


CRA COMPETITION POLICY DISCUSSION PAPERS 2

Dominance: meaning and measurement

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Introduction

Dominance is clearly a key concept in EU competition law. Article 82 outlaws “any abuse by one or more undertakings of a dominant position” whilst the Merger Regulation prohibits “a concentration which creates or strengthens a dominant position as a result of which effective competition would be significantly impeded”. A natural assumption would be that such a key concept would have a well defined meaning and a well defined standard of measurement. We think that neither of these is the case. The result is that the concept of dominance is often more a mantra than an analytical framework. A general uneasiness with the concept of dominance is also echoed in the recent Statement of Purpose of the OFT and the forthcoming EC Green Paper on merger control (discussed further below).

In this paper we explain why we believe that the concept of dominance in EU competition law is not currently adequately defined and suggest a possible approach to improving on this situation. The paper is offered as a note to generate discussion: we do not pretend to have solved the problem that we raise.

The legal definition of dominance

The standard legal definition of dominance was laid down by the European Court of Justice (ECJ) in *United Brands v Commission*¹. The Court stated that:

“The dominant position thus referred to (by Article [82]) relates to a position of economic strength enjoyed by an undertaking which enables it to prevent effective competition being maintained on the relevant market by affording it the power to behave to an appreciable extent independently of its com-

petitors, customers and ultimately of its consumers.”

This definition is echoed in the ECJ’s *Kali-Salz/MdK/Treuhand* decision with respect to collective dominance². This Court stated that:

“In the case of an alleged collective dominant position, the Commission is therefore obliged to assess, using a prospective analysis of the reference market, whether the concentration which has been referred to leads to a situation in which effective competition in the relevant market is significantly impeded by the undertakings involved in the concentration and one or more other undertakings which together, in particular because of factors giving rise to a connection between them, are able to adopt a common policy on the market and act to a considerable extent independently of their competitors, their customers, also of consumers.”

However, it is interesting to note that some European authorities have started questioning the wisdom of an approach based on the original concept of dominance. John Vickers, the Director General of the UK Office of Fair Trading (OFT) stated in a speech early this year that:

“The Government’s proposed approach to merger control in the UK - which largely consolidates existing practice - has the same pro-competitive aim of the ECMR. But it is cast in somewhat different terms, involving the test, which has long and successfully been employed in the US, of ‘substantial lessening of competition’. I find this concept attractive, and would not argue for converting the UK approach to one based on dominance (including col-

lective dominance). There might even be merit in some debate on whether the ECMR should likewise be cast in terms of 'substantial lessening of competition' "3

This same wording found its way into the Statement of Purpose of the OFT in July of this year, when referring to the approach to merger control in the UK:

"[...] The OFT will uproot and deter all forms of anti-competitive behavior, including cartels and the abuse of market power. The OFT will advise referral to the Competition Commission (CC) of all mergers that might *substantially lessen competition* and, where appropriate, will refer to the CC markets where competition is not working well."4 (italics added)

The issue of whether the concept of dominance should be replaced by *substantial lessening of competition* will also be raised in a Green Paper on EC merger control to be published by the Commission before the end of the year.

The essence of the two ECJ definitions of dominance described above is the ability to act independently to an appreciable extent of competitors, customers and consumers. It is this essence that provides problems both in terms of meaning and measurement.

Acting independently of consumers and customers⁵

Our first criticism of the definition is that no successful firm anywhere can act to an appreciable extent independently of its consumers. This is because of what economists refer to as the *discipline of the demand curve*. Firms typically face downward sloping demand curves, indicating that the lower the price of their product, the more of it they sell. Conversely, if a firm raises its price, it will sell less. It is not open to the firm to raise prices and sell the same quantity as before. The demand curve facing a firm constrains its behaviour. If the firm raises its price, it has to accept that it will sell fewer units of its product. This is true of a dominant

firm just as much as it is true of a non-dominant firm. One response to this might be to say that what the ECJ really meant was that a dominant firm can profitably raise prices higher than a non-dominant firm. This may well be true (see below), but it is important to note that this possibility is not dependent so much on the behaviour of consumers as on the existence and behaviour of competitors. A firm that faces many competitors will find it harder to raise prices profitably than a firm that faces no, or only weak, competitors. An example of this situation would be a cigarette manufacturer that knows that its consumers will not readily substitute cigarettes for other goods if the price of cigarettes is increased. We can say that it faces a very *inelastic* market demand. However, because it faces strong competition from other cigarette manufacturers, this firm will not be able to significantly raise its price without losing sales to a close competitor. It is clear that what constrains the firm in this case is not consumers (the shape of the demand curve) but rather its competitors.

So it appears that defining dominance as the ability of a firm to behave to an appreciable extent independently of its consumers will not distinguish adequately between dominant and non-dominant firms.

Acting independently of competitors

We have argued above that it is not economically coherent to think of firms acting independently of consumers to an appreciable extent. The next question is whether it makes sense economically to think of firms acting independently of their competitors. There is a sense in which it does, but here we run into a measurement problem. That is, we think that it may well make sense to think of firms acting independently of their competitors, but that it will be very hard to measure whether this is happening.

Every firm that faces competitors (i.e. all firms apart from true monopolists) is constrained to some extent by those competitors. This is clearly true for firms operating in a competitive market. In these circumstances firms cannot raise their prices above the competitive

price level without losing so many sales to their competitors that the price rise is not profitable. Yet this is also true for a dominant firm. This is because a dominant firm will raise prices above the competitive level to the point at which the constraints imposed on the firm by its competitors and its demand curve are binding. So the dominant firm does not act independently of its competitors. Rather, its behaviour is constrained by its competitors.

However, there is clearly an important sense in which the dominant firm has acted to an appreciable extent independently of its competitors: it has raised its price above the competitive price level. So it was not constrained from raising its prices above the competitive price level. This ability to price above the competitive price level strikes us as an important aspect of being dominant. So perhaps one test of a firm's dominance is whether the firm can profitably price above the competitive price level. However, there is a measurement problem here: how can we measure whether a firm has the ability to price above the competitive price level or to act independently of its competitors?

The competitive price level is virtually always impossible to calculate⁶, and of course if it could be routinely calculated then we would not need to worry about whether a firm was dominant. We would instead cut straight to the heart of the matter: was the firm pricing above the competitive price level by a significant amount? Further, we cannot ask the question "could the firm profitably raise prices above the current price level" as a proxy because the answer to this question should always be "no", regardless of whether the firm in question is dominant or not. A dominant firm, like a non-dominant firm, will raise its prices up to the point at which the constraints imposed on it by its competitors and demand curve bite and make a further price rise unprofitable.

This measurement issue is related to the Cellophane Fallacy⁷. It has a very important implication for the ECJ's definition of dominance: an empirical test for

dominance would never find that a dominant firm was acting independently of its competitors in its pricing decisions. Since it would be pricing at the profit maximising level given the behaviour of its competitors, if its competitors changed their prices, it would change its prices. Hence the pricing policy even of a dominant firm is dependent on the pricing of its competitors.

In many cases this problem is more fundamental than just a measurement problem. It is often not clear what the competitive price level is *as a matter of economic theory*, let alone practical measurement. Economists "know" that the competitive price level is marginal cost, but this statement begs more questions than it answers. Which marginal cost (short-run? long-run)? Whose marginal cost (the most efficient firm's? the least efficient firm's)? What about in the case of large fixed costs (so that marginal cost will not cover the fixed costs except in the very long-run)? How should fixed costs be allocated when they are incurred jointly by two or more products?

We have concentrated so far on price as being the important dimension of competition. This is clearly not always the case: in some markets the main focus of competition is in other dimensions, such as quality, service and innovation. However, our remarks above are equally applicable to markets of this type. Firms will act in such a way that they do face constraints from competitors in each of the dimensions of competition. With price that means raising prices up to the point at which further price rises would not be profitable. With quality it might be lowering quality (and hence costs), but not price, up to the point at which further reductions in quality would not be profitable. With innovation it might be slowing the pace of innovation (and hence R&D expenditures) as far as is consistent with maintaining long run profits.

Our main concern has been, so far, to highlight the inadequacies of the legal definition of dominance and the limitations of tests for dominance such as the ability to raise prices above the competitive level. In the next

section, we discuss alternative ways to assess dominance and highlight the advantages of our preferred approach.

Potential solutions

If the legal definition is not very helpful, what constitutes a better economic approach to the issue of dominance? One approach is to say that dominance is **substantial market power**. This is an attractive approach as it is consistent with the OFT “Guidelines to the Competition Act”. Paragraph 2.10 of *Assessment of Market Power* (OFT 415) states that:

“An undertaking is unlikely to be dominant if it does not have substantial market power.”

whilst paragraph 1.2 states that:

“Market power describes a situation where the constraints which would usually ensure that an undertaking behaves in a competitive manner are not working effectively. As a matter of convenience, however, this guideline usually refers to market power as the ability to raise prices consistently and profitably above competitive levels.”

Despite this, we do not think that this is ultimately a very useful definition of dominance. This is not because it is not necessarily the right definition, but because it suffers the same measurement difficulties as outlined earlier. If dominance is substantial market power and market power is the ability to price above the competitive price level, then it seems clear that what we really need to do is to compare the current price to the competitive price level. But we cannot in general identify the competitive price level and if we could then, as discussed earlier, we would not need to concern ourselves with the concept of dominance.

Another possible definition is that dominance is the **ability to engage successfully in anti-competitive behaviour which cannot be restrained by the independent actions of competitors, customers or consumers**. This definition has the attraction that it “rehabilitates” the United Brands definition by

replacing “act independently to an appreciable extent of” with “restrained by the independent actions of”. From an economic perspective this difference is significant and makes the definition of dominance more economically coherent. However, this definition has an obvious problem: it fails to tell us what constitutes anti-competitive behaviour and so fails to provide us with a standard for assessing dominance. Pricing above the competitive price level might be considered anti-competitive but as we have discussed this is rarely measurable. Excluding rivals is often considered anti-competitive, and sometimes actually is anti-competitive, but in itself it is not (firms frequently exit markets, usually because they are less efficient than other firms). So whilst this may be an economically coherent definition, it is incomplete.

Another possible definition is that dominance is the **ability to restrict output substantially in the market-place**. This is similar to the suggestion made by Klein⁸ that:

“it is more useful to define the extent of a firm’s antitrust market power in terms of whether changes in the firm’s prices have any significant effect on market quantities and prices” (p76)

Before discussing this definition in detail, some words of clarification are necessary. First, we are not suggesting that dominance should be defined as the ability to restrict output substantially below the *competitive output level*. That would be equivalent to the ability to raise prices above the competitive price level and as such we have already dismissed it as a useful practical definition. Instead we are suggesting that dominance should be considered as the ability to restrict output substantially below its **current** level. Note that what matters is the *ability* to restrict output substantially below its current level, not whether the firm actually wishes to do so. The Cellophane Fallacy implies that a firm with market power will already be exercising it and so will not want to raise price, or lower output, any further. Thus we are not requiring the output restriction to

be profitable for the dominant firm (since in that case it would have already so restricted output). Second, what matters is that the firm is able to restrict total output in the market, not just its own output. Any firm can restrict its own output, but in most markets any unilateral output restriction would be replaced by an output expansion by other players in the market. This is not true of a dominant firm's output restriction. Third, we recognise that what we are proposing is more a test than a definition. However, for practical purposes it is a necessary test. Note that we are not claiming that it is the only possible test. For instance, there may be occasions when it is clear that an allegedly dominant firm is pricing substantially above the competitive price level and this may be enough to allow an investigator to infer dominance.

Our suggested definition/test has a number of attractions. If a firm can restrict output in the market then it must have power over price (since demand curves slope down). Dominant firms are normally considered to have power over price. The ability to restrict output in the market implies that the firm has the ability to harm consumers. When a firm restricts output in the market some consumers who previously bought the product no longer buy it, and those who do continue to buy it pay more for it. These two effects represent unambiguous consumer harm.

However, the most attractive aspect of this definition/test is that it is consistent with current practice whilst having a firm economic foundation. Focusing on output restriction is consistent with most of the standard factors that are usually considered relevant in the appraisal of dominance. The standard list includes at least:

- i. market share of the leading firms;
- ii. variability of market shares;
- iii. existence of substitute products;
- iv. barriers to entry;
- v. barriers to expansion;
- vi. existence of spare capacity; and

- vii. the nature of competitive interaction in the market.

The market share of the allegedly dominant firm is important because it tells us how much of the market the firm currently supplies and therefore what its potential is for substantially reducing output in the market. A firm with a 5% share is unlikely to be able substantially to reduce output in the market because (a) it has relatively little current output to restrict; and (b) there are clearly other firms (covering 95% of the market) who are likely to be able to replace any lost output. The variability of market shares is relevant because it indicates the extent to which players have been able to increase their output in the short-run in the past. Factors iii to vi deal directly with the question of whether there are other firms who could potentially replace any output removed from the market by the allegedly dominant firm. Factor vii deals with the question of whether the other firms would choose to replace the lost output.

Another attractive aspect of this definition/test is that restricting output is key to most anti-competitive behaviour. When is price discrimination likely to be anti-competitive and when is it likely to be pro-competitive? The economic literature is clear that price discrimination will generally only increase consumer welfare if it raises output. When is a refusal to supply likely to be anti-competitive? When it leads to a reduction in output on the market. When is it plausible that a low price strategy is predatory? When the alleged predator has the potential ability to restrict output in the long run once it has excluded rivals. When is a merger likely to be anti-competitive? When it allows the parties profitably to raise prices, which requires a restriction of output.

Finally, another attractive feature of this test is that there are cases where the observation of price and costs cannot be easily achieved but where concentrating on the ability to reduce quantity may provide a ready test of dominance. One example of dominance being exercised through the restriction of output may be the licensing of certain sports rights where constraining

supply is a way to increase the value of the rights. *The Economist* argued:

“Money is pouring into sport because viewers are willing to cough up a lot to watch it. [...] But viewers are paying over the odds because sporting authorities are able to use their control over the supply of games to force up the price of TV rights. America’s National Football League (NFL) is negotiating eight-year deals worth a total of \$15 billion with several American TV networks. BSkyB, which broadcasts via satellite in Britain, is paying the English Premier League £620m (\$1 billion) over four seasons for the rights to a fraction of its matches.”⁹

This may be a situation where it is easier to assess the possible existence of dominance through the sporting authorities’ ability to restrict output than through their ability to raise prices above the competitive level (what is the competitive price for sporting rights? what are the relevant costs?).

Conclusions

The current legal definition of dominance does not have a well defined economic meaning or a well defined standard of measurement. This situation is not conducive to good competition law enforcement. Our suggested definition/test does not imply a substantive change in current practice but is consistent with the underlying economic conditions necessary for a firm to be able to act anti-competitively. A definition/test of dominance that has a firm basis in economics, whilst being consistent with the established legal approach

and case law, should help to clarify the thinking of both regulators and regulated.

- 1 Case 27/76 *United Brands Co and United Brands Continental BV v Commission* [1978] 1 CMLR 429
- 2 Cases C68/945 and 30/95 *French Republic v EC Commission* [1998] 4 CMLR 829
- 3 ‘Competition policy and globalisation’ a Speech to the European Policy Forum 16/01/01.
- 4 ‘The OFT: Statement of Purpose’ 17/07/01.
- 5 This section is framed within the context of acting independently of consumers. The logic of the section also applies to acting independently of customers (where customers are assumed to be intermediate in the vertical chain between manufacturers and final consumers).
- 6 With the possible exception of the regulated utilities.
- 7 The Cellophane Fallacy is named after the celebrated *Du Pont* case. In this case Du Pont argued that cellophane was not a separate relevant market since it competed directly and closely with flexible packaging materials such as aluminium foil, wax paper and polyethylene. But as many commentators have since noted, the conclusion is a circular one since Du Pont, as the sole supplier of cellophane, is likely to have set prices for its products as high as it could before other products became too great a competitive constraint. That is, Du Pont would have raised its price above the competitive price level up to the point at which competition from other products started to bite.
- 8 Klein, B 1993. “Market power in antitrust: economic analysis after *Kodak*”, *Supreme Court Economic Review*, vol 3, 43-92
- 9 “Tackling Monopolies” in *The Economist* 05/02/98.

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