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Static on the Line Leads to Difficulties in Getting Through: Some Economic Implications of the Three/O2 Judgment for the Assessment of Horizontal Mergers

In the EU, dominance used to be a necessary but, importantly, not a sufficient, condition for finding that a horizontal merger would give rise to competition concerns. But since 2004, EU merger control allows for the possibility of anticompetitive mergers that do not create or enhance a dominant position.[1] This raises the important question: if dominance is no longer a necessary condition, how should we determine whether a horizontal merger is pro-competitive or anti-competitive?[2]

That question was addressed in the recent judgment of the EU General Court, in which the Court annulled the Commission's decision to prohibit the merger between Three and O2, two of the four main providers of mobile telephony services in the United Kingdom.[3,4] That judgment provides an important commentary on the Commission's economic approach to assessing horizontal mergers that goes beyond the specifics of this particular case. This Brief discusses some noteworthy points to emerge from the judgment.[5]

The importance of defining relevant markets correctly

The judgment categorically stresses the importance of defining the relevant market as part of the competitive assessment. The General Court noted that a proper definition of the relevant market is a necessary precondition for any assessment of the effect of a concentration on competition.[6] Furthermore, and importantly, the General Court stresses that the definition of the relevant market must be done properly. *"In so far as significant impediments to effective competition arise generally from the creation or strengthening of a dominant position, market shares may only be used as indicia of competition concerns to the extent that the market to which those shares relate has been correctly defined beforehand"*.[7]

These statements are to be welcomed. In recent years, the Commission's approach to defining the relevant market has had, on occasion, little regard to the principles of the Hypothetical Monopolist Test.[8] Of course, the General Court is not saying that the definition of the relevant market and the calculation of market shares is the be-all-and-end-all of the economic assessment.[9] It simply says that this important first step in the analysis needs to be done properly. It will be interesting to see how the Commission addresses these points when revising its Notice on the Definition of the Relevant Market.

Qualitative Assessment of Unilateral Effects

Central to the Court's critique of the Commission's decision is its qualitative assessment of the likelihood that mergers give rise to a significant impediment to effective competition (SIEC) in the absence of a dominant position. Although the Commission has published guidelines on the assessment of horizontal mergers, in practice, those guidelines lack clarity and leave too much room for interpretation.

Eliminating an Important Competitive Force

One of the factors which the Commission took into account in concluding that the merger would give rise to unilateral effects was that *"Three constitute[d] an important competitive force in the [retail market] ... pursuant to paragraph 37 of the ... Guidelines, or in any event it exert[ed] an important competitive constraint on that market, and [was] likely to continue exerting such a constraint absent the transaction"*.[10]

1. The adoption of the SIEC standard extended the set of mergers that could be found to be anticompetitive beyond those that do not result in (or strengthen) the largest firm in the market.
2. Since practically all industries in which the Commission assesses horizontal mergers can be characterised as oligopolies, this issue is a wide-ranging one.
3. EU General Court, T-399/16 — CK Telecoms UK Investments v Commission, 2020.
4. RBB Economics has had no involvement in this matter at any stage.
5. The Commission considered that the merger between Three and O2, two providers of mobile telephony services in the United Kingdom, gave rise to three theories of harm, resulting in adverse effects in both the retail and wholesale markets. See paragraph 126 of judgment for an overview.
6. Judgment, paragraph 144.
7. Judgment, paragraph 147.
8. For a commentary and relevant case references see RBB Economics, *The EC's consultation on market definition: Observations by RBB Economics,* October 2020.
9. *Note bene,* the assessment of an important competitive force and closeness of competition both rely to a large extent on an assessment of market shares.
10. Paragraph 777 of Commission decision.
11. See paragraph 37, Horizontal Merger Guidelines (2004).

The Horizontal Merger Guidelines provide a cursory, two paragraphs on when a merger can be considered to eliminate an important competitive force. The Guidelines state that *"[s]ome firms have more of an influence on the competitive process than their market shares or similar measures would suggest. A merger involving such a firm may change the competitive dynamics in a significant, anticompetitive way, in particular, when the market is already concentrated. For instance, a firm may be a recent entrant that is expected to exert significant competitive pressure in the future on the other firms in the market".*[11]

But this provides no meaningful guidance as to how to identify "an important competitive force" in practice. Since this concept is not well-defined in economics,[12] the absence of any meaningful guidance provides the Commission with significant discretion and raises the prospect that any merging party in a market characterised as an oligopoly could be considered to be an "important competitive force". For example, the Commission could, in principle, claim that a firm with a 2 per cent market share has more of an influence on the competitive process than its tiny market share would suggest and, on that basis, block a merger with that firm.

The Court's judgment provides a helpful commentary on this important issue. The Court found that an "important competitive force" does need to stand out from its competitors in terms of its impact on competition.[13] If that were not the case, any firm deemed to have "more of an influence on competition than its market share would suggest" in a market characterised as an oligopoly (i.e. most real-world markets) could be held to exert an important competitive constraint. This would permit the Commission to prohibit, by that finding alone, any horizontal merger without any need to assess its overall impact on competition.

This, of course, does not imply that in certain circumstances one of the merging parties could not play a central role in determining competitive outcomes.[14] But these characteristics need to be substantiated with evidence on a case-by-case basis, rather than asserted.

The assessment of the closeness of competition

Another area in which the Court's judgment provides useful insights is in relation to the concept of closeness of competition. The Horizontal Merger Guidelines observe that products may be differentiated such that some products are closer substitutes than others, and that *"[t]he higher the degree of substitutability between the merging firms' products, the more likely it is that the merging firms will raise prices significantly"*.[15]

Closeness of competition is usually defined with reference to the diversion ratio between two firms; the diversion ratio from Firm A to Firm B measures the share of volumes that Firm A would lose to Firm B (out of all volumes lost if Firm A were to increase its price whilst all other firms, including Firm B, hold their prices at prevailing levels).[16] But it is important to note that any two firms in a well-defined relevant market will have a positive diversion ratio between them.

This raises the important question of how high the diversion ratio between the merging parties needs to be in order for a merger to be considered anticompetitive.

Two observations can be made. First, the diversion ratio by itself does not necessarily provide a good proxy for whether a merger is likely to be anticompetitive. What matters is not just the proportion of sales that would shift from Firm A to Firm B but also the wider market context. To see this, consider a hypothetical example of a merger between Firms A and B where the diversion ratio from A to B is 30 per cent, but from B to A it is only 1 per cent, reflecting A's tiny market share, also 1 per cent. In this example, Firm A is clearly a marginal player whose products are purchased by only a small fraction of consumers. As a result, the merger between A and B is highly unlikely to result in post-merger increases in the prices of products supplied by either A or B.[17,18] This example illustrates that the absolute level of the diversion ratio, although informative as to the relative closeness of competition between various firms in the market, cannot by itself be decisive in deciding whether a merger is anticompetitive.

12. It is also important to note that the concept of an important competitive force is dynamic and therefore does not sit well with the implicit assumption often adopted by the Commission's economists that firms compete according to the theoretical static models of Cournot competition and Nash-Bertrand competition.

13. Judgment, paragraph 170.

14. For example, a firm's market share might be growing rapidly over time thanks to its low cost or aggressive pricing strategy, or because a firm is investing in new capacity much more than its rivals. To the extent that rivals are forced to respond by cutting their prices, then this could provide reasonable grounds to prohibit the merger.

15. Horizontal Merger Guidelines, paragraph 28.

16. *Note bene,* since post-merger prices are likely to change relative to pre-merger prices, diversion ratios between all remaining firms post-merger can also be expected to change.

17. Where there is a large difference in firm size in a properly defined relevant market, it is usually the case that that the diversion ratio from the small firm to the large firm is greater than the diversion ratio from the large firm to the small firm. Especially when the smaller merging party has a low market share, this can give rise to counter-intuitive conclusions as to the likely competitive impact of such mergers. To see this note that, in the example above, even if B is an important constraint on A, the loss of that constraint is not a concern because A is such a marginal competitor in the relevant market.

18. The fact that Firm A has a tiny market share reflects that it has a weak offering in the market and that any worsening of its offering (for example, by increasing its price) will further weaken its market position.

Second, is it sufficient for merging firms simply to be close competitors in order for a merger to be considered anticompetitive or do we need to establish something more? In its decision, the Commission argued that it was sufficient to demonstrate that Three and O2 *"are close competitors on the overall retail market"*.[19] The Court categorically rejected this argument. The Court found that the fact that the merging parties are "relatively close competitors" cannot be sufficient to establish a SIEC.[20] What matters is the likely overall impact of the merger on market outcomes, taking into account the competitive constraints posed by existing and potential competitors, not merely that the merging parties are "relatively close competitors".

Quantitative price analysis

The judgment also provides a useful commentary on the role played by estimates of price effects in the overall competitive assessment. In this particular case, the Commission undertook both a GUPPI analysis and a calibrated merger simulation analysis.[21] Both GUPPI and merger simulation models assume that firms compete in a particular manner specified in simple theoretical models; i.e. either Cournot or, more usually, Nash-Bertrand.[22] Consequently, both GUPPI and merger simulation will always predict that any horizontal merger will give rise to a price increase absent short-run marginal cost efficiencies. This implies that when using these techniques, unless we consider it appropriate to block all horizontal mergers that do not give rise to short-run marginal cost efficiencies, we need to be able to distinguish between those mergers that give rise to "significant" price effects from those that only give rise to "insignificant" effects.[23] This requires three critical steps.

- Estimating the magnitude of the likely price effect.
- Assessing the reliability of any such estimate.
- Setting a benchmark for distinguishing between significant and non-significant price effects.

Estimating the magnitude of likely price effects

Despite what may appear to be sophisticated mathematics underlying GUPPI and merger simulation, obtaining an estimate of the magnitude of likely price effects is relatively straightforward. Assuming data can been obtained to estimate diversion ratios and margins (and, in the case of merger simulation, data on certain other factors held to affect prices), these models are essentially black boxes which will produce an estimate of the likely price effects arising from the horizontal merger, given the theoretical assumptions made on how firms compete.[24]

Assessing the reliability of estimated price effects

Unfortunately, the next step is less straightforward. First, it should be stressed that these models are crude abstractions from how firms actually compete. For example, these models usually assume that firms compete on only one parameter of competition.[25] Whether or not this is a reasonable assumption will depend on the industry under consideration. It should be noted that this assumption clearly does not hold in mobile telephony since mobile operators compete not just on price but on the quality of their respective networks which varies over time.

Second, these models rely primarily upon information on diversion ratios and margins. Measuring these inputs is fraught with difficulties and even small errors in the measurement of either can produce significantly divergent results. Furthermore, the efforts expended in attempting to produce estimates of diversion ratios and margins draws attention away from many other features of real-world competition.[26]

In particular, both GUPPI and merger simulation models fail to take into account market dynamics in the form of active customers and dynamic responses by rivals.[27] These models assume essentially passive customers and passive competitors which is inconsistent with the way in which competition actually works in most markets. When likely customer responses and/or supply-side responses are taken into account, the neatness of these simple predictions

19. Commission Decision, paragraph 463.

20. Judgment, paragraph 249.

21. It appears that the General Court has confused UPP with GUPPI and GUPPI with merger simulation. However, this does not affect the force of the following comments.

22. The Cournot model of competition assumes that firms compete by setting output to maximise profits assuming that the output of other firms is fixed. In contrast, the Bertrand model assumes that firms set price in order to maximise profits taking as given the prices of other firms.

23. Alternatively, we need to assume that all horizontal mergers give rise to some marginal cost efficiencies. Farrell and Shapiro in their paper proposing UPP as a screening tool for assessing mergers suggested an *ad hoc* 10 per cent efficiency credit. See Farrell and Shapiro, *Antitrust Evaluation of Horizontal Mergers: An Economic Alternative to Market Definition,* The B.E. Journal of Theoretical Economics: Vol. 10: 2010.

24. Strictly speaking, UPP and GUPPI do not provide estimates of likely price increases but rather an indication of the likelihood of price increases. Additional restrictive assumptions need to be made in order for these methods to produce estimates of merger price effects.

25. Where firms supply differentiated products, the quality of their respective offerings is usually assumed to be fixed.

26. For an early warning, see RBB Brief 12, *The Emperor's New Clothes? – the role of merger simulation models,* January 2004

27. Simulation models can account for the *static responses* of rivals which arise from the assumption of Nash-Bertrand competition but they fail to take into account more important dynamic responses. Such dynamic responses can take the form of product re-positioning or the introduction of new products, changing pricing behaviour and/or changes in consumer behaviour. These responses are all usually absent from simulation models and therefore these models typically overstate the likely competitive effects of a merger.

is upset in a manner that is fact-dependent and varies substantially from the assumed theoretical model.[28,29]

For that reason alone, one should be careful before placing any weight on these price estimates. The fact that, in this matter, the Commission's analysis predicted price increases by Three of above 30% in the pre-paid retail sector by itself indicates that something is seriously awry.[30] This is the most competitive segment of the retail market, yet the estimated price increases were much higher than in other market segments. Weight should only be given to such price estimates if the underlying assumptions of the models are assessed against the observed behaviour of firms and the role that customers and rivals play in circumventing increases in market power following mergers.

It is interesting to note that the Commission in its decision states that the result obtained should not be seen as an exact and precise quantification of the price increases that may result from the transaction, but rather as an "indication for the likelihood" of such increases.[31]

The Court disagreed, stating that, *"as is apparent from the contested decision itself, the quantitative analysis is not regarded as decisive evidence. Accordingly, that analysis is not sufficient to demonstrate to the requisite legal standard that the elimination of the important competitive constraints that the parties exerted upon each other would result in a significant increase in prices and, therefore, in a significant impediment to effective competition."* In other words, if a price estimate is to provide any evidentiary weight, it must be reliable.

The need to set a threshold

Third, even assuming that we are able to obtain reliable estimates of likely short-run price effects, it is necessary to define *ex ante* a benchmark against which those estimates can be assessed. The Commission argued otherwise, stating that the magnitude of the price increases is only one of the factors relevant to its overall assessment. For this reason, the Commission did not consider it necessary to define a threshold above which a price increase indicated by an individual piece of evidence would be significant. But as noted above, these methods of estimating likely price effects will always predict a price increase. So, how is one to distinguish between significant and non-significant price increases?[32] In the absence of an *ex ante* threshold for estimated price effects, competition authorities have almost unlimited discretion to make that decision, which can lead to inconsistent and uncertain merger policy.[33]

Conclusions

Regardless of whether the Commission is successful in its appeal, the Court's judgment provides important observations as to how the economic assessment of horizontal mergers should be undertaken. Those observations highlight the need to always ground economics analysis in the real world where proper account is given to the dynamics and complexities of competition rather than blindly following the predictions of simple theoretical models.

28. The judgment noted the need to take into account dynamic responses. *"It must be held that, because of the competitive conditions on such a market, concentrations in an oligopolistic market tend to lead almost automatically to an increase in prices in the short term on account of the loss of competition between the merging parties. It is only in the medium term that external competition from players already present on the market or, depending on how high barriers to entry are, from new players, will force the merged entity to lower its prices."* See paragraph 276.

29. It is interesting to note that the Commission accepted in its decision that it did not take into account these dynamic aspects of competition. It stated that, in its view, its quantitative analysis captures the most important factors affecting pricing incentives. Furthermore, the Commission claimed that *"features and dynamics outside the scope of its quantitative analysis, such as entry and repositioning, are unlikely to reduce the estimated price effects from this Transaction to levels that are no longer of concern."* Commission decision, Annex A, paragraph 304. But how does one know that this is the case if one has not undertaken that analysis?

30. These results are largely driven by the manner in which margins are estimated.

31. Commission Decision, paragraph 250 of Annex A.

32. It was for this reason that Farrell and Shapiro (2010) *op. cit.* in advocating UPP as an alternative screen to defining relevant markets proposed an *ad hoc* "efficiency credit" of 10 per cent.

33. See, for example, RBB Brief 60, *Sainsbury's/Asda and the CMA's GUPPI decision rule: On the money or basket case?* October 2019.