Chapter 6

ECONOMIC IMPACTS OF THE CITRIC ACID CARTEL

Market forces facing single producers usually overwhelm any attempts by a firm to deviate from its assigned role in an industry (see Chapter 2 above). With a given plant in place, once a seller in a competitive market observes the market price, it passively sets its output level at the profit-maximizing point. If, as was the case in the global market for citric acid, food-grade product made by alternative sellers was viewed by buyers as perfect substitutes, sellers have few strategic options to try to improve their profitability. Efforts by a firm to distinguish itself on the basis of delivery terms or after-sales service can easily be imitated by rivals. Investing in a lower cost production technology might yield better profits for a few years but carries the danger of operating at inefficiently low levels of utilization or betting on the wrong technology. Price cuts can be quickly matched by other sellers and can lead to a price war that hurts everyone until it is abandoned. Price increases for homogeneous products will lead to an erosion of a firm’s market share and a build up in excess capacity that further squeeze margins.

While single-firm actions contrary to market forces are doomed to failure in most commodity markets, joint actions by a group of sellers large enough to dominate supply are another matter. For millennia, sellers have realized that collective action on prices or output levels can raise the profits of all suppliers in a market. The citric acid cartel met these criteria. It chose to raise selling prices simultaneously around the globe. With control of about two-thirds of the world’s supply and a system for detecting and compensating for cheating by its members, the cartel clearly was efficacious in raising prices in at least North America and Europe. In this section, the effects of the cartel’s collusive behavior on prices, international trade, profits, and consumer welfare in the U.S. market are detailed as precisely as possible.

PRICE EFFECTS

When the G-4 began meeting in 1991, they made agreements to raise their list prices. In some industries, like retail grocery stores, the price listed on the item or shelf is the actual price a buyer will pay at check-out. However, in many other industries, like automobiles, most consumers regard the list price as simply the highest price a seller hopes to get for the product, whereas after searching for alternative offer prices most buyers will purchase an
automobile at a negotiated discount. List prices for most industrial commodities like citric acid follow the automobile model of pricing (see "Selling Practices" in Chapter 4 above).\(^1\)

Citric acid prices are hard to find. Chemical-industry magazines occasionally published announcements of list prices of citric acid, particularly when fairly large increases were initiated and when all the major suppliers followed the movement in prices. Somewhat less frequently these magazines would summarize the transaction prices that buyers claimed to be paying (Connor 1998:55).\(^2\) In December 1988, U.S. list prices of the most common type of citric acid were $0.81 per pound (i.e., full truckloads of acid delivered east of the Rockies at a 100% active-content strength). A year later, the list price had dropped to $0.75 per pound and kept falling to the summer and fall quarters of 1990 when it reached a low of $0.63 (see Figure 5.1). Press reports attributed this reduction in list prices by Pfizer and Haarmann & Reimer to the expectation that Cargill’s new plant would pour vast quantities of citric acid onto the market. Throughout the latter half of 1990, Cargill fulfilled these expectations. Indeed, Cargill initiated the late 1990 price cuts as a way of quickly attracting new customers. A couple of trade magazine articles asserted that the largest buyers of citric acid were paying 6 to 10 cents per pound less than list price during this period. That is, by late 1990, U.S. manufacturers were selling citric acid to their most favored customers at $0.53 to $0.57 per pound. At those prices even Cargill’s efficient operation was probably losing money.

By early 1991 conditions had changed. Pfizer had retreated from the industry, only to be replaced by Cargill’s old nemesis, ADM, which was busy learning the new business and upgrading its acquired plant. More importantly, Cargill’s plant was approaching its optimal level of utilization, so attracting a lot more market share was no longer such a high priority.\(^3\) Thus, Cargill successfully led a list-price increase in February 1991 and another in August 1991, after which the cartel took over arranging price increases. List prices spiraled upward from February 1991 to October 1993, rising on average every six months by 3 cents per pound. From late 1993 to late 1996, U.S. list prices remained stuck at $0.85 per pound. The cartel was responsible for all the price changes during 1992-1993, and it was responsible for keeping the list price at $0.85 for a couple of years beyond that. Reported transaction prices were not far below list at this time, despite what the trade press called “ample supplies.”

Although the citric acid cartel’s crime was the agreement to fix list prices, the economic injuries caused to buyers must be assessed using transaction prices.\(^4\) In a market like citric acid where there is no public price reporting, often only the sellers themselves know what transaction prices really are. Fortunately, a quasi-public source of quarterly average transaction prices was obtained, and there are good reasons to believe that these prices closely track the proprietary price information known to the sellers. U.S.