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A Bridge Too Far? – Complements, Substitutes and Theories of Exclusion in EC Merger Control

This Brief discusses two key merger control cases of 2001, involving GE/Honeywell and Tetra Laval/Sidel (Tetra/Sidel).[1] Both deals were blocked over concerns that the post-merger firm would, by exerting leverage across two or more separate product markets, exclude rivals and thereby create or strengthen a dominant position. We consider the economic concepts behind these "new" economic theories of exclusionary effects and how those concepts were applied in the two cases.

1 General Electric/Honeywell, Case COMP/M.2220 (2001), and Tetra Laval/Sidel, Case COMP/M.2416 (2001).

GE/Honeywell – Exclusionary Effects Through a Combination of Complements

The facts of the GE/Honeywell case are complex and cannot be fully appraised in a short review article. However, the essence of the theory against the merger lies in the fact that it brought together a series of businesses that were complements in the economic sense of the term. For example, GE's aero engines and Honeywell's aircraft avionics systems are complements since an aircraft manufacturer would need to buy both engines and avionics in order to build a new aircraft.[2]

2 There were a number of complementarities between GE and Honeywell, including those between engines and starters, and lease finance and avionics. There were also some straight horizontal overlaps.

Complements are defined in economic theory by their negative cross-price elasticity. If the price of aero engines were increased unilaterally, that would make it less commercially attractive to make new aircraft, which in turn would reduce demand for avionics systems. Thus, an increase in the price of engines would reduce demand for avionics systems.

This is the opposite of the situation that typically arises in horizontal merger cases, where substitute products are brought together under common ownership. The relationship between two competing aero engine suppliers, for example, is one of substitutes, defined by a positive cross-price elasticity. If GE raised the prices of its engines unilaterally, that would cause some customers to choose Rolls-Royce aero engines instead, thus increasing demand for Rolls-Royce engines. The possible harmful effects of a merger between two competing producers can be understood in the context of these cross-price effects. In a merger that brings together important substitutes, the firm in question can benefit from the fact that an increase in the price of one brand will raise demand for the other. In this way the positive cross-price elasticity between the merging products relaxes the pre-merger incentive to keep prices low.

Applying the same logic to a merger between suppliers of complementary products such as GE/Honeywell, we ought to predict a post-merger reduction in prices, since by reducing price for one product, the post-merger firm could boost demand for the other product that is now under common ownership. Whereas pre-merger GE obtained no benefit from boosting Honeywell's sales of avionics, post-merger that effect would be of benefit to the enlarged GE group. In an industry such as commercial aerospace, where incremental sales carry high price-cost margins, this could (under certain conditions) give a significant incentive for post-merger price reductions.

This likelihood of post-merger price reductions is fully acknowledged by the Commission in the GE/Honeywell decision, but, controversially, it is interpreted as an argument against the merger using the following chain of predictions:

> First, because of the complementary relationship of the merging firms' products, the post-merger firm would, as predicted by economic theory, tend to reduce prices post-merger. Indeed, in order to get the maximum benefit from the negative cross-price elasticity between the complements, the offer of post-merger price reductions would have been made conditional on the customer buying a package of GE's engine and Honeywell's avionics – i.e. it would take the form of a discount on the "bundle" of GE/Honeywell products.

> Second, rival suppliers of engines and avionics would find it unattractive or impractical to respond (e.g. through merging or forming selling consortia) by offering their own competing "bundle".

> Third, the result of the above would be for rivals of the post-merger firm to lose sales volumes to the more aggressive bundled prices of GE/Honeywell. This loss of rivals' sales volumes would result in their being unable to finance and sustain investment in new product development, which would over time cause them to exit the market, or at least to become less vibrant players.

> Fourth, as a result of the above chain of events, the merger would ultimately have the effect of strengthening GE's dominant position in the supply of aero engines, allowing it to raise price and harm customer interests.

This chain of events represents the steps necessary under the GE/Honeywell case in order for the combination of complementary products to result in an anti-competitive, exclusionary effect. The chain of events is speculative, but it cannot be ruled out on a priori grounds, and a number of recent articles in the economic literature give some legitimacy to the theory.[3] The Decision does at least have the merit of spelling out the theory of the case with more clarity than in some of the previous portfolio power and leverage cases.[4]

The GE/Honeywell decision has attracted numerous commentaries. Some have questioned whether the Commission is right even to consider advancing a case based on the premise that the post-merger firm will reduce prices, but most have accepted some variant on the framework laid out above and focused their attention on whether the specific facts of the commercial aerospace industry can really support this set of post-merger predictions.

Tetra/Sidel – Exclusionary Effects Through a Combination of Substitutes

The Tetra/Sidel case shares some features with the GE/Honeywell decision. It also resulted in a merger being prohibited despite the fact that most of the businesses of the merging firms lay in separate product markets, and on the grounds that bundling and related post-merger practices would result in the "leveraging" of market power from one market to another.

3 See, for example, Choi and Yi, "Vertical Foreclosure with the Choice of Input Specifications", Rand Journal of Economics, Vol. 31, No. 4, pp 717-743, and Nalebuff, "Competing Against Bundles", in Incentives, Organization, and Public Economics, Oxford University Press (2000).

4 See Coca-Cola/Amalgamated Beverages, Case IV/M.794 (1997), and Guinness/Grand Metropolitan, Case IV/M.939 (1998).

The key difference between the two cases is that, whilst GE/Honeywell is essentially a merger in which the parties' businesses were complements, in Tetra/Sidel the parties' respective main businesses were selling products that were substitutes for one another. Tetra, as is well documented, is the dominant player in the carton packaging market, whilst Sidel is the leading player in the provision of equipment used to make PET bottles.[5] The two Article 82 cases in which Tetra has been involved have concluded that competition for Tetra's carton business from PET bottles is not strong enough to provide a constraint on Tetra's carton market dominance, but at the margin there is undoubtedly some degree of substitution between these types of packaging. If Tetra were to increase its prices for cartons and carton packaging machinery, that would be good news for suppliers of PET bottle machines such as Sidel, since at the margin this would tip the balance of choice for some customers away from cartons and towards PET.

5 The Decision puts Tetra's share of carton packaging systems at around 65%. Sidel, meanwhile, is described as the leader in PET packaging systems, but not as enjoying a dominant position.

In the Tetra/Sidel decision, the Commission argued that the merger would create a dominant position in the PET packaging market because Tetra/Sidel would find ways to leverage Tetra's carton packaging monopoly onto the PET packaging market. According to para 359 (e) of the decision, this would be achieved by some combination of discounts for customers buying a "bundle" of Tetra and Sidel products, along with "rebates" and "price wars" designed to harm Sidel's PET rivals and thus make them less viable competitors.

However, since the main packaging products sold by Tetra and Sidel are substitutes, not complements, it is worth questioning how and why this merger was supposed to change behaviour. In the complements case of GE/Honeywell, the post-merger incentive to compete more vigorously on price is (at least in theory) well established. But by the same token the combination of Tetra and Sidel's competing businesses ought to weaken the incentive to compete on price. Pre-merger, Sidel already has an incentive to try to "dominate" the PET packaging market and, subject to the constraints posed by competition rules, might contemplate doing so by aggressive rebates and sales techniques designed to squeeze rival PET suppliers from the market. But following the logic of the GE/Honeywell decision the merger with Tetra ought to reduce that incentive since efforts to drive prices down in the PET packaging market would now have the additional effect (not previously taken into account by the independent Sidel) of increasing the competitive pressure on Tetra's cartons business.

If in GE/Honeywell we are asked to believe that the combination of complements will make GE and Honeywell compete more aggressively on price, by the same logic it must be predicted that the combination of substitutes in Tetra/Sidel would encourage the post-merger firm to compete less aggressively on price post-merger as the parties came to recognise the spill-over effects caused by their competing behaviour in each others' markets. Thus, the Commission's theory of exclusionary effect in the Tetra/Sidel case lacks the basic merger-related motivation that is present in the GE/Honeywell case. For this reason its exclusionary effects story is inherently less convincing.[6]

6 There are theoretical models of monopoly leveraging and predation that can apply to products that are not complements, but the Commission did not specify any such models in the Tetra/Sidel decision.

In other respects, however, the Tetra/Sidel decision has more to commend it. Almost hidden, later in the decision, is a further theory about the strengthening of Tetra's dominant position in carton packaging systems which does relate the merger appraisal to the fact that the deal brought together suppliers of substitute products.

Recall that two Article 82 cases have concluded that Tetra enjoys a dominant position in carton packaging.[7] In economic terms, this means that competition between rival carton packaging suppliers has been found not to impose an effective constraint on Tetra. In such circumstances, it is well established in economic theory that the profit-seeking monopolist will raise price until the next closest competitive constraint starts to bind. Thus, when dealing with pre-existing dominance in a merger case it becomes critically important to identify and understand what constitutes the next closest substitute outside the dominated market.

7 This proposition appears to have been accepted by Tetra in the course of the merger proceedings.

8 See paras 392 to 400 of the decision.

The Commission decision paints a plausible account of how it is PET packaging that provides this next closest constraint.[8] Consequently, the combination of Tetra's dominant carton packaging business with Sidel's leading position as a PET packaging supplier gives a conventional horizontal concern with the Tetra/Sidel merger. The oddity is that this horizontal concern has been buried deep in the decision because of the Commission's efforts to develop a leverage effects theory of the case. Yet the aspect that makes the leverage argument unconvincing – the fact that the two parties supply competing not complementary products – is the very factor that gives weight to the horizontal concern.

Implications and Conclusions

The exclusionary effects theories advanced in the GE/Honeywell and Tetra/Sidel cases make an interesting basis for comparison. In GE/Honeywell, the Commission has adopted a theory of the case that relies on a long chain of possible post-merger events, but in which the theory of post-merger harm to competition is based on some potentially legitimate (if very theoretical) models of imperfect competition. The main controversy of the GE/Honeywell decision surrounds the facts of the industry, and in particular whether the somewhat speculative predictions on which the exclusionary effects story are based really could be sustained with sufficient certainty to justify the prohibition.

In Tetra/Sidel, the Commission has again tried to develop a story of post-merger exclusion through bundling, but has built that story on shaky foundations. Whereas in GE/Honeywell the complementary nature of the parties' businesses gives a prediction of post-merger price reductions that sets in motion a chain of events that could eventually harm competition, in Tetra/Sidel that basic starting point is missing. Applying the logic used in the Commission's GE/Honeywell story, the Tetra/Sidel merger should have made life easier, not harder, for rival PET packaging suppliers. The paradox of the Tetra/Sidel decision is that the Commission appears to have been so intent on developing its exclusionary effects theory that it has almost overlooked a conventional horizontal effect – the danger that Tetra's dominant position in carton packaging would be strengthened if it bought out the most potent rival in the adjacent but competing PET packaging sector.

Taken together, the two cases raise a number of concerns with the Commission's ability to apply new economic theories of exclusionary effects in a sufficiently critical manner. The Tetra/Sidel decision in particular shows the Commission favouring an exclusionary effects theory that does not seem well supported, even when there exists a conventional horizontal overlap that potentially raises genuine concern. Neither decision makes life easier for firms and their advisers in trying to predict which direction the Commission will take next.

Clearly, exclusionary effects theories are now a part of the regulatory landscape for European mergers, and observers of European competition law will appreciate that exclusionary effects concerns seem to receive a more sympathetic hearing in Brussels than in other jurisdictions. However, as the range of theoretical models of possible exclusionary effects grows, the obligation on the Commission to spell out its theory carefully, and to test that theory critically against the facts, becomes more