Post-cartel pricing and dynamic cartel damages

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The evolution of prices after the break down of cartels has moved into the spotlight especially since more and more follow-on private damage claims are being filed. One typically thinks about still elevated prices shortly after the break down of a cartel due to price rigidities. According to the standard argument prices would not be elevated if they had not been elevated by the cartel in the first place. Thus, the cartel is responsible for further damages after its breakdown. Yet, cartels may also cause post-cartel prices to fall below the competitive level for some time. A logically consistent argumentation would require that the resulting losses (due to too low prices), which would not have been realized without the cartel, are subtracted from the cartel damage. Therefore, when analyzing cartel overcharges it is important to carefully consider the development of post-cartel pricing even if other estimation procedures than the during-and-after yardstick approach are applied.

Post-cartel price development

Economic theory predicts that cartels typically yield higher prices during cartel periods. However, there are various alternative scenarios for post-cartel prices to evolve.

Cartels may be followed by a fade-out phase during which prices return only slowly to the competitive level. This scenario might arise if (average) prices cannot immediately return to the competitive level e.g. due to ongoing supply contracts or cost inefficiencies which result from the previous lack of competitive pressure.[1] Such transition periods with prices still elevated need not occur in all instances. E.g. in auction markets with each auction being independent of previous ones prices are likely to return to the competitive level immediately after the cartel ends.

In contrast, however, cartels may also be followed by price wars. Recall that cartel agreements are a form of collusion and collusion requires some fear of punishment in order to be stable. One type of punishment strategy would be simply to return to competitive pricing (so called Nash Reversion) but more severe punishment strategies including below-cost-pricing may be applied as well. Therefore, both cases, prices above or below the competitive equilibrium price are possible post-cartel scenarios. The following graphs illustrate both possibilities (actual prices (red line), hypothetical but-for prices (dashed line)).

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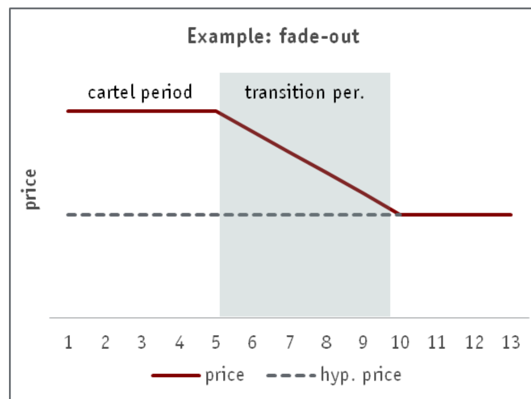
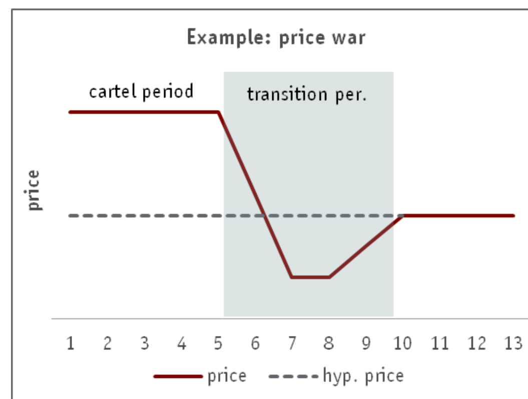
[1] See Inderst and Jakubovic (2013). Nachwirkungen von Kartellen. Wirtschaft und Wettbewerb, Vol. 63, pp. 5-17 for a discussion and more examples.



Case A: fade-out



Case B: price war

Estimation procedure

The first issue that arises in both cases is how to measure the cartel effect correctly. In the fade-out case, the cartel effect would be underestimated if still elevated prices during the transition period were used to predict the hypothetical price. Contrary, in the price-war case the cartel effect would be overestimated. One way of avoiding a bias is the inclusion of an extra variable that captures the difference between the counterfactual competitive price and the transition-period price. A similar approach, though with several variables, has been applied e.g. in the German cement market case.[2] Besides the potentially severe influence on the estimated cartel effect, a fundamental issue of including transition period variables is the (correct) time span for which they are applied.[3]

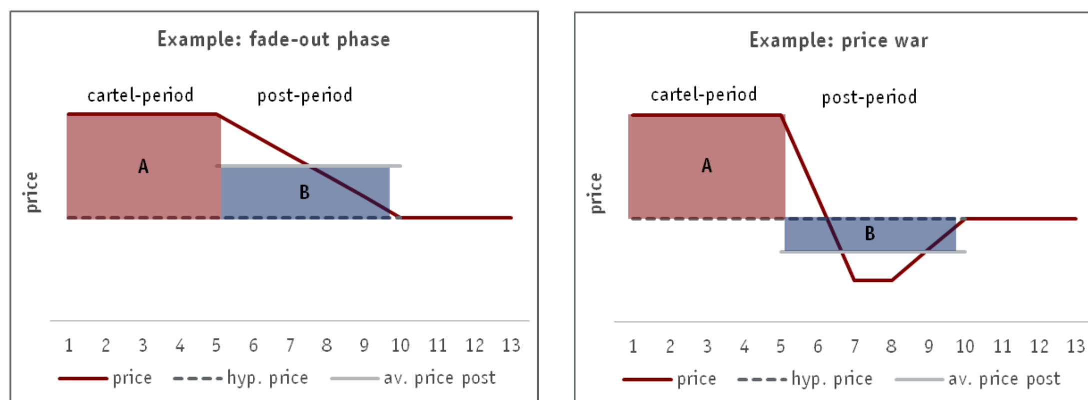
For this discussion, assume that problem to be solved, however. Then, the estimation procedure will yield two results:

- The cartel effect (price in cartel-period minus hypothetical price)
- The post cartel effect (price in transition period minus hypothetical price)

Both effects are illustrated by the following graphs.

[2] See e.g. Bongard/Ewald (2009), ACE Conference: The German cement cartel, available at http://www.competitioneconomics.org/dyn/files/basic_items/226-file/1_Ewald_Cement.pdf .

[3] See Frank and Lademann (2010), Economic Evidence in Private Damage Claims: What lessons can be learned from the German Cement Cartel case? Journal of Competition Law & Practice. vol 1, Nr. 4, 2010, pp. 360 - 366. Frank and Schliffke (2013). The Post-Cartel Equilibrium Puzzle in the German Cement Market. Journal of Competition Law & Economics, Vol. 9, pp. 495-509 for a procedure to estimate the length of transition periods.



Put simply, damage is the price effect due to the cartel multiplied by the quantity bought (we ignore any pass-on and output reduction effects for simplicity). Thus, taking into account price effects during a transition period the total dynamic cartel related damage is simply "Damage = A + B". Obviously, in the fade-out case this logic will increase total damages since "B" is positive. However, in the price-war case this logic will decrease total dynamic damages since "B" is negative, i.e. "Damage = A + (- B) = A – B".

Implications for damage proceedings

In general, the above conclusion is straightforward: If the same customer bought from the cartel during the cartel and transition periods, this customer suffered damages both during the cartel period and suffered (profited) from too high (low) prices during the transition period. Neither effect would have occurred without the cartel. Treating both cases symmetrically thus seems reasonable. Further, this logic extends to any pass-on and output effects (i.e. cartel related price cuts and increases of units sold to indirect purchasers).

A symmetric treatment of cases is not feasible in the case where a customer purchased from the cartelist only in the post-cartel period. Such a customer might have suffered damages from a fade-out phase with elevated prices and may hold the cartel responsible for it. The opposite case, a cartelist claiming compensation for an extra price-war induced downstream profit is not reasonable, however. Typically, the customer did not cause the cartel and is thus not responsible for the price war. Consequently, requiring compensation from the customer would be absurd. For the subcase of post-cartel purchasers only, the two cases of either a fade-out or price-war transition period are indeed asymmetric.

Even if damage estimation is based on other methods than the during-and-after yardstick approach post-cartel pricing is an important issue to investigate as post-cartel pricing may aggravate or mitigate total damages.