



Price wars and cartel damages

Price wars can be the cause or result of cartelisation; and can occur before, during and after a cartel. Here the impact of price wars on the estimation of cartel overcharges and their duration are examined.

Types of price wars

There are three main causes of a price war: punishment, structural over-capacity, and the entry of a competitor.

Price wars can be used to punish members of a cartel who deviate from the agreed pricing strategy and as a means of restoring the effectiveness of the cartel. A price war meted out to punish a deviator obviously reduces the overcharge during the period of the price war. But it does not affect the counterfactual price since it would not have occurred but for the illegal coordination between firms in the industry – as much as the price increase thereafter.

An alternative view is that price wars are a reversion to competition, the prices an indication of the but for price, and that these periods should be expunged from the calculations of the overcharge. While this view is tenable, the variety and complexity of price wars suggests that it does not provide a blanket treatment of a price war.

The same is not true where a price war is caused by endemic over-capacity in an industry. This can especially occur during downturns in the business cycle, causing firms to compete aggressively to build and maintain market share. Examples are shipping (where conference line agreements have received exemption from anti-cartel laws for this reason), cement and cardboard box industries. It is well known that these industries have been poor at matching production capacity to demand, and suffer from periods of chronic overcapacity and severe price wars. Such price wars represent uncoordinated rivalry between competitors, and therefore should be treated as part of the counterfactual. This is even if the price war causes some firms to incur losses. It is not the role of the market to guarantee the profits of firms, and hence cost-plus approaches to determining the but for price are arguably misguided. Price wars generated by excess capacity either prior to the formation of or during a cartel reduce the but for price.

Price wars can be sparked by the entry of a new firm. This can be initiated by the entrant which aggressively 'under-prices' its product to build market share, or by the cartel which drops its price to foreclose the market. The treatment of this type of price war is trickier. Suppose a

firm enters a market attracted solely by high cartel prices, and this initiates a price war which ends with its eventual participation in the cartel. In this case, entry as well as the price war is clearly cartel-induced and would not be part of the counterfactual. If on the other hand entry is not exclusively related to a high cartel price, then the price war is a genuine market development which will reduce but for prices and the overcharge. However, distinguishing between the two may be difficult. A good indicator will be what happens once the cartel collapses: if the entrant (or another equivalent firm) exits the market, then this would be evidence of cartel induced but unsustainable entry.

In summary, there is no pre-determined way of dealing with a price war. A price war unambiguously lowers the actual price and hence the overcharge and damages. But it may also reduce the but for price, which would increase the overcharge. To determine whether it does requires that each case be individually assessed based on evidence on what caused the price war. If it was cartel induced, it does not alter the counterfactual price; if not, it does. However, like all rules there are exceptions.

Dealing with Price wars

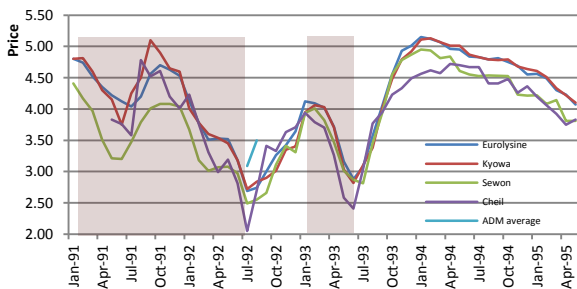
Dealing with price wars in the practical quantification of damages can be tricky and complicated. Often a number of factors will occur simultaneously, and the cartel may be subject to different types of price wars which may also affect the duration of the cartel. Below we look at two cartels to illustrate these problems.

Example 1 – amino acid (lysine) cartel

The amino acid (lysine) cartel was subject to two distinct price wars caused by entry and punishment respectively. Exceptionally the European Commission published data for European amino acid prices in its decision (Case COMP/36.545/F3). The figure below shows these prices gyrating wildly during the alleged cartel period (September 1990 to June 1995) with price wars between early 1991 to June 1992, and between early 1993 and June 1993 (shaded). The reasons for each – although not entirely clear – differ. The first price war arose when ADM and Cheil entered and increased production capacity in the industry. Both subsequently joined the cartel. If ADM's strategy was to price aggressively to build market share and gain a better arrangement with the existing cartel members (such as a higher quota), then the price war would not be part of the counterfactual. If on the other hand entry was independent of the cartel, and

the price war was due to the presence of an effective competitor outside the cartel, then the price war is part of the counterfactual and lowers the but for price. However, where the motivation is mixed – genuine entry spurred on by the prospect of joining the cartel – it would affect the but for price.

Evidence indicated that the second price war was intended to punish firms, Cheil in particular, who were heavily discounting lysine prices. If so, it was cartel-induced and not part of the counterfactual. Hence, this price war did not affect the but for price, and hence reduced the cartel overcharge.



The price wars may also lead to different claims as to the duration of a cartel. Does one exclude or include the price war periods? Economists have recently used screening techniques to identify the existence of a cartel. These search for statistically significant structural breaks in price patterns, such as a sudden increased stability in prices. In late 1993 lysine prices rose and stabilised at a higher level which continued to the end of the cartel. This evidence could be used (as it was) to argue that the cartel period was in reality very short, and the damages far less. However, identifying this shorter cartel period begs the question of what were the but for prices, and ignores evidence that the second price war was punitive.

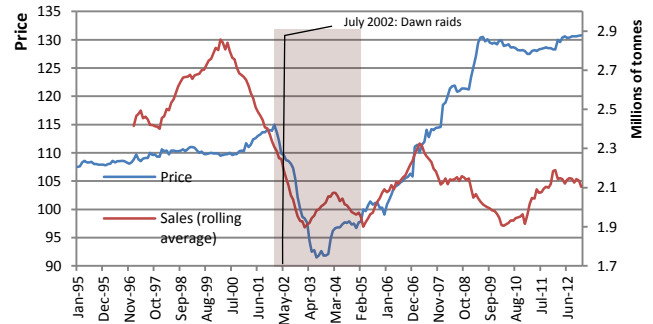
Example 2 – German cement cartel

The German cement cartel presents an even more complex situation. The price war occurred while the cartel had been detected and was under investigation (July 2002). Evidence accepted by the court was that its purpose was to punish the defector (Readymix). Others suggest that the price war was the result of the dramatic decline in cement sales following the cessation of the East German reconstruction effort (see sales in the figure below).

The figure below shows that cement prices fell about 24% from their peak in January 2002 to their lowest point in November 2003. Thus it matters considerably whether the period following the start of the price fall is considered

part of the cartel period or not. This is especially so when the post-cartel prices are used to estimate the overcharge.

Three groups of economists associated with a subsequent German class action accepted that the price war was cartel-induced. All three used a during-and-after regression analysis with a dummy variable to represent the cartel period, but made different assumptions regarding the price war period.



The experts appointed by the court took account of the decline in cement sales, the speed of price adjustment and the price war. They assumed that it took 38 months after the cartel had been detected for prices to adjust (shaded period above) to their true non-cartel level, implying an estimated average overcharge of around 10%. Huschelrath *et al* tested three different transition periods of four, six, and eight months to arrive at a much higher average overcharge of between 20% to nearly 27%. The third study adopted Huschelrath’s model together with a statistical analysis to date the end of the price war, which suggested that it took around 40 months for post-cartel prices to be established leading to an estimated average overcharge of 7.6% to 9.1%.

Study	Overcharge	Price war duration	Party represented
Friederiszick & Roller	>10%	38 months	Court
Huschelrath, Muller & Veith	20% - 26.5%	4, 6 & 8 months	Litigation funder
Frank & Schliffke	9.1% - 7.6%	41 months	Defendants

Conclusion

The reasons for a price war cannot be determined by statistical analysis – they must rely on industry and other direct evidence – but its consequences and duration can. Here several of the complications have been touched on, but there are many more, such as predation during entry and the treatment of below cost prices.

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