

Fine in Theory

In light of the increasing reliance on ever more sophisticated theories of anti-competitive effects in all areas of competition law, this Brief discusses how the relevance of economic theories should be evaluated in the practical application of competition rules. Assessing the relevance of a theory to the actual operation of a market is critical because with the right assumptions it is possible to build a theoretical model to support almost any view of the world. It is therefore important that any theory of competitive harm is carefully assessed and that its underlying assumptions and predictions are consistent with observed industry behaviour. By way of illustration, we explore how the NMa recently considered and rejected a theoretical model of the operation of the market for motor fuel retailing in the Netherlands.¹

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RBB Economics advised one of the major oil companies in relation to this investigation.

The Dutch Petrol Case

On 6th March 2003 the NMa dropped a case it had been pursuing for some time against a number of major oil companies (the “majors”) active in the supply of motor fuel (“petrol”) in the Netherlands. The focus of this investigation was the practice of the majors of selectively reducing the wholesale price of petrol to those of their dealers wishing to cut retail prices in the face of a price cut by a competitor site. This practice, known as “margin support,” was alleged to lead to a less competitive retail petrol market, resulting in higher retail prices and excessive profits for the majors.

At the heart of its provisional case against the oil majors was a report, commissioned by the NMa from a leading academic economist, in which a theory of the anti-competitive effects of margin support was developed. It was impossible to assess, on the basis of the report alone, whether its central prediction – that margin support leads to higher prices – was relevant or not. Ultimately the NMa dropped the case, unconvinced that the theory was an accurate reflection of reality.²

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See http://www.nmanet.nl/en/nieuws_en_publicaties/persberichten/03_09.asp for the report of the decision not to proceed with the prohibition of margin support.

Petrol Retail Markets

In common with several other European countries, the Netherlands is populated with broadly three types of petrol retail outlet. These are company-operated sites, dealer operated sites and independent sites. Company operated sites are outlets owned and operated by an oil major, which sell petrol under the brand of that major (e.g. Shell), with the major directly setting prices at the site. Dealer operated sites are outlets owned and operated by a dealer, selling petrol under the brand of the oil major which supplies it, but with the dealer setting its own retail prices.³ Independent sites obtain their supplies from a variety of sources, sell under their own brand or that of a group unlinked to the oil majors, and, naturally, set their own retail prices independently of the majors.

Petrol sales at a site are very sensitive to the prices at nearby competitor sites. Thus, when a competitor site lowers its prices, it is very often in the interests of a site to lower its prices too, as failure to do so will usually result in a significant loss of volumes. At company-operated sites the majors are able simply to direct their site managers to lower retail prices to remain competitive with local rivals. At dealer-operated sites it is at the discretion of the dealer whether or not to lower the retail price. Failure to remain competitive with local rivals will harm both the dealer and the major that supplies it, since volumes

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Dealers sometimes own their own sites and sometimes lease them from a major. In both cases petrol is supplied to the dealer under a long term supply agreement. In both cases the dealer has the discretion to set its own prices.

at the site will fall. However, at prevailing wholesale prices, the dealer may not be able to afford to cut its prices. So, in order to make a mutually advantageous price cut affordable for the dealer, the supplying major will often cut the wholesale price it charges that dealer, enabling it to cut its retail price and remain competitive. Indeed, in many cases, the dealer is contractually entitled to such a reduction in wholesale prices, by virtue of the margin support clauses contained in its long term supply agreement.

Margin support has several pro-competitive features. It allows retail prices to fall, permits dealers to compete against their local rivals, and safeguards sales volumes for the benefit of dealer and supplier alike. Nevertheless a different and anti-competitive interpretation of the practice is possible. It can be argued that margin support actually leads to higher retail prices than would otherwise prevail. This is because petrol retailers will know that if they cut their retail prices many of their local rivals will automatically get margin support to enable them rapidly to respond to the original price cut. With an aggressive response guaranteed, the original price cut looks less attractive than it would do otherwise and, in some cases, a retailer may refrain from initiating a price cut solely because it knows its rivals will subsequently benefit from margin support.

Testing the Theory

In support of this anti-competitive view of margin support the NMa commissioned an academic report. The report made a number of assumptions about the Dutch petrol market, including assumptions about the prevalence of margin support, the relative costs of different petrol retail outlets, and the behaviour of customers in response to price differences. Based on these assumptions the report then built a series of models of the Dutch petrol retail market and was able to show that, in those models, margin support led to higher prices than would otherwise have existed. However, as a purely theoretical report, it was necessary to test both its technical validity and its relevance to the real-world operation of the Dutch petrol market.

Generally, there are three ways in which a theory and its relevance to a case might be tested. First, one can test the internal logic of the model itself. In other words, one can test whether, even on its own terms, the predictions of the model flow logically from its assumptions. Of course, testing the internal logic of the model says nothing about its practical relevance; it merely ensures that there are no mistakes in the algebra and that its conclusions truly flow from its assumptions. Most models are internally consistent.

Secondly, the assumptions of the model must be tested. Usually one would wish to test the sensitivity of the model's results to small changes in its underlying assumptions and, particularly if the results are sensitive to the precise nature of those assumptions, whether they accurately reflect the reality of the market. Clearly, a model whose results change dramatically if small adjustments are made to its underlying assumptions cannot be relied upon as heavily as a model whose results are robust to minor variations in its assumptions.⁴

Thirdly, the results of the model should be tested against observable market realities. In many cases the central prediction of the model may not be directly testable. For example, if a model predicts that excessive profits will arise as a result of certain industry practices it is unlikely to be possible directly to test whether profits are indeed excessive. However, in addition to its central predictions, a model is likely also to generate a series of ancillary predictions. These may not be important conclusions in their own right, but testing whether the ancillary predictions of a theoretical model accord with reality can provide an important check on whether the model is accurately describing what is actually taking place in the market.

In some variants of the model developed to assess the effect of margin support on the operation of the Dutch petrol market it was found that margin support definitely made

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Two standard models of competition on which the Commission has drawn in its recent draft guidelines on horizontal mergers – the Cournot and Bertrand models of competition – are examples of models whose predictions about market outcomes are sensitive to the assumptions one makes about the strategic behaviour of the firms and the nature of the products involved.

tacit collusion more likely, whilst in other variants of the model it was found that it probably did so. However, when subjected to closer scrutiny, it was clear that the model was flawed. First, and surprisingly, in this case, the claimed results of certain variants of the model did not follow logically from its assumptions. Crucially, contrary to the claim that in some variants of the model margin support always led to excessive prices, it was possible to show that excessive prices were predicted by these variants of the model whether margin support was present or not. With the prediction of excessive prices flowing from the other assumptions of the model and not from the presence of margin support, it could hardly be claimed that margin support was responsible for the alleged lack of competition in the market.

Secondly, when tested against market data it could be shown that the assumptions of the model were not consistent with the observed operation of the market. For example, the model assumed that all retail outlets were in receipt of margin support and that all outlets had identical costs. In fact, a significant proportion of the market did not receive such support and the costs of each outlet varied greatly. A re-working of the model – holding everything equal other than the assumptions of universal margin support and equal costs – showed that when some outlets in an area do not receive margin support and some outlets have lower costs than others, the presence of margin support at certain sites may have no impact on the competitiveness of the market. Other assumptions of the model could be varied in a similar way, with similar consequences.

Thirdly, whilst the model predicted that prices would be excessive, it also made a number of other implicit predictions about the way the market worked, none of which were supported by the evidence. For example, it was an implicit prediction of the model that margin support would rarely be activated because the rival prices cuts that would normally trigger the award of margin support will be deterred by the very presence of margin support. In fact, margin support is routinely awarded to a large proportion of qualifying sites, suggesting that the rival price cuts it is alleged to deter are occurring with some regularity despite the presence of margin support.

Additionally, the model implicitly predicted that, when activated, margin support will be in place for only a limited period, sufficient to punish the price cutter and persuade him to raise prices to their previous level. Again, market evidence shows that in a large number of cases margin support is in place for an extended period, and in some cases has been in place at a site for several years. Finally, the model predicted that the recommended retail price of the majors will inevitably act as a focal point for the collusive pricing which margin support allegedly promotes. Yet again, evidence from the actual operation of the market shows, contrary to the predictions of the model, that most sites do not price at the RRP of the majors and that there is a high degree of diversity in pricing.

Wider Lessons

In its press release closing the case against the majors, the NMa expressly stated that the economic model which had underpinned its case could not be relied upon.⁵ The NMa should be given considerable credit for recognising that a theory that does not stack up against the evidence cannot form part of a credible competition case.⁶ It is particularly commendable in this case given the high profile nature of the sector and the publicity that had previously been given to the investigation. It is also a case from which valuable lessons can be drawn for the application of economic theory to competition law cases more generally. For example, most of the substantive criticism directed at the European Commission by the Court of First Instance (CFI) in the recent merger appeals was not that the anti-competitive theories on which it had relied were intrinsically flawed or could never form part of the case against a merger, but that insufficient market evidence had been gathered to show that the models on which it had relied were relevant to the market

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The NMa stated in its clearance letter to the parties, available on its website, that "... Ook de economische onderzoeken die in opdracht van de NMa zijn gedaan maken niet voldoende aannemelijk dat de steunsystemen bijdragen aan het in stand houden van een bovencompetitief prijsniveau." ("...Also the economic studies that were carried out at the request of the NMa make an insufficiently plausible case that support systems contribute to maintaining a supra-competitive price level.")

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The decision of the NMa not to act against margin support continues what appears to be a trend in the Netherlands towards highly economically literate decision-making in the area of competition. For example, its decisions in the Heineken case (see RBB Brief 4 available at www.rbbecon.com) and its very recent clearance of agreements between Interpay and Ahold both reveal a level of sophistication in its economic reasoning that is far from universal amongst European competition agencies.

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For example, see *Airtours v Commission*, *Schneider Electric v Commission* and *TetraLaval v Commission*, all available at the website of the Court at <http://europa.eu.int/comm/competition/court>.

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The draft Commission merger guidelines can be found at <http://europa.eu.int/comm/competition/mergers/review> and a critique of the draft can be found in RBB Brief 7 available at www.rbbecon.com.

under investigation.⁷ Equally, evidence submitted by the parties that was inconsistent with the Commission's model of anti-competitive effects had not been adequately rebutted by the Commission.

Both the CFI judgments and the lessons of the Dutch petrol case underline the importance of robustly testing theories of anti-competitive harm against market evidence. Moreover, as the influence of economic thinking on competition policy and enforcement continues to increase, the need to do so has never been greater.

In its recently published draft merger guidelines, for example, the Commission sets out a number of theoretical models of how horizontal mergers might adversely affect competition. It also makes clear – through its redefinition of dominance and its adoption of a category of mergers that it terms non-collusive oligopoly – that mergers which were arguably previously beyond the reach of European merger control have now been brought squarely within its grasp.⁸ This extension of powers may be justified. However, with almost all horizontal mergers now having a theory of anti-competitive effects that can be deployed against them it is vital that competition authorities do not simply select a convenient model from their portfolio and merely assert that the merger will create a dominant position as a result.

Undoubtedly, economic analysis has the power to provide the appropriate conceptual framework within which to consider competition issues, but purely academic models – theories that have not been tested against the reality of the market – are no longer enough. For economic analysis to be robust and effective, all parties in competition cases, whether mergers, abuse cases or agreements, must roll-up their sleeves and generate the market-based evidence necessary to show which theories apply and which do not in the particular circumstances of the market under review. The Dutch petrol case and the recent CFI judgments show that this important principle applies with as much force to the competition authorities, that have so often taken an ill-fated theoretical path, as it does to the parties themselves.