



New Developments in Merger Analysis

Part 1: Doing Away with Market Definition

Anyone who has worked with economists will know that we are continually complaining that there are not enough data to allow us to carry out the necessary analyses.¹ Fortunately – or unfortunately, depending on your view of the value of economic analysis – modern technology is coming to the rescue. It is now easier to answer directly some of the important anti-trust questions. Indeed, there is now a range of circumstances in which the intermediate steps to which we have all become accustomed – such as market definition – are no longer necessary.

Missing out market definition in merger cases

The most extreme example is a new approach to analysing mergers in differentiated products industries (i.e. where competing products are only partial substitutes for one another). Improvements in retail technology mean that there are now a great deal more data available for analysis than in the past. The key improvement has been the use of scanner technology. Instead of bi-monthly audit figures we can now use monthly, weekly or even daily figures for actual sales and prices.

This plethora of new data allows us to estimate, to a high degree of accuracy, all the own-price and cross-price elasticities found within a differentiated products market. Using these elasticities, it is now possible to calculate precisely the extent to which the potential merger can be expected to reduce competition and even the extent to which the merger will lead to higher prices.²

This econometric approach (henceforth referred to as the NIDS approach) has been used in the US by both the regulatory authorities (for instance, in the Bread merger and in the Kimberly-Clark/Scott merger) and economic consultancies such as Lexecon Inc. Europe has lagged behind owing largely to the slower introduction of scanner technology – but this technology is becoming increasingly widespread and is allowing us to use this technique in current cases.

A hypothetical example should make the value of the new technique clear. Suppose that there was a merger in the US between three North American beer

brands: Coors, Labatts and Molson. Would this merger allow prices to rise? Using the NIDS approach we would be able to answer this question. Table 1 shows that in our hypothetical merger the prices of all three brands can be expected to rise. This is not surprising: the merger removes some interbrand competition and so prices should rise.³

Table 1
Price rises in the hypothetical beer merger

Coors	Labatts	Molson
4.2%	9.2%	8.7%

So this approach allows us to answer directly the question of whether the merger will allow prices to rise. We have not had to argue about the intermediate step of what is the relevant market definition (all beer? branded beer? branded beer with no taste?). This is a significant improvement over the normal state of affairs in competition law in which inordinate efforts are expended over (usually) subjective arguments about market definition.

So great is the effort expended in most anti-trust cases on the question of market definition that it is easy to forget that defining the relevant market is only an intermediate step in an imperfect approach to anti-trust analysis. We define the relevant market so that we can calculate market shares. We believe that there is some connection between market shares and market power (i.e. the ability to raise prices above the competitive level). This belief is based on what economists refer to as the Structure-Conduct-Performance paradigm: the structure of the industry (i.e. the degree of concentration) determines the conduct of firms (i.e. their price and quantity setting behaviour), which in turn determines their performance (i.e. their profits). Advances in industrial economics over the last fifteen years have made it clear that this paradigm bears, at best, only a very rough approximation to reality. After all, in a perfectly contestable market, even a 100% monopolist has no market power. So any approach that allows us to ignore the intermediate question of market definition, and instead answer directly the question of whether the merger will allow prices to rise, must be a significant improvement on current practice.

¹ This has been particularly true of residual demand analysis. As a theoretical technique it promises to answer many of the interesting questions about market power. As a practical possibility, it has never been implemented in Europe – and only rarely, and with mixed results, in the US.

² For the technically minded reader, the estimation is based on the Nearly Ideal Demand System (NIDS) of Deaton and Muellbauer (*American Economic Review*, 1981).

³ It is, of course, necessary to make some sort of assumption about the nature of competitive interaction. The standard assumption used by economists is called the “Cournot-Nash reaction function”. In effect, this means that each company, without any collusion, maximises its profits subject to the sales of the other companies. In many circumstances this seems the most plausible assumption to make.

Analysing potential divestments

In our beer example it seems clear that the intended merger would harm consumers: prices rise by more than the magic 5% figure.⁴ We might also expect to see the prices of other beers rising in response to the price rise in Coors, Labatts and Molson. The interesting anti-trust question is now: are there any divestments that will remedy the competitive harm? Or should the merger as a whole be blocked? Again, our ability to estimate elasticities to a high degree of accuracy is the key. Using the elasticity estimates derived from the NIDS model, we can calculate the effect on prices of each of the three possible divestments. Table 2 contains the results for our hypothetical merger.

Table 2: Effects of possible remedies

Price rises if Coors divested	Labatts	Molson
	8.3%	7.9%
Price rises if Labatts divested	Coors	Molson
	3.1%	2.3%
Price rises if Molson divested	Coors	Labatts
	2.5%	2.6%

These results suggest that the main competition policy concern created by the merger is the removal of competition between Labatts and Molson. To cognoscenti of North American beers this should not be a surprising result. Labatts and Molson are both Canadian beers imported into the US and marketed there as premium products. Coors, on the other hand, is resolutely positioned as a US beer.

Table 2 shows that the divestment of Coors does not solve the competition problem (prices of Labatts and Molson still rise by about 8%), but the divestment of either of the other two brands does largely solve the competitive harm. Analysis of this type can short-circuit a great deal of fruitless debate about alternative remedies. Following legislation last year, the Commission now demands that parties make any divestment proposals at an earlier stage than in the past. **For firms contemplating a “difficult” merger, it is worth carrying out this form of analysis at an early stage.**

Note that this result would **not** drop out automatically from a simple analysis of market shares. Coors has a higher market share than the two imported beers and so, on the basis of market shares alone, it would seem that the divestment of this brand would be more likely to solve the problem than the divestment of either of the other two brands.

⁴ Magic only because it is frequently used by officials on both sides of the Atlantic. In fact, the case for this figure, or any particular figure, is dubious.

Allowing for synergies

We can also analyse in a semi-scientific way the effect of synergies that may result from the merger. Suppose that the parties decided that they could not combine Molson and Labatts and so the transaction became a merger of just Coors and Labatts. As Table 2 shows, there will still be small rises in the price of Coors and Labatts. Taking into account the expected synergies from the transaction ought to reduce these price rises. Indeed, they may reverse them. It is a commonplace in economics that for a given demand curve, the lower is the **marginal cost** of the product, the lower is the price. This is true regardless whether the industry is competitive or monopolised. Using the estimated own-price and cross-price elasticities we can recalculate the profit maximising prices for the parties **after** allowing for expected declines in marginal costs. Table 3 shows the possible results.

Table 3: Price rises after allowing for efficiency gains

Marginal costs decline by:	0%	5%	10%
Prices rise by:			
Coors	2.5%	-0.8%	-6.1%
Labatts	2.6%	-1.9%	-7.0%

In this example, if marginal costs decline by even as little as 5% after the merger, then prices will actually fall after the merger. The problem still remains that it is easy to claim efficiencies and hard to substantiate them. Nevertheless, where it is possible for the parties to make a credible case for the efficiencies, then this methodology can be a powerful way of highlighting their pro-competitive effect.

Conclusions

Over the last few years Lexecon has made a concerted effort to make market definition in Europe a more objective exercise based on empirical evidence. We have championed the use of empirical techniques to implement the now standard test based on the idea of a “small but significant and non-transitory price increase”. So it might seem a little incongruous to read us now advocating the use of a technique that does away with the need to define markets at all.

Yet market definition can never be more than an intermediate step on the way to an analysis of market power. Where this intermediate step can be omitted, it should be. The technique outlined in this memo allows us to omit the intermediate step on those occasions where the data are available. Realistically, this is likely to be commonly the case mainly in FMCG (fast moving consumer goods) industries – so we are not claiming that the days of arguing over market definition are finished. Nonetheless, where these superior techniques can be used we can expect that in future they will be, and competition policy enforcement will be better as a result.

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