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January 14, 2010

Are Global Cartels More Effective Than “National” Cartels?

Introduction

There is a rapidly growing economic literature on the effectiveness of cartels. The seminal article by Levenstein and Suslow (2006)¹ has spurred research by Joseph Harrington other economists. This literature has been enabled by publication of details of cartels in the United States² and Europe as cartels have been discovered and members fined by the competition enforcement agencies. The increasing richness of discovered cartels is providing industrial organization economists with insights into the functioning of “successful” or “effective” coordination of firms.

There is one perspective of cartels, however, which has received little attention in the economic literature: global versus “national” cartels. Global cartels are those whose coordinated conduct affects most, if not all, sales of the affected products/services worldwide. The Bulk Vitamins cartel was a global cartel, though the members of the cartel were primarily European and Japanese. In

¹ Levenstein, Margaret C., & Suslow, Valerie Y. (2006). What Determines Cartel Success? Journal of Economic Literature, Volume XLIV(1), 43-95.

² In the United States the details of the functioning of a cartel are often learned through follow-on civil action whereas in Europe it is predominantly through the published reports of the European Commission.

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contrast, the hydrogen peroxide cartels in the United States and Europe were national in scope despite the presence of both European and American members. With the expansion and depth of the European Union it is, of course, increasingly difficult to distinguish a truly national cartel (for example, cement in Germany) from a trans-European cartel with the enforcement of the competition law by the European Commission. This has become complicated because of the long-standing practice in some industries of “honoring” home territories. The absence of any meaningful price competition (or any competition for that matter) would continue unabated until some exogenous event caused explicit cartel behavior, which was subsequently discovered by the European Commission. The four global cartels described below do not include trans-European cartels.

Defining an “effective” (“successful”) cartel should be relatively straightforward. Profit-maximizing firms engage in coordination behavior because they conclude that their future profits will be higher with coordination than with independent behavior. And the longer a cartel remains in business³, the better it is for the cartel members. A discounted profit attributed to the cartel as a percent of discounted profit without the cartel would provide the most comprehensive measure of cartel effectiveness. Alas, such a measure is clearly not feasible, even in the American legal system. Reliable financial statements for the targeted product are seldom available, particularly for many years in the past. And in other parts of the world, access to cartel members’ profitability statements is simply not possible.

This is one reason, among several, for the focus on prices to measure the extent of the harm to purchasers caused by a cartel. Economists attempt to quantify the extent to which cartel-affected prices are higher than they would be if the cartel were not present. The resulting “overcharge” is the measure by which purchasers have been harmed per unit of the affected product.⁴

³ A recent paper by Levenstein and Suslow (2009) is right on point “Breaking Up Is Hard to Do: Determinants of Cartel Duration.”

⁴ A price overcharge of, say, three percent, may seem small (why would firms risk cartel behavior for such small rewards?) but this may well result in pre-tax profit being 9-10 percent (or more) higher.

My experience as an economist with four global cartels suggests that truly global cartels may be more effective (as defined above). Admittedly, four is anything but a scientific sample. As other global cartels are added, a more rigorous analysis (a la Levenstein and Suslow) can be conducted. These four cartels are described here partly because of intervention by enforcement agencies and partly because of my personal knowledge. The four cartels are MSG and Nucleotides; Bulk Vitamins; Micro Crystalline Cellulose (MCC); and Marine Hoses.

MSG and Nucleotides

This long-standing cartel had four principal firms (two Japanese and two Korean) and two Taiwanese fringe firms. The cartel had its origin in a failed attempt by the Korean firms to enter the Japanese market. The cartel met annually and agreed on quantities and prices by geographic market. Even the sequence and prices were agreed upon for the few multinational firms that employed a formal bidding system.

The cartel was administered by the two Japanese firms. The largest producer of MSG and nucleotides (also a food flavoring that provided more intensity) was Ajinomoto, whose name literally means MSG. The other Japanese firm, Takeda, was responsible for monitoring the two Korean firms.

The cartel came to light through an obscure plea agreement by Takeda in the late 1990s in the United States and the now infamous taping by Mr. Whitacre of Arthur Daniels Midland in the Lysine investigation. As with Lysine, Ajinomoto feared ADM might disrupt the MSG market in the United States, hence the separate two-party agreement.⁵

The first record of cartel action was 1968, but probably began several years earlier. The cartel ceased to function after Takeda's plea agreement.⁶ Thus, the cartel functioned continuously for about thirty years. There were, of course, some tensions along the way. The Japanese and Korean firms did not trust each other. For example, Ajinomoto's joint venture in France filed (successfully) an anti-dumping complaint against the Korean firms in the European Union. Ajinomoto's main interest in building an MSG plant in the United States was to

⁵ ADM entered and exited the MSG market in the 1990s.

⁶ Takeda's plea agreement for MSG was a small part of a multi-page agreement concerning Bulk Vitamins.

threaten the Korean firms with anti-dumping duties if they did not follow cartel rules.

Was this cartel profitable for its members? By my imperfect estimation, prices for MSG and nucleotides were at least 12 to 43 percent higher, respectively, with the cartel than without. The impact on profitability would be even greater, though there was no empirical basis to quantify this effect. And the cartel existed for about thirty years. It was quite successful.

Microcrystalline Cellulose (MCC)

MCC is a common but relatively unknown product: any person, who has swallowed a medication, used a health supplement, or used salad dressing, has consumed MCC. As the name implies, it is a wood-based material used to bind the active ingredients in pharmaceuticals, vitamins and similar health supplements, and to thicken certain food preparations.

A U.S. corporation developed the product and filed patents in major countries in the world. In the late 1960s, a Japanese firm entered into a licensing arrangement with the American firm. As part of the license, it was agreed that the American firm would sell MCC in North America and Europe, and the Japanese firm would sell in Japan and the rest of Asia and the Pacific. In the mid-1980s, the patent expired, and a new agreement was reached between the two firms maintaining the same geographic allocation of markets.

In the mid-1990s the U.S. Federal Trade Commission intervened, alleging a global market division between the two firms. The FTC settled the matter by having the parties agree to (1) void the current agreement; and (2) cease from entering any subsequent agreement that would restrict price competition in the sale of MCC in the United States. While this settlement appears harmless to the parties, most large purchasers of MCC throughout the world were alerted to the alleged market allocation, resulting in lower prices of MCC. Improved quality of Taiwanese and Chinese MCC resulted in some price competition in the vitamin segment in the United States and Europe. Also, by 1996-97, the American firm was facing increasing price competition in the pharmaceutical segment of the MCC market in Europe and the United States from de novo entrants.

The MCC cartel was successful. It operated for about 13 years with an estimated price overcharge as high as 35 percent.

Bulk Vitamins

The Bulk Vitamins cartel is well known, in part because of the high profile provided by the enforcement agencies of Europe, the United States, Canada, Japan, and perhaps others, and in part due to the magnitude of global bulk vitamin sales (several billion U.S. dollars annually). The cartel appears to have begun during 1989-90 with the participation of three major European manufacturers of bulk vitamins, several smaller manufacturers of bulk vitamins, and several Japanese firms. Based on the various plea agreements, the Swiss firm Hoffman LaRoche was the largest manufacturer of bulk vitamins and the manager of the cartel.

The production of vitamin C, and hence its price, was the one bulk vitamin the cartel was unable to control. Once Chinese suppliers were able to produce quality vitamin C in bulk, the global price of vitamin C fell dramatically. The other bulk vitamins remained in the control of the cartel and the elevated cartel prices continued through 1997.

The cartel ceased to exist when the French supplier asked to become the amnesty firm in the United States. Criminal fines of almost US\$1 billion were levied by the DOJ and similarly large fines were levied by the European Commission. Civil litigation in the United States resulted in settlements valued at about US\$1.5 billion.

The bulk vitamin cartel was quite successful for its members. With the exception of vitamin C, the cartel was in business for about eight to nine years (1989-1997). The weighted average price overcharge for all vitamins (including C) was 18-19 percent. If vitamin C is excluded, the weighted average price overcharge is close to 30 percent. And the percentage increase in pre-tax profits would be substantially higher.

Marine Hose

The marine hose cartel was a long-lived cartel that managed to stay “under the radar” of the enforcement agencies until quite recently (2007). Marine hose is a specialty hose used for transporting petroleum and petroleum products in a marine environment (off-shore production, loading and off-loading at docks, etc.). There are about seven suppliers, spread around the world (Great Britain, France, Italy, and Japan). The cartel is said to have begun in the 1980s as an

increasing proportion of marine hoses became commodity-like, so that prices became the principal decision criterion of many purchasers.

A tradition among most purchasers was to request sealed bids from several suppliers of marine hose. Thus, coordination of prices requires coordination of the bids, and a designation of the successful bidder. This, in turn, required a recording of market shares of all suppliers on a regular basis. The administrative functions of the cartel were performed by a British person, one Peter Whittle.⁷ He would identify the “successful” bidder and the gross profit margin of the job.

For about three years (1997-1999) the cartel broke down and gross profit margins plummeted. The cartel was reestablished in 2000 with PWC as its coordinator and continued until the late 2000s with the arrest of the principal cartel representatives and Mr. Whittle.

Though the annual global sales of marine hoses was small (probably around US\$150 million), this cartel was very successful. It was in existence for at least 14 years (and probably longer). The price overcharge was also high, at an estimated 30 percent. The increase in pretax profit of the cartel members, of course, was even greater.

Summary

What characteristics do these four global cartels share that made them so successful in terms of longevity and elevation of prices for the cartel members? Clearly, one of the characteristics is the relative obscurity of the products (with the possible exception of bulk vitamins). Closely related is that for the vast majority of purchasers of these four cartel products, the cartel product was a very small part of total costs. Thus, for example, MCC probably constituted less than one percent of the costs of branded pharmaceuticals. The cost of bulk vitamins was consistently one to two percent of total costs for livestock producers, ready-to-eat cereals and similar major purchasers. These cartels (at least for many years) simply passed under the radar.

Another shared characteristic was a system which increased the probability of adherence to cartel rules. Through the leadership of a dominant member (MSG

⁷ His corporation, PWC, is not to be confused with the auditing firm Price Waterhouse Coopers.

and Bulk Vitamins), or a creative administrative apparatus (Marine Hoses), or a scheme which could easily be monitored (MCC), these four cartels provided increased certainty of continued cartel pricing to their members.

Still another shared characteristic was that cartel members, globally dispersed, may have avoided attention of domestic enforcement agencies since much of the output is exported. When, for example, Italian and Japanese firms are engaging in cartel behavior, the cartel may be more difficult to detect and, besides, “it is someone else’s problem” by virtue of the exports. As globalization continues, a greater share of the world’s cartels will be global in practice and in effect on prices.⁸

Another common characteristic, at least for these four global cartels, is their remarkable effectiveness. Their duration and magnitude of price (profit) elevation made it easier to withstand the ups and downs of a cartel. Firm profitability was so vastly improved with the cartel, that the normal tension of “cheating” was reduced and less likely to cause the cartel to dissolve.

⁸ An example of this may be with vitamin C. The European-Japanese cartel for this particular bulk vitamin unraveled because of Chinese exports. It has been alleged that Chinese suppliers of vitamin C subsequently engaged in cartel behavior causing the price of vitamin C to return to its prior cartel levels.