the 1990s and the high frequency of recommendation against bid-riggings. The possible reasons appear to be that: (i) there was some policy change and resources of the investigation were mainly allocated to bid-riggings in the 1990s; (ii) there were much more latent (undetected) bid-riggings than other types of cartels; and (iii) it has been much easier to detect bid-riggings compared to other types of price fixing agreement. Feuerstein (2005) noted that “increasing the probability of detecting cartels

3 As for the recent amendments of the Japanese Antimonopoly Act, see JFTC (2005). JFTC officials' speeches such as Suwazono (2005) and Uesugi (2005) provide some historical background of the amendments.



Note: The number of bid-rigging constitutes a subset of the number of cartels. Recommendation is an administrative guidance, and if not accepted by alleged respondents, moves to an administrative hearing.

Data Source: JFTC Annual Report (various years) on the number of cartels, and internal personnel records on the number of investigators.

Figure 1. Recommendations against Cartels in Japan, 1977–2003.

causes costs, and it must be taken into account that antitrust authorities have only limited resources.” The Japanese experience offers a good example of this remark.

Ubiquity of bid-riggings in Japan may be associated with the close relationship among industry, politicians and government officials in certain business fields. This relationship may provide various channels facilitating information exchange among them through trade associations and government councils. In addition, golden parachute of government officials may be a hotbed of the involvement in bid-riggings by various types of conspirators such as private companies, state-owned companies, government officials, and politicians. Even though some remedial measures were introduced recently, bid-riggings have been continually exposed by JFTC.<sup>4</sup>

4 In May 2000, JFTC issued recommendation to the bid-rigging in agricultural administrative works which was actually initiated by the Hokkaido Prefectural Office. After a lot of exposure of the plot in the mass media, the Act Concerning Elimination and Prevention of Involvement in Bid-riggings was enacted in July 2002 which prevents government officials from involving in bid-riggings by (i) disciplinary measure against the government employees and (ii) claims to the employees of compensations for damage. In June 2005, JFTC filed a large-scale accusation additionally with Public Prosecutors Office into a bid rigging case concerning steel bridge construction projects ordered by the Ministry of Land, Infrastructure and Transport.

Leniency program is scheduled to be introduced in Japan next year and it would economize on resources of the Japanese competition authority, especially toward bid-riggings, but the real effect of the leniency program remains to be seen.

#### 4. Conclusion

Collusion in Industrial Economics has fruitfully clarified the mechanism of cartel formation. But there are still some disagreements among practitioners concerning the probative value of circumstantial evidence. Information exchange may be a possible clue to elucidate the evidentiary standard. On the other hand, there seems to be a unanimous agreement, if appropriately designed, on the desirability of leniency programs. Necessity of leniency programs must be a reflection of stricter standard of proof in court decisions, resource constraints of antitrust enforcers, or increasingly defensive acts of conspirators.

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