

CRA Competition Memo



Cartel Damages

In 1994 much press attention was focused on the EC Commission's vigorous anti-cartel policy. Some 80 firms from four industries (steel beams, plastics (PVC), carton-board and cement) were fined a total of more than ECU 500 million.

As a consequence, 1995 is bringing a new worry for some firms, and a new opportunity for many others - cartel damage actions launched on the back of these Commission decisions. In this respect Europe is beginning to resemble the pattern already seen in the USA where Federal Trade Commission and Justice Department actions become stalking horses for the private suits to follow.

If this is indeed the way events are moving then two interesting issues arise - who should pay and how much? The first is a classic legal question of liability. If firm A was supplied by firm B, the latter having been fined for participating in a cartel, is firm B alone liable or is the whole cartel jointly liable? The actions of firm B could not have damaged firm A on their own - without the complicity of the other cartel members firm A could simply have sought supplies elsewhere.

The purpose of this memo, however, is to examine the second issue - "How much?". Two distinct questions arise. What would price have been in the absence of the cartel? And what damage has resulted from the higher price?

1. What Would Price Otherwise Have Been?

Cartels are notoriously difficult to operate and many attempts are ineffectual. The Commission levies fines simply for trying, but the award of damages requires more. There are five complications which constantly recur - each rooted in an economic issue. These complications turn out to be exactly the issues relevant to estimating what the price would otherwise have been.

Imports/Entry - An attempted cartel will likely have no effect on price if the industry is open to imports from producers located outside the market. As soon as the cartel members attempt to reduce supply and raise price, importers will respond to the increased opportunities and undercut. Supply will expand and price will return to normal. Of course the same argument holds if not all firms within the market are members of the cartel - they can also expand output and undermine the price raising attempts of the cartel members. And it applies also to firms that perceive a profitable opportunity, enter the industry and never join the cartel.

Substitution in Demand - A cartel will also have no effect if the product being cartelised has perfect substitutes in demand (as long as the producers of the perfect substitutes are not also members). As soon as the price of the cartelised product rises, production of

the substitute will increase and customers will switch. The cartel members will sooner or later realise they are losing money and will return to normal pricing.

Substitution in Supply - The same considerations apply if the product being cartelised has perfect substitutes in supply. If other firms, currently producing other products, are willing and able to switch production to the cartelised product, the cartel price will eventually be undermined.

Cheating - Another problem facing cartels is the inevitable temptation for members to cheat - that is, produce more than their quota. This is tempting because, if the firm is small relative to the size of the whole industry, an additional unit of output will not disrupt the cartel price but will be very profitable for the firm in question. The problem is that every firm faces this temptation and, if the industry is one in which cheating is hard to detect, firms will cheat and the cartel will likely fail. OPEC is a classic example.

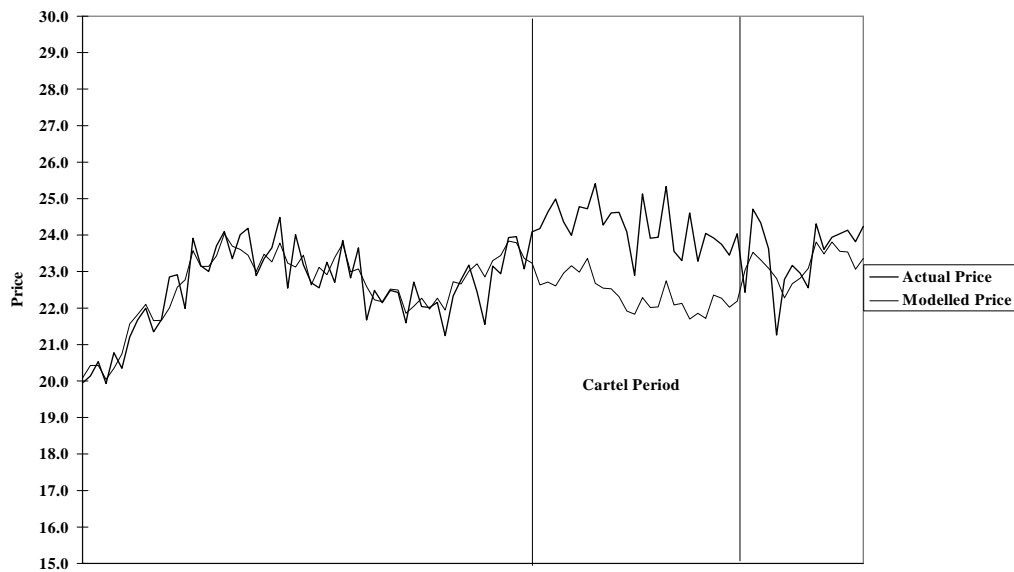
Conscious Parallelism - Even if a cartel does achieve the ultimate goal - the price a monopolist would set - this may represent a very modest achievement for a great deal of effort and legal risk. Many industries exhibit already prices that are above the competitive price and may even be quite close to the monopoly price. This happens because of conscious parallelism - the process whereby, without explicit collusion, firms recognise individually that their own best interests are served by not competing as vigorously as they otherwise might. The forming of a cartel in such industries will have little incremental effect.

The relevance of these five issues is that the more the threat from imports, the more demand and supply substitutes there are, the more prone the cartel is to cheating and the more susceptible the industry is to conscious parallelism, the more likely it is that a cartel price will be not much greater than the price that otherwise would have applied.

Measurement

The only scientific approach to measuring the change in price that has resulted from cartel activity is to undertake an econometric analysis. The analyst must develop a model, to be estimated by computer, of the industry price - a model that covers the period before, during and after the cartel. The idea is that the model should successfully track the actual industry price before and after the cartel period by taking into account factors such as the state of the economy (GDP), the price of inputs and the price of substitutes. Then, by appealing to the same factors, the model is used to "forecast" what price should have been during the cartel period. Forecast is not quite the exact word because the model is not generally predicting the future - rather it is filling in the blanks in the past.

Actual vs Modelled Price - Before, During and After a Cartel



This modelling exercise also indirectly reflects phenomena such as the level of conscious parallelism exhibited by the industry in the absence of a cartel. When this exercise is complete the damage to customers relates to the (average) difference between the actual cartel price and the price "forecast" by the model. This is illustrated in the chart above, which is based on a case on which Lexecon advised.

2. What Damage Resulted from the Higher Price?

Having established what price would have been but for the cartel (say 100 ecu), the next question is what damage has resulted from the fact that price was 120 ecu instead of 100 ecu. If the customer bought a quantity (500) of the cartelised product then the simple spreadsheet answer to the question of actual damage is that firm A has spent 10,000 ecu more on inputs than it would otherwise have done.

This accounting procedure, though commonly used, is almost always wrong. In fact only when two extreme and unlikely conditions apply is it correct - in all other cases the answer is less than 10,000 ecu and may even be zero. First, where the customer faces a "perfectly elastic demand", an increase in the final price to its consumers will reduce the demand for the customer's product to zero. In this case the only option for the customer is to bear the cost of the cartel-induced price itself. But even then there may be possibilities for the customer to adjust its input mix and use less of the cartelised product to produce the same output. Only if the customer is totally unable to substitute away from the cartelised input, will it actually bear the full 10,000 ecu cost.

These are the central issues in quantifying the damage associated with a change in price (once such

a change is established) - the elasticity of demand facing the firm and the extent to which the firm will switch inputs. Few products have consumers whose demand is perfectly elastic and few production processes allow no variation in input ratios. In all the real world cases Lexecon has seen the simple answer is wrong.

Thus, to measure accurately the damage to the customer, we must measure both the elasticity of demand facing the firm and the extent to which the firm varies its input mix in response to changes in input prices. And again the only scientific approach to measuring these effects is by econometric analysis.

Conclusion

1995 will see activity in the national courts - Lexecon knows of four actions already under way - as aggrieved cartel customers seek redress for years of (supposedly) having been forced to pay artificially high prices. Since such actions are generally mounted on the foundation of a Commission decision, some liability seems highly likely. The principal issue is the level of damages. The economic and statistical issues that arise in this calculation are exactly the same as those appearing regularly in administrative competition proceedings. And their resolution lies in econometric analysis, whether the results are needed for the court room or as a weapon in settlement negotiations.

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