Competition Competence Report

CARTELS: THE ECONOMIC PERSPECTIVE

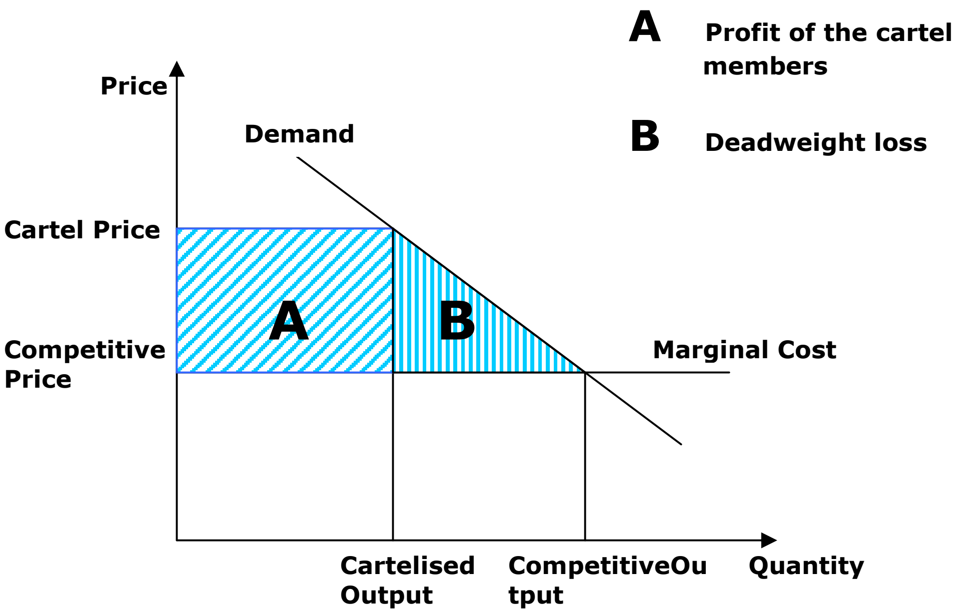
Sometimes companies are confronted with allegations from antitrust authorities to participate in cartels. Cartelisation is an infringement of Article 101 TFEU respectively the corresponding national law. Fines in cartel proceedings can be really painful: in extreme cases up to 10% of the annual turnover. This CCR discusses the role of economic analysis in cartel allegations. A well-founded analysis quantifies the economic effect of a cartel on the market. In practice, the "successful" implementation of cartel agreements is rare. Thus, a quantitative assessment may prove that the actual economic effects on the market are marginal. High fines are avoidable. In the following, the functioning of a cartel from an economic perspective is demonstrated first. In addition, the market conditions which favour cartels are discussed. Subsequently, the approaches to counter cartel allegations by means of economic expert testimonies as well as the quantitative techniques recommended by EE&MC are presented.

Functioning of a Cartel

The functioning of a cartel is simplistically described in the figure below. In the case of perfect competition in a market, products/ services are provided at a price that equals marginal costs. By creating a cartel, producers can raise in theory their price and thus increase their profits. This approach leads to a reallocation of surplus between producers and consumers equivalent to area A representing the profit of the cartel members. A price increase usually results in a decrease of demand: less output is sold. This deadweight loss is equal to triangle B. The loss of the consumers (A+B) surpasses the gains of the cartel members (B), thus a cartel leads to a decrease in total welfare, similar to a monopoly.

European Economic & Marketing Consultants - EE&MC GmbH
E-Mail: DHildebrand@ee-mc.com*Homepage: http://www.ee-mc.com

Functioning of a cartel



Market Conditions in a Cartel

In reality, there are hardly any markets where prices equal marginal costs. This does not mean that in all those cases cartel prices are fixed. Prices above marginal costs are rather a result from fixed costs or product differentiations. In theory, producers might be interested in establishing a cartel in order to achieve higher profits through increased, cartelised prices. However, in practice each member of a cartel has an economic incentive to deviate from any cartel agreement. The reason for this is that the cartel price is higher than the competitive price. If an individual undertaking lowers slightly its own price, it will benefit from an increase in demand for its own products at the cost of the other cartel members. Due to the lower price, the deviating company has a competitive advantage: market shares increase and the undertaking achieves a price above the competitive level. The profit of this undertaking rises. This means that it is not possible under "normal" market conditions to implement a cartel since undertakings will underbid one-another consecutively until they reach the competitive price level again.

European Economic & Marketing Consultants - EE&MC GmbH
E-Mail: DHildebrand@ee-mc.com*Homepage: http://www.ee-mc.com

However, certain market structures can lead to a failure of the competition mechanism.[1] Conditions are that the undertakings reach a mutual agreement first and, in addition, are able to monitor this agreement. This is possible if the market is a transparent one: only a few producers are active producing a few, homogenous products. Constant conditions of supply and demand facilitate cartelisation as well. On the other hand, new competition by means of market entries or extensive demand fluctuations reduces the stability of a cartel. In such a case a cartel member cannot be sure if a decrease in demand is caused by an alteration of demand or by a cartel member who does not follow the cartel agreement. Another important factor facilitating cartel agreements is the possibility of the cartel members to sanction undertakings that deviate from an agreement. Only a serious, effective sanction mechanism makes a durable coordination feasible and deters cartels members from deviating due to a strong self-interest. Possible punishment instruments are e.g. price wars that make a deviation financially unattractive and, hence, discipline the cartel participants. Finally, a cartel agreement can only work, if all important market participants take part in it. If important producers are not members of the cartel and do not follow the agreement, cartel members might loose market shares and the coordination becomes unprofitable. On the other hand, a high number of cartel members endanger the functioning of a cartel. New competitors entering the market can cause the breakdown of cartels, as well.

Economic Expert Testimonies

If an undertaking is confronted with the allegation of cartelisation, there are different ways how to come up against the accusations by means of an economic expert testimony. First, it can be assessed to what extent the market structures enable a coordination of the market behaviour at all. If important market characteristics are not given, for instance a stable demand or the possibility to punish undertakings that deviate from the cartel agreement, a durable coordination of market behaviour in form of a cartel agreement is not possible.

The approach of an economic testimony is to measure the real economic effects of the alleged cartel on the behaviour and the price-setting of the cartel members. Antitrust authorities and Courts generally assume that sharing information has an impact on the behaviour and especially on the

[1] See: European Commission, Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentration between undertakings, OJ 2004 No. C31/5.

price-setting of undertakings. [2] Nevertheless, an essential aspect is that the alleged undertakings have the possibility to provide counterevidence. The European Court of Justice states in this respect that:

> *"However, subject to proof to the contrary, which the economic operators concerned must adduce, the presumption must be that the undertakings taking part in the concerted action and remaining active on the market take account of the information exchanged with their competitors for the purposes of determining their conduct on that market."*[3]

Therefore, it's up to the undertakings to produce the counterevidence that they have not taken into account the cartel agreement in their market behaviour. If the evidence succeeds, it has a direct effect on the magnitude of a possible fine. Though cartel agreements are considered a violation of Article 101 TFEU independent of their real effect,[4] the European Commission considers the magnitude of the economic effect and thus the damage to consumers` when determining the size of the fine.[5] To conclude, there is the possibility to reduce a potential fine by means of a solid economic analysis of the economic effects given the appropriate results.

EE&MC Approach

There are different economic methods to examine if agreements between undertakings had an impact on prices. EE&MC recommends the "before-and-after" method, the "yardstick" approach and economic modelling of the market. These approaches are described briefly below.

The „before-and-after" method compares the price curves before the period of the agreements with the price curve during the period of the agreements. The price curves are deduced from the price-demand-relationship by means of single regression analyses. Cartel agreements usually aim to raise or at least fix current prices.[6] The „before-and-after" method analyses the factual price development and is therefore appropri-

---

2 For instance: Judgment of the Court of First Instance on 24.10.1991, T-1/89, para. 109; Rhône-Poulance vs. Commission.

3 Judgment of the European Court of Justice on 08.07.1999, C-199/92 P, para. 162, Hüls AG vs. Commission.

4 Ibid, para. 164.

5 See Commission Decision of 23.04.1986, IV/31.149, para. 108, Polypropylen.

6 Judgement of the Oberlandesgericht Düsseldorf on 06.05.2004, Kartellsenat, VI-Kart 41-43 + 45-47/01 OWi.

European Economic & Marketing Consultants - EE&MC GmbH
E-Mail: DHildebrand@ee-mc.com*Homepage: http://www.ee-mc.com

ate to invalidate the allegation that prices have increased during the cartel period. Other factors influencing the price, e.g. changes of demand or costs, technological developments or market entries of competitors are not considered in this methodology. Thus, this tool can used as a starter for further analyses.

Another approach is the so called "yardstick" approach. This method involves the comparison of the price development in the period of the agreement with the price development of a comparable product- or geographical market in which competition is evident. If the relevant product market is a regional one, the identical product market in another geographical region is normally used as the reference market. But it is also possible to use the development of the prices for different products in the same geographical region. One important principle is that the market conditions of the reference market should be similar to the market conditions of the market under review. This assumption relates to important conditions of competition like cost structure, demand or number of competitors. The methods used for the "yardstick" approach are trend analyses and price correlations. If the price correlation with the reference market is close to +1, it can be assumed that both markets have similar price developments and no effective cartel agreement exists.

The most comprehensive approach uses the possibility of econometric modelling of markets to estimate the significance of different influencing factors on the price. This method involves the calculation of a hypothetical price without the alleged cartel agreement during the period of the agreement using a market simulation model based on data before the period of the agreement. If the price equals or is close to the actual price that persisted during this period it is proved that the alleged cartel agreements did not have any impact on the price-setting. Econometric modelling is very meaningful as all relevant factors for the price setting are integrated. In addition, the modelling of the market permits the integration of game-theoretic approaches. Thus, by means of econometric modelling the instability of cartels can be shown. However, econometric modelling of the market requires a higher work load. On the other hand, the econometric market modelling approach is well accepted by the antitrust authorities.[7]

---

7 S.f. Clark, Emily/ Hughes, Mat/ Wirth, David, Study on the conditions of claims for damages in case of infringement of EC competition rules, analysis of economic models for the calculation of damages, "Ashurst-Study", 31. August 2004.

European Economic & Marketing Consultants - EE&MC GmbH
E-Mail: DHildebrand@ee-mc.com*Homepage: http://www.ee-mc.com