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New Horizons in Cartel Detection

Jonathan B. Baker*

My comments will address briefly two issues motivated by the interesting articles on price-fixing by Professor William Kovacic and Gary Spratling. Before doing so, I want to take a moment to note that wherever Bill Kovacic teaches, law review symposia on antitrust quickly follow. Bill is an inspiring mentor, and the students at George Washington are lucky indeed that he has landed here. The two issues I will address are whether it is difficult to detect cartels, and how antitrust enforcers can improve detection efforts.

It may seem odd to begin by asking whether antitrust enforcers have problems detecting cartels. After all, they appear to catch a lot. Most notably, every few decades, a shocking, high-profile cartel case involving large firms captures public attention. When the electrical equipment cartel involving General Electric and Westinghouse was uncovered around 1960, the company faced fines and expensive private follow-on damages litigation, executives went to jail, and books were written about the case.¹ The lysine and vitamins cartels, uncovered recently, were treated similarly in the courts and the press.² In addition, illegal cartels are often uncovered at other times, with less public attention. The Antitrust Division has successfully prosecuted price-fixing criminally in a wide range of industries, including multiple cases involving such routine activities as road building and school milk procurement contracts.³ Another example involves the Antitrust Division's civil price-fixing case, settled by consent, against the major airlines and their Airline Tariff Processing Co. ("ATP") joint venture during the early 1990s.⁴

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¹ See generally JOHN G. FULLER, *THE GENTLEMAN CONSPIRATORS: THE STORY OF THE PRICE-FIXERS IN THE ELECTRICAL INDUSTRY* (1962); JOHN HERLING, *THE GREAT PRICE CONSPIRACY: THE STORY OF THE ANTITRUST VIOLATIONS IN THE ELECTRICAL INDUSTRY* (1962); Phil C. Neal & Perry Goldberg, *The Electrical Equipment Antitrust Cases: Novel Judicial Administration*, 50 A.B.A. J. 621 (1964); *Additional Sentences in Antitrust Cases*, N.Y. TIMES, Feb. 8, 1961, at 16.

² See generally KURT EICHENWALD, *THE INFORMANT* (2000); JAMES B. LIEBER, *RATS IN THE GRAIN: THE DIRTY TRICKS AND TRIALS OF ARCHER DANIELS MIDLAND* (2000).

³ See 60 Minutes with Charles F. Rule, *Assistant Attorney General, Antitrust Division*, 57 ANTITRUST L.J. 257, 259-60 (1988) (reporting that in 1987 the Antitrust Division filed criminal cases against electrical contractors, road builders, antique-auction pools, and others); Constance K. Robinson, *Developments in Criminal Antitrust Enforcement*, 60 ANTITRUST L.J. 649, 650 (1992) (describing criminal cases and investigations in "diverse areas of the economy" including road-building, industrial hardware, health care, public auctions, soft drink bottling, school bus bodies, billboards, waste disposal, the government securities industry, and milk); Anne K. Bingham & Gary R. Spratling, Joint Address Before the Criminal Antitrust Law and Procedure Workshop, ABA Section of Antitrust Law (Feb. 23, 1995) (describing criminal cases involving steel wool scouring pads, residential flush doors, milk and dairy products sold to schools and the military, construction contracts, and crawfish), available at <http://www.usdoj.gov/atr/public/speeches/95-02-23.htm>.

⁴ *United States v. Airline Tariff Publ'g Co.*, 1994-2 Trade Cas. (CCH) ¶ 70,687 (D.D.C.)

With so much enforcement activity, do many instances of price-fixing go undetected? Do antitrust enforcers merely catch the tip of the iceberg, particularly with respect to cartels among large firms? As a matter of theory, one would expect that given the level of enforcement activity, those cartels that have taken steps to make detection by enforcers the most difficult would remain. An analogy will clarify the point. Many highways have high occupancy traffic lanes for use during rush hour only by cars carrying one or more passengers as well as the driver. The police can most easily identify as violators those automobiles with only one head sticking up. It will be more difficult for the troopers to identify solo drivers who have propped up a dummy in the passenger seat. Accordingly, when the police increase resources devoted to preventing drivers without passengers from using high occupancy lanes, one would expect them to catch most of the single drivers but only a smaller fraction of the drivers engaging in more deceptive tactics. Similarly, in policing cartels, higher enforcement activity can be expected to catch most of the easy-to-detect violators, but a smaller proportion of the hard-to-detect violators.⁵

Accordingly, the question of whether much price-fixing goes undetected, and thus whether antitrust enforcers need new tools to detect cartels, turns on whether there are many cartels that take precautions to make themselves hard to detect. It is obviously difficult to estimate this number because the cartels we seek to count are, after all, hard to detect. On the one hand, the main reason to suspect that there may be many undetected cartels is that when the tools for catching price-fixing improve—as with the amnesty program described by Gary Spratling—antitrust enforcers find more, and perhaps more harmful, cartels. I will have more to say about those tools shortly.

On the other hand, the main reason to suspect that few undetected cartels remain is the plausible possibility that the recent run of large price-fixing cases may represent a one-time change in business practice, by which an old culture of interfirm cooperation is ending. According to this story, it took the GE-Westinghouse case for large U.S. firms to recognize the need to alter their internal procedures governing relationships with rivals and develop methods of ensuring antitrust compliance. The ATP airline price-fixing case may have done something similar for the deregulating airline industry, which apparently had to learn not to cooperate. Finally, the run of recent high profile international price-fixing cases against well-known defendants like Archer Daniels Midland, Hoffman-La Roche and Sotheby's may now be teaching large firms in Europe and Japan lessons that most U.S. firms were forced to learn in earlier decades.

Aug. 10, 1994) (final judgment); *United States v. Airline Tariff Publ'g Co.*, 1993-2 Trade Cas. (CCH) ¶ 70,410 (D.D.C. Nov. 1, 1993) (final judgment); *see also* *United States v. Airline Tariff Publ'g Co.*, 59 Fed. Reg. 15,225 (March 31, 1994) (proposed final judgment and competitive impact statement); *United States v. Airline Tariff Publishing Co.*, 58 Fed. Reg. 3,971 (Jan. 12, 1993) (proposed final judgment and competitive impact statement).

⁵ Cf. Jonathan B. Baker, *Private Information and the Deterrent Effect of Antitrust Damages Remedies*, 4 J.L. ECON. & ORG. 385, 402 (1988) (welfare effects of detrebling private antitrust damages depend in part on distribution of potential cartels with respect to ex ante probability of successful antitrust enforcement).

Even if recent cartel enforcement reflects the effects of a systemic change in business culture for the better, rather than a sign that widespread price-fixing lies under the surface in many markets, hidden from detection, developing improved approaches to cartel detection is all to the good. In this area of antitrust, I am skeptical of arguments that antitrust enforcement overdeters legitimate conduct, presumably in the form of inducing excessive efforts at compliance with the prohibitions on price-fixing and bid-rigging. There is no serious evidence, for example, that firms are limiting joint venture formation or legitimate trade association activity for fear of being charged with price-fixing.⁶ Accordingly, I will turn now to survey the range of approaches available for detecting price-fixing and its cognates, bid-rigging and market division.

Methods of cartel detection fall into three categories, which I will describe as (1) enlisting the victims, (2) encouraging cartel participants to turn themselves in, and (3) identifying cartels from economic evidence. Antitrust law enlists the victims primarily by allowing private lawsuits for treble damages. This method has limitations. In practice, according to Professor Lande, the damages remedy is actually closer to single damages on average.⁷ Moreover, private lawsuits against cartels are often follow-ons to government cases, suggesting that the victims do more to promote deterrence than to bring cartels to light.⁸

Both Gary Spratling and Bill Kovacic emphasize a second approach to cartel detection: encouraging cartel participants to turn themselves in. Some strategies involve sticks. Price-fixing can lead, among other things, to fines and treble damages for the firms and imprisonment for their executives. In addition, a cartel uncovered in one jurisdiction can be prosecuted by multiple countries. In the United States, penalties have been ratcheted up over time.

Other strategies for encouraging violators to turn themselves in involve carrots. These include government offers of immunity or lesser penalties for coming in first and disclosing all price-fixing schemes that may involve the firm. The Justice Department's amnesty program, introduced in its modern form in 1993, has been wildly successful, as Gary Spratling, one of its authors, has detailed in this symposium. There is irony in the use of corporate amnesty programs as a basis for cartel detection. This strategy works by placing

⁶ In his paper in this symposium, Professor Kobiyashi notes the theoretical possibility of overdeterrence of price-fixing, but he provides no reason to consider that possibility a practical concern. See Bruce H. Kobayashi, *Antitrust, Agency, and Amnesty: An Economic Analysis of the Criminal Enforcement of the Antitrust Laws Against Corporations*, 69 GEO. WASH. L. REV. 715 (2001).

⁷ Robert H. Lande, *Are Antitrust "Treble" Damages Really Single Damages?*, 54 OHIO ST. L.J. 115 (1993).

⁸ In addition, the deterrent effects of private damages actions will be reduced to the extent the victims were aware that they may have been dealing with a cartel when they were charged a high price by it (and thus more likely someday to blow the whistle by filing a private lawsuit). When both victim and violator are aware that the victim may sue for damages in the future, the market price will go up to undo the later damages in an expected sense. Jonathan B. Baker, *supra* note 5; see also DANIEL F. SPULBER, *REGULATION AND MARKETS* § 19.4 (1989); Stephen W. Salant, *Treble Damage Awards in Private Lawsuits for Price Fixing*, 95 J. POL. ECON. 1326, 1327 (1987).

the firms in a “prisoner’s dilemma,” making it more attractive for the firm to “cheat” by revealing all to government enforcers than to “cooperate” by remaining silent. The irony is that these are the very markets in which the usual “prisoner’s dilemma” that generates marketplace competition—by which firms prefer to compete by cutting price rather than cooperate with their rivals in fixing prices—does not operate.

Professor Kovacic’s proposal for a bounty program would also provide a large carrot to price-fixers for coming forward with information about cartels. One of the justifications for introducing a bounty program in government procurement, that it helps remedy a form of government failure, however, does not apply to antitrust. Some federal procurement agencies are thought to have been “captured” by contractor interests, and thus to have been unwilling to challenge suspect industry practices. In contrast to the hypothesized situation in federal procurement, however, there is no reason to think that the Antitrust Division acts in the interest of price-fixers.

The final approach to cartel detection involves reliance on economic evidence. Two types of economic evidence may be employed. The first evaluates the market structure to determine whether it is plausible that firms can solve their “cartel problems” of reaching consensus on price and output, deterring cheating on that consensus, and discouraging entry.⁹ These techniques, however, identify necessary, but not sufficient, conditions for cartel formation, and thus are probably better suited for ruling out industries in which collusion is unlikely than for identifying industries in which price-fixing most likely has occurred.¹⁰

More recently, economists have developed new empirical methods of identifying suspicious bidding practices in potential bid-rigging situations. This has always been done in an informal way. For example, if the prices bid by all the unsuccessful bidders in a particular procurement auction are identical to the last digit, it may be plausible to infer that the firms selected that figure as part of a market division scheme, to avoid undercutting the firm designated to win the procurement. Indeed, evidence of identical bids to the Tennessee Valley Authority led a journalist to uncover the electrical equipment cartel.¹¹ More recent econometric approaches take more systematic looks at the conduct of firms that bid in multiple auctions. They compare the bidding behavior of the firms in the market suspected of bid-rigging to the actual bidding behavior of firms that are known to compete¹² or to the way competing firms would be expected to behave given a plausible economic

⁹ For a recent survey of an extensive economic literature on factors that facilitate and frustrate collusion, see Simon J. Evenett & Valerie Y. Suslow, *Preconditions for Private Restraints on Market Access and International Cartels*, 3 J. INT’L ECON. L. 593 (2000).

¹⁰ See Jonathan B. Baker, *Two Sherman Act Section 1 Dilemmas: Parallel Pricing, the Oligopoly Problem, and Contemporary Economic Theory*, 38 ANTITRUST BULL. 143 (1993) (explaining that if industry economic environment is not conducive to coordination, it would be irrational for firms to agree on price; but if the industry is fertile ground for coordination, the firms may be able to exercise market power through price-leadership that falls short of reaching an agreement).

¹¹ DENNIS W. CARLTON & JEFFREY M. PERLOFF, *MODERN INDUSTRIAL ORGANIZATION* 127-29 (3d ed. 2000).

¹² Robert H. Porter & J. Douglas Zona, *Detection of Bid Rigging in Procurement Auctions*,

model.¹³ For example, if firms do not make higher bids when their costs are greater, or if they systematically raise their bids when a rival lowers its bid, it may be plausible to infer that those sellers are not behaving competitively.

Detecting price-fixing has historically relied less on economic evidence than many other areas of antitrust. But with the development of new econometric tools, economists may come to play a greater role in detecting cartels in the future. After the successful reinvigoration of the Justice Department's corporate amnesty program, if widespread hidden price-fixing remains to be discovered, new economic approaches such as these may be the best way to uncover them.

101 J. POL. ECON. 518, 520-21 (1993); Robert H. Porter & J. Douglas Zona, *Ohio School Milk Markets: An Analysis of Bidding*, 30 RAND J. ECON. 263 (1999).

¹³ See, e.g., Patrick Bajari & Lixin Ye, *Competition Versus Collusion in Procurement Auctions: Identification and Testing* (Feb. 20, 2001) (unpublished manuscript) (on file with author).