Effects Analysis in Hub and Spoke Cartels

Email communication which may appear to be consistent with hub and spoke cartel behaviour may simply be unsanctioned and inaccurate speculation by relatively junior staff members. This raises the issue as to how much weight should be placed on economic effects when investigating hub and spoke cartels. Clearly, effects are only one consideration; for example, an attempted but unsuccessful hub and spoke cartel endorsed by senior managers should not be treated as sympathetically by competition authorities as idle chatter among junior staff, even if neither had a detrimental impact on consumers. However, the analysis of economic effects can play a significant role in both identifying and quantifying the nature of hub and spoke activity. This memo outlines how this effects analysis was applied in a recent investigation.[1]

The hub and spoke framework

Hub and spoke cartels can take a variety of different forms. In a typical example, a supplier can act as a "hub" by collating and distributing information about the future pricing intentions of its retailers (the "spokes"). This allows retailers to gain advance warning of the price intentions of their rivals without the need for direct horizontal contact. For example, supplier X might learn that retailer A will only raise the prices of supplier X's product if rival retailers B and C do the same. X then alerts B and C, who both confirm that they would immediately follow a price increase by A. This information is passed back to A, which feels more confident that a price rise will be matched so proceeds with the price rise.

The harm associated with this sort of behaviour is clear. By reducing market uncertainty, such behaviour facilitates (in this case) downstream coordination, leading to higher prices for consumers. There is also a potential detriment to dynamic competition, as there is a risk that retailers might favour "compliant" suppliers. This could make it harder for other suppliers to gain access to retail outlets. As a general observation, vertical discussions precipitate harm to consumers in this context when horizontal competition is adversely affected.[2]

[1] As the case against the company involved was eventually dropped, it is subject to confidentiality undertakings and details cannot be disclosed. The views expressed in this memo are those of the author only and do not necessarily reflect the opinions of other CRA staff or of CRA's clients.

[2] This memo concentrates on an example of a hub and spoke cartel where the vertical communication patterns described support horizontal coordination among retailers. It should be noted that coordination can also be driven by powerful suppliers seeking to control retail prices.

Incentives of the parties

Not surprisingly, hub and spoke cartels are usually observed when at least one of the markets (upstream or downstream) is concentrated. Firms would only have an incentive to behave in this way where such communication can be expected to have a direct impact on prices. Coordinating and monitoring such behaviour is also easier with fewer participants. However, it should not be thought that suppliers and retailers would always have an incentive to behave in this way. For example, it would normally be assumed that supplier X in the above example would want downstream competition to be as vigorous as possible. This is because more competition at the retail level would mean lower prices to consumers, which in turn would lead to more sales for supplier X upstream.

Hub and spoke cartels are more likely when this assumption does not hold. It is possible, for example, that lower retail prices can lead retailers to ask suppliers to "fund" some of the price cut (effectively lowering the supplier's wholesale price). The supplier might also feel it makes sense to be "helpful" to retailers, especially if the retailers are in a strong bargaining position (if, for example, the retail market is particularly concentrated and/or retailers have a wide choice of alternative suppliers). This means that the supplier might decide that it is rational to facilitate a cartel that hurts it (due to higher prices downstream) as it provides an advantage over its horizontal competitors (gaining and/or maintaining guaranteed shelf space).

The feedback loop described above may also help the supplier to pass on cost increases. Empirically, problematic vertical information exchanges often occur when suppliers are attempting to cajole retailers into accepting the case for higher wholesale prices as a result of higher costs. A retailer may individually accept the case for higher prices but might take the view that it will only move its prices if the "market" moves too. By sharing information on individual retailers' willingness to increase prices, the supplier can manipulate market sentiment and facilitate the wider acceptance of the case for a price rise.

Some practical issues

When presented with potentially incriminating evidence, competition authorities face a number of questions to consider in evaluating the extent to which the exchange of sensitive price information actually affected outcomes. How senior were the people involved? Did they actually have the ability to determine prices? If not, were they acting with the blessing of senior management? Did all the participants plan to act on the information being provided or were some merely going along with the process in order to gain market intelligence? How did participants respond to inaccurate information? How sensitive was the information being exchanged? These issues illustrate that many of the problems associated with maintaining tacit collusion – such as establishing a credible pricing rule, dealing with "noise", ensuring "agreements" are adhered to and so on – also have to be overcome in hub and spoke cartels.

A further complication is that sometimes the information being exchanged may be ambiguous from a competition perspective. For example, supplier X might send retailers B and C a till receipt which demonstrates that retailer A has just increased price. In its defence, supplier X could argue that it was merely communicating information that was already in the public domain. The relevant competition authorities may well be suspicious about such behaviour: why would a supplier go to the trouble of providing retailers with such market intelligence? It is possible that there is a benign explanation but it is also possible that such behaviour is consistent with the "policing" of an agreement to raise price (e.g. "retailer A has increased price so you should – as we agreed – follow as quickly as possible").

A recent example

In a recent case, it emerged that an account manager for a supplier had been in price-related email correspondence with a number of retailers. Part of this correspondence involved the manager passing on speculation about the likely future pricing intentions of each retailer to its rivals. CRA was retained to gauge whether this behaviour had any detrimental impact on consumers. We undertook two separate analyses.

Pricing case studies

The first involved an assessment of the accuracy of the data being distributed. This typically involved the supplier manager sending emails along the lines of "retailer A has agreed to raise price by 10p and if you (retailer B) follow it without delay retailer A will hold these prices at this higher level". Such information exchange could be consistent with an effective hub and spoke cartel. However, it could also be consistent with the supplier manager – however ill-advisedly – attempting to bluff retailers into accepting a wholesale price increase by giving the impression that there was a consensus among retailers for prices to rise.

Using retail scanner data, we examined a number of case studies to gauge whether actual prices followed the path implied by the email correspondence. Overall, this showed that – whatever the motivation and intent among the parties involved – there was no systematic relationship between the supposed future pricing intentions of retailers and actual prices. In short, the information the supplier was distributing was not credible. This is not to condone the behaviour observed, but it was strongly suggestive that the email correspondence did not result in consumers paying higher prices.

Margin analysis

We also investigated whether higher margins were earned over the period in which information was exchanged. As the email correspondence suggested that the supplier manager was concerned about retailer margins as well as supplier margins (partly because the supplier manager believed wholesale price rises could be passed on without a detrimental impact on retail margins), we examined margins both upstream and downstream. This involved using internal cost and margin analysis from the supplier as well as scanner data on retail prices, with appropriate adjustments made for factors such as VAT.

As the data covered a number of years, margins both upstream and downstream varied over time. However, there was no evidence of either margin being higher during the period in which the information was exchanged (if anything, margins were slightly higher after the period of alleged hub and spoke activity had ended). There was also no evidence of a "regime change" in pricing and margins once the alleged activity came to the attention of the competition authorities. Once again, although the email correspondence was clearly not appropriate, there was no evidence to suggest that it resulted in consumers paying higher prices.

Conclusion

In this particular instance, the case was not pursued further, partly as a result of a range of remedial measures put in place by the supplier (including the strengthening of its compliance programme) but also in part because the effects analysis was hard to reconcile with the observed behaviour causing significant consumer harm. As stressed above, a supplier distributing information among retailers on the future pricing intentions of rivals is clearly inappropriate and risky from a competition law perspective. However, when considering how to deal with such behaviour, competition authorities need to differentiate between tightly-run successful hub and spoke cartels at one extreme and the inappropriate but ineffective correspondence of what are often junior staff at the other. The case highlighted above – in which the competition authority involved was commendably pragmatic – shows that assessing the economic effect of such activity is an important component of putting the behaviour under scrutiny in context.

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