Abuse of market power

Speech to the 31st conference of the European Association for Research in Industrial Economics, Berlin

By John Vickers[1]
Chairman, Office of Fair Trading

3 September 2004

Introduction

Competition law is a fundamental part of the ground-rules of the market economy. Its three basic elements combat anti-competitive agreements, anti-competitive mergers and abuse of market power. Competition policy in Europe in respect of the first two elements has recently been reformed towards a more economics-based approach. Many practitioners and observers of competition law believe that the same should happen with the rules on the abuse of market power. In the United States too there is much current debate about what the law against monopolization is, and should be. The aim of this paper is to describe some of the main issues in these debates and to stress the importance of economics-based development of the law.

In recent years the balance of emphasis of EC competition policy towards agreements between firms has shifted, at least to some degree, from vertical to horizontal agreements, and from legal form to economic effect. The 1999 block exemption regulation for vertical agreements created a larger safe harbour for non-price vertical agreements in un-concentrated markets. Around the same time, EC anti-cartel policy,

[1] I am very grateful to Mark Armstrong, Frances Barr, John Fingleton, Amelia Fletcher, Eleanor Fox, Bill Kovacic, Nic Newling, Ali Nikpay and Richard Whish for many discussions and comments that helped shape this paper. The views expressed here are personal and not necessarily those of the OFT.

following successes in the US, became much more vigorous. Large fines (the stick) and more encouraging leniency arrangements (the carrot to information providers) have been used in a number of major cases – including vitamins, lysine, citric acid, graphite electrodes, and plasterboard. The balance of incentives for potential cartelists has shifted significantly, and cartel activity is accordingly less likely. Very recently, as part of the 'modernisation' of the implementation of EC competition law that came into effect on 1 May, the bureaucratic notification system for agreements was ended. The result of these developments is a European policy approach towards agreements between firms that is more economics-based in terms of its priorities, processes and substantive case analysis.

The first of May also saw the coming into force of the revised EC Merger Regulation. Among other things this changed the test for merger appraisal from whether the merger would create or strengthen a dominant market position to whether the merger would significantly impede effective competition.[2] This is better in tune with the economic purpose of merger policy and is close to, if not the same as, the 'substantial lessening of competition' test in the law of the US and a number of other countries, including, since June 2003, the UK. The new EC merger regulation was accompanied by economics-based horizontal merger guidelines. Economics now plays a stronger role in merger appraisal within the European Commission's directorate for competition – for example through the new chief economist position. And recent judgments suggest that the European Community Courts in Luxembourg require more economic rigour in merger analysis.

In contrast to these developments affecting agreements and mergers, EC competition law and policy towards abuse of market power have seen less development and are in a state of some uncertainty. There appear, moreover, to be significant differences between EC and US law and policy – unlike the general situation now with mergers – but even this is hard to judge in view of significant intra-jurisdictional uncertainties on both sides of the Atlantic. Ultimately it will be the courts that resolve these uncertainties through cases, but in the meantime the competition authorities must apply, and competition lawyers must advise on, the law as they see it to be. Public

[2] An account of recent EC and UK merger policy reform is in Vickers (2004).

debate on these issues should help clarity, understanding, and perhaps reform. It is now getting under way, and economics has a major part to play.

The law

The corner-stone of European law on abuse of market power is Article 82 of the EC Treaty, the text of which is in the Box below. It is immediately apparent that the prohibition on abuse of dominance covers a wide and diverse range of corporate behaviour. The practical meaning of the prohibition has evolved over time through the case law, especially since judgments by the European Court of Justice (ECJ) from the late 1970s, before which there were very few cases.

Article 82 of the EC Treaty

Any abuse by one or more undertakings of a dominant position within the common market or in a substantial part of it shall be prohibited as incompatible with the common market in so far as it may affect trade between Member States. Such abuse may, in particular, consist in:

(a) directly or indirectly imposing unfair purchase or selling prices or other unfair trading conditions;

(b) limiting production, markets or technical development to the prejudice of consumers;

(c) applying dissimilar conditions to equivalent transactions with other trading parties, thereby placing them at a competitive disadvantage;

(d) making the conclusion of contracts subject to acceptance by the other parties of supplementary obligations which, by their nature or according to commercial usage, have no connection with the subject of such contracts.

Article 82 applies only to firms that have dominant positions. Of course a large body of case law deals with the assessment of dominance – market definition, market shares, entry conditions, and so on. Those issues are beyond the scope of this paper, which is concerned with *abuse* of market power, and so will take dominance as given.

It is worth pausing, however, to note the issue of whether inferences about dominance can ever be made from the conduct questioned as abusive. On the one hand, analysis of dominance must be based on the evidence looked at in the round, and it would seem wrong to exclude from the evidence base for dominance assessment relevant conduct by the firm in question. On the other hand there is a danger expressed by Ronald Coase (1972):

"If an economist finds something – a business practice of one sort or another – that he does not understand, he looks for a monopoly explanation. And as in this field we are very ignorant, the number of un-understandable practices tends to be very large, and the reliance on monopoly explanation, frequent".

Although the economics of the past thirty years has reduced our ignorance, the warning is one still to heed. False inferences can be made not only about monopoly but also about anti-competitive conduct.

All but a few EC cases on abuse of dominance have concerned exclusionary conduct by dominant firms – i.e. conduct preventing or restricting competitors – rather than behaviour directly exploitative of consumers. (Exclusionary practices can of course be *indirectly* exploitative of consumers, and, as discussed below, there is a view that no conduct is properly characterised as exclusionary unless it is ultimately exploitative.) Many EC cases have dealt with pricing issues – for example predatory pricing, selective price cuts, margin squeezes, and discounts and rebates. Non-price issues have included tying, bundling, exclusive dealing and refusal to supply. The cases discussed below involve questions of pricing abuse.

In terms of general principles, the case law has established:[3]

- that a dominant firm "has a special responsibility not to allow its conduct to impair genuine undistorted competition"
- that a dominant firm may not eliminate a competitor or strengthen its position by "recourse to means other than those based on competition on the merits"
- that abuse involves "recourse to methods different from those which condition normal competition"

[3] See, for example, Whish (2003, chapter 5).

- that the concept of abuse is "objective", so does not require anti-competitive intent (though evidence on intent can be relevant to finding abuse).

Some of the intellectual roots for these principles can be traced to the 'ordo-liberal' school of law and economics based in Freiburg in the 1920s and 1930s.[4] For the ordo-liberals, competition law was central to the economic constitution of society as a constraint on the exercise of both private and state power in the economic sphere. Where market power could not be eliminated, the favoured competition law standard was that dominant firms should act *as if* constrained by competition. That would allow 'performance competition' (Leistungswettbewerb) – to offer better deals to customers. But it would disallow 'impediment competition' (Behinderungswettbewerb) – hindering rivals' ability to offer better deals to customers. In a competitive market there is naturally performance competition but no scope for impediment competition. By this standard, a dominant firm, while welcome to engage in performance competition, may not engage in impediment competition.

The United States has a much longer tradition of competition law than Europe. Section 2 of the Sherman Act of 1890 makes it illegal to "monopolize, or attempt to monopolize, or combine or conspire with any other person or persons, to monopolize any part of the trade or commerce among the several States, or with foreign nations".

Monopolization has two elements, which very roughly correspond to dominance and abuse:

- possession of monopoly power
- "the willful acquisition or maintenance of that power as distinguished from growth or development as a consequence of a superior product, business acumen or historic accident".[5]

In discerning the latter the challenge lies in "distinguishing between exclusionary acts, which reduce social welfare, and competitive acts, which increase it".[6]

Note that in the US, the law is engaged only if there is a causal link from the conduct to the market power. By contrast, though Article 82 applies only if there is market

[4] See Gerber (1998, especially chapter VII).
[5] *United States v Grinnell Corporation*, 384 U.S. 563, 570-571 (1966).
[6] *United States v Microsoft Corporation*, 253 F.3d 34, 58 (D.C Cir.) (2001).

power – to the extent of dominance – conduct can be abusive even if it does not maintain or strengthen that power. So in Europe, but not in the US, pure exploitation of market power – e.g. excessive pricing – can breach competition law. But nearly all European cases have concerned exclusionary, rather than directly exploitative, conduct.

Here the fundamental issue, which recurs in various guises and phrases, is the same in Europe, the US and elsewhere – how to distinguish between (unlawful) exclusionary or competition-distorting behaviour and (lawful) "competition on the merits" by firms with market power? The answer is less than clear. Indeed, Einer Elhauge (2003b), speaking of US law, goes so far as to say that "monopolization doctrine currently uses vacuous standards and conclusory labels that provide no meaningful guidance about which conduct will be condemned as exclusionary".

Case law does suggest standards to distinguish between exclusionary and pro-competitive behaviour for some types of dominant firm conduct, but the underlying substantive principles are not always easy to discern. Development of such principles is important, for otherwise there would be a danger that competition law towards abuse of dominance could become a set of ad hoc and unpredictable rules that are consistent neither with each other nor with the policy goals of the law.

The next section outlines some of the standards that have evolved, and questions that have arisen, in relation to types of pricing abuse – predatory pricing, selective price cuts, margin squeezes, and discounts and rebates – by reference to some recent EC, UK and US cases. The subsequent sections pursue the quest for general principles by discussing tests based on profit "sacrifice", productive efficiency and consumer harm.

Some recent cases

Predatory pricing

Competition spurs firms to offer customers good deals, and competition law should not readily condemn the offering of deals to customers that are alleged to be too good. Industrial organisation theory has however demonstrated that predatory pricing – low pricing that is profit-maximising only because of its exclusionary effect – is certainly not

an empty box, especially where reputation and financial effects are important.[7] In this spirit a US Court of Appeals recently said that, while it approached the question of predation "with caution, we do not do so with the incredulity that once prevailed".[8]

Competition law is unconcerned with low pricing by non-dominant firms. For dominant firms the standard approach is to examine pricing in relation to measures of cost. Thus in the case known as *Tetra Pak II*, the ECJ, confirming the approach in the earlier *AKZO* case, held that:

"First, prices below average variable costs must always be considered abusive. In such a case, there is no conceivable economic purpose other than the elimination of a competitor, since each item produced and sold entails a loss for the undertaking. Secondly, prices below average total costs but above average variable costs are only to be considered abusive if an intention to eliminate a competitor can be shown."[9]

The ECJ went on to say that, in the circumstances of the case, it was not necessary to prove in addition that Tetra Pak had a realistic chance of recouping its losses. That contrasts with US law. In 1993 the Supreme Court in *Brooke Group* held that predatory pricing violates the Sherman Act only if there is a dangerous probability that the predator will recoup its losses.[10] Arguably, however, dominance – without which there can be no abuse in European law – implies ability to recoup.

As to the first part of the ECJ standard, while pricing below AVC by a dominant firm is normally abusive, the presumption of abuse can, exceptionally, be rebutted. An interesting, but unsuccessful, attempt to rebut a finding of abuse was made in a recent UK case. (UK law mirrors EC law.) The Office of Fair Trading (OFT) found in 2001 that Napp Pharmaceutical Holdings had abused its dominant position in the supply of sustained relief morphine tablets and capsules by a combination of below-cost pricing in the hospital segment of the market and excessive pricing in the community segment. Napp sought to justify its below-cost pricing on the grounds that hospital sales led on to profitable community sales, and so were not loss-making. But this was a circular

[7] See Brodley et al (2000) for a comprehensive analysis of the (US) law and economics of predatory pricing.
[8] *United States v AMR Corporation*, 335 F.3d 1109 (10th Cir.) (2003).
[9] Case C-333/94P *Tetra Pak International SA v Commission* [1996] ECR I-5951, para 41.
[10] *Brooke Group Ltd v Brown & Williamson Tobacco Corp*, 509 U.S. 209 (1993).

argument inasmuch as the high margins on community sales depended on the exclusionary low pricing to hospitals. For this and other reasons, Napp's appeal against the OFT's decision failed.

Pricing above the dominant firm's AVC but below its ATC was discussed by the Competition Appeal Tribunal in another recent UK case – *Aberdeen Journals* (though the OFT found abuse in that case on the basis of pricing below AVC). For example, the CAT said that such pricing "is likely to be abusive when undertaken in anticipation of competitive entry or in order to undercut a new entrant", and that, with prices below ATC including a proportionate share of general overheads, "sooner or later an equally efficient competitor will be forced out of the market".[11]

The appropriate definition (and of course measurement) of cost can be controversial. In 1999 the US Department of Justice (DoJ) brought a case against American Airlines saying that it had reacted – by price cuts and capacity expansion – in an unlawfully predatory way to entry by rivals on routes connecting to its Dallas hub. The DoJ argued that the conduct was predatory because it was unprofitable but for its exclusionary effect. The district court gave summary judgment – i.e. judgment without full trial – against the DoJ, which was upheld on appeal, on the grounds that AA had not engaged in pricing below an appropriate measure of cost. A key point in this case, which is discussed below in relation to the "sacrifice test", was whether profit lost on existing capacity is an opportunity cost that should be counted in the reckoning when applying the cost tests for predatory pricing.

Selective price cuts

Above-cost price cuts were at issue in the case of *Compagnie Maritime Belge*, on which the ECJ gave judgment in 2000.[12] The enterprise, which had a near-monopoly position on certain shipping routes between Europe and West Africa, had selectively cut prices to match those of its competitor, though not demonstrably to below total average cost. The Court saw the risk that condemning such pricing could give inefficient rivals a safe haven from the full rigours of competition, but in the circumstances at hand judged that there was abuse (albeit not abuse under the heading of predation) because the selective

[11] *Aberdeen Journals Limited v OFT* [2003] CAT 11, paras 352 and 370.
[12] Case C-395/96P *Compagnie Maritime Belge SA v Commission* [2000] ECR I-1365.

price cuts were aimed at eliminating competition while allowing continuing higher prices for uncontested services.

A very basic model, taken from Armstrong and Vickers (1993, example 3), illustrates some of the pros and cons of disallowing selective price cuts by dominant firms. Suppose that

- Overall demand is divided uniformly (but not necessarily equally) between two markets
- Firm M is dominant over market 1 but firm E might enter market 2
- Firm M has constant marginal cost
- Firm E has constant returns to scale, except perhaps for a fixed cost of entry
- The move order is that E decides whether to enter, and if so, its scale of entry k. Then M decides the prices p_1 and p_2 in the two markets.

If selective price cuts are allowed, M will set $p_1 = p^m$, the monopoly price, and $p_2 = p(k)$, where $p(k)$ is a decreasing function of the scale of entry. Let $p^e = p(k^e)$ be the price associated with the optimal scale of entry k^e for E, taking account of M's response, if it enters.

If selective price cuts are banned, M must set $p_1 = p_2$. Then M will respond less aggressively to entry than if selective price cuts are allowed, and so if E enters, it will do so on a larger scale. In this simple model the optimal scale of entry for E is such as to induce $p_1 = p_2 = p^e$. (The mathematical intuition for this result is that the situation in the aggregate of both markets when price discrimination is banned is the same, apart from multiplication by a constant, as that in the contested market when discrimination is allowed.)

So in this simple setting, subject to the proviso below, a ban on selective price cuts would not affect price in the contested market but would cause price in the uncontested market to fall to that in the contested market. That would obviously be good for consumers in the uncontested market. However, it could be bad for productive efficiency because firm E might be considerably less efficient than firm M at serving the business that it wins from M. Firm M's incentive to compete in market 2 is blunted by the profit forgone in market 1.

The proviso is whether firm E will enter. (Recall that entry might entail a fixed cost.) It may well be that E's entry decision will be the same whether or not selective price cuts are allowed. But depending on the size of the fixed cost of entry, it is possible that E will enter if and only if selective price cuts are banned. Then, in this simple model, the monopoly price p^m will prevail in both markets if selective price cuts are allowed, but price will be p^e in both markets if they are banned.

This very simple example illustrates the wider point that a rule against *selective* price cuts in response to competition by dominant firms would have mixed effects on social welfare even if no price is reduced below variable cost, and even if the dominant firm merely meets competition and does not engage in profit "sacrifice" (on which see below). Such a rule could be good for competitors and consumers but costly in terms of productive efficiency. Though consumers benefited from the ban on selective price cuts in the simple example above, this is not a general result. Indeed a rule against selective price cuts could often be bad for consumers in contested markets, and sometimes detrimental to consumers overall. Some of these themes will recur in the discussion below of discounts and rebates.

Margin squeezes

A margin squeeze occurs when a vertically integrated dominant firm sets the wholesale price for an upstream product, upon which downstream rivals rely, and the retail price for its final product such that the margin between them is unduly low, thereby anti-competitively squeezing rivals downstream. The question focused on here is what counts as unduly low.[13] Equivalently, a margin squeeze occurs when the wholesale price is unduly high relative to the retail price – a kind of "raising rivals' costs" – or when the retail price is unduly low relative to the wholesale price – akin to predatory pricing. It can also be seen as akin to undue discrimination between self-supply and supply to others. These are just different descriptions of the same thing.

Two recent UK cases, with contrasting outcomes, are *Genzyme* and *BSkyB*. Genzyme is dominant in the supply of drugs for the treatment of Gaucher's disease. In 2001 it

[13] Of course there is no *general* duty on dominant firms to supply downstream rivals. The law and economics of refusal to supply is beyond the scope of this paper – see Whish (2003, pages 663-678) on the position in European law. The recent *Trinko* case before the US Supreme Court, mentioned below, concerned refusal to supply telecommunications network access.

ended its distribution agreement with the homecare delivery and services provider Healthcare at Home (HH). Genzyme would thereafter only supply HH the drug at the price that Genzyme charged for the drug plus delivery and homecare services – in short, at a wholesale price equal to its retail price. Thus there was no margin for HH to make *any* contribution to its costs. The OFT found that Genzyme's margin squeeze was an abuse of dominance, and this finding was upheld on appeal.[14] Somewhat similarly, in 2003 the European Commission found that Deutsche Telekom had abused a dominant position by setting the wholesale price of local loop capacity to competitors at times higher than the retail price to final customers.

When, as in these examples, wholesale price is as high as the retail price – so that the retail-wholesale margin is zero (or less) – rivals cannot profitably operate in direct competition with the dominant firm no matter how efficient they are. But when questions of abusive margin squeeze arise, how large a positive margin should be required? While too small a margin can squeeze out "efficient" rivals, too large a required margin would shelter "inefficient" rivals to the detriment of productive efficiency. And what is the right benchmark by which to judge rivals' efficiency?

The natural answer is the efficiency of the dominant firm in the downstream activity. In other words, the benchmark is the "as-efficient" competitor. There is no need to assess any firm against some hypothetical yardstick of efficiency. The issue is whether the dominant firm is by margin squeeze preventing rivals from winning business that they would serve more efficiently than the dominant firm. So, in principle, if the dominant firm's downstream unit would be loss-making if it paid the wholesale prices charged to rivals, there is a margin squeeze; otherwise there is not. This makes economic sense and has been recognised in European case law. For example, in a case some years ago, British Sugar was found to have abused its dominant position by setting its retail and wholesale (industrial) sugar prices such that the margin between the two was insufficient to reflect its own costs of transformation (in that case, its own repackaging costs).[15]

The margin squeeze question in the *BSkyB* case was whether BSkyB was abusing its

[14] *Genzyme Limited v OFT* [2004] CAT 4.
[15] *Napier Brown/British Sugar* OJ [1988] L284/41, para 66.

dominance in the supply of premium pay TV channels by charging rival distribution companies too much for wholesale channel supply in relation to its own retail prices for those channels.[16] Upon examination BSkyB's downstream operation was found to be around break-even in the period in question, so margin squeeze abuse was not shown.

Discounts and rebates

One of the most topical issues regarding abuse of dominance is that of discounts and rebates. In September 2003 the European Court of First Instance upheld a Commission decision finding abusive the system of quantity rebates operated by the tyre manufacturer Michelin to its dealers in France. Michelin's quantity rebates, it was held, were "loyalty-inducing", so tended to prevent dealers from being able to select their suppliers freely, and sought to prevent dealers from getting supplies from competing manufacturers. The rebates were therefore found to have a foreclosure effect. The Court said that this need not be an actual effect – to find abuse it is sufficient to show that the dominant firm's conduct "tends to restrict competition or, in other words, is capable of having that effect".[17]

In December the Court likewise upheld a European Commission decision against British Airways for its performance reward systems for UK travel agents.[18] It was held that these encouraged the agents to sell BA tickets in preference to those of other airlines, and restricted the agents' freedom of choice to the detriment of other airlines. Neither Michelin nor BA was found to have given an adequate economic justification for its rebate/discount scheme, for example in terms of cost savings.

The issue of discounts and rebates also arose in the recent US case of *LePage's*. LePage's sued 3M for monopolizing the market for transparent tape by its policy of giving discounts and rebates to retailer customers on the basis of sales targets and the

[16] Decision of the Director General of Fair Trading, *BSkyB investigation: alleged infringement of the Chapter II Prohibition*, 17 December 2002. Another issue in the case concerned BSkyB's "mixed bundling" pricing of premium channels such that a bundle of premium channels was priced at less than the sum of the individual prices of the channels – i.e. incremental price was below average price.
[17] Case T-203/01 *Manufacture Française des Pneumatiques Michelin v Commission*, judgment of 30 September 2003, para 239.
[18] Case T-219/99 *British Airways plc v Commission*, judgment of 17 December 2003. BA has appealed the CFI's judgment to the ECJ (pending case C-95/04).

range of 3M products that they stocked – so-called "bundled rebates". In a judgment last year the Court of Appeals by a majority upheld a lower court verdict against 3M.[19]

These cases about discounts and rebates, on both sides of the Atlantic, illustrate sharply a fundamental dilemma for the competition law treatment of abuse of market power. A firm with market power that offers discount or rebate schemes to dealers is likely to sell more, and its rivals less, than in the absence of the incentives. But that is equally true of low pricing generally.

Superficially, then, discounts and rebates can appear at once anti-competitive and pro-competitive. So can various other forms of commercial behaviour by firms with market power. Only by going beneath the surface to underlying economic principles can the clash of superficial appearances be resolved sensibly. But what are, or should be, the underlying principles by reference to which conduct that distorts and harms competition can be distinguished from normal competition on the merits?

The remaining sections of the paper discuss three related approaches to this question – the sacrifice test, the as-efficient competitor test, and the consumer harm test. The main aim is to assess some economic pros and cons of the tests, not their consistency with existing case law, though that will be mentioned in places.

The sacrifice test

One general principle that has been advanced for helping to determine when dominant firm behaviour is unlawfully exclusionary – as distinct from competition on the merits – is the sacrifice test, sometimes also known as the "but for" test. This test asks whether the dominant firm conduct in question would be profitable, or make business sense, but for its tendency to eliminate or lessen competition.[20]

[19] *LePage's Inc v 3M Co.*, 234 F.3d 141 (3rd Cir.) (2003). The Supreme Court declined to take the case. The US Government advised that it was not an attractive vehicle to clarify the law on bundled rebates, and that it would be preferable to allow the case law and economic analysis to develop further. A recent contribution to that economic analysis is Nalebuff (2004).

[20] Note that this is not necessarily the same as asking whether the conduct is short-run profitable – see below. The degree of probability that should attach to the "tendency" is an important question not discussed in detail here.

At a general level this test has some appeal. Predatory pricing fails the test since it entails short-run losses and is profitable only because of its tendency to eliminate (and/or deter) rivals. Meeting competition by price cuts passes the test inasmuch as the price cuts are a profitable response to the entry and expansion of rivals. Unlike with predatory pricing, such price cuts do not depend for their profitability on the subsequent exploitation of enhanced market power.

Quite apart from questions about the application of the test to the facts of cases – for example about the requisite standard of proof – there are several prior conceptual issues. Is the test a substantive standard or just a standard to assess intent or wilfulness? What is the benchmark for assessing sacrifice? In what circumstances is the test sufficient and/or necessary for conduct to be unlawful?

A test of intent or a substantive standard?

As to the first of these questions, an "intent" form of the test might say that conduct is intentionally (or wilfully) exclusionary if it does not make business sense but for being exclusionary. Such a test for implied intent (or wilfulness) would itself say nothing about what was exclusionary, which would have to be determined separately. William Baumol et al (2003), consistent with the pure intent form of the test, speak of the sacrifice test as a "tool for assessing wilfulness", and as part of the "wilfulness inquiry".[21]

But elsewhere they say, for example, that "the finding that the practice would not make business sense absent the additional monopoly power it provides generally reveals that the business practice is anti-competitive".[22] This suggests that the sacrifice test can perhaps be interpreted as a substantive standard. Thus a "substantive" form of the test might say that conduct is exclusionary if it does not make business sense unless competition is distorted or harmed (or some such). To be saved from circularity or vacuity, however, this needs specification of what is meant by competition being distorted or harmed. A casual approach might seek to avoid this need by saying that a strategy was exclusionary if it was inexplicable unless it

[21] At pages 13 and 11 of their *amici* brief on the *Trinko* case mentioned below.
[22] Page 5, *ibid*.

somehow or other led to monopoly power. But this would run straight into the danger expressed in the quotation from Coase above.

This suggests that while the sacrifice test might be useful in assessing wilfulness or intent, it does not naturally yield a substantive standard of what behaviour is exclusionary. There is no escape from the fundamental question of what is harm to, or distortion of, competition.

Sacrifice relative to what?

Any form of the sacrifice test must specify the benchmark for assessing whether or not there has been sacrifice.[23] In short, sacrifice relative to what? If the benchmark was the most profitable strategy (that was not anti-competitive), then, in principle, only the profit-maximising such strategy would pass the test. If, moreover, not being anti-competitive was equated with being focused entirely on the short run, then only short-run profit-maximisation by the dominant firm would pass the test.

This could have very unfortunate consequences for prices, efficiency, investment and innovation – and hence for consumers and economic welfare overall – especially if the test is taken to provide a substantive standard rather than a measure of wilfulness.[24] Many of those adverse consequences might be averted by distinguishing not being anti-competitive from short-run focus. But then an alternative specification of anti-competitiveness is needed. And the test would still in theory be passed only if the dominant firm chose the profit-maximising strategy from the set of not-anti-competitive strategies, which could still be bad for prices and efficiency.

It might be said that this concern is merely theoretical because in practice the test would be failed only if the firm adopted a strategy that was manifestly and substantially less profitable (but for its anti-competitive effects) than some salient alternative strategy. But a test that is less bad in practice than in theory is not obviously a good test.

[23] Edlin and Farrell (2003) give a fuller discussion of this issue in their analysis of the *American Airlines* predation case. The Court of Appeals judgment in the case is cited in footnote 8 above.
[24] Elhauge (2003b) makes particularly trenchant criticisms on these lines.

A variant that might escape some of these criticisms is a test that assesses whether *changes* in strategy entail sacrifice. Then for a firm that alters strategy – for example in response to entry – the benchmark would be whether the new strategy is less profitable (but for its anti-competitive effects) than the old strategy in the new situation. *American Airlines* was a case in point.[25] The DoJ argued that capacity expansion by AA in response to entry was unlawful in that it increased AA's revenues – taking into account revenue lost on pre-existing AA capacity – by less than it increased costs. Put another way, the claim was that price was below cost, where cost includes the opportunity cost of profit loss on existing capacity caused by the capacity expansion. The courts did not accept this approach to cost.

The below-cost standards for assessing predatory pricing, mentioned above, can themselves be construed as variants of the sacrifice test – the benchmark being, for example, sacrifice relative to not producing (on an avoidable cost standard) or relative to producing less (on a marginal or variable cost standard). But while such a standard might show particularly clear instances of sacrifice, it seems a curious – or at least very cautious – benchmark for a sacrifice test, especially for firms with market power. Moreover, to say that below-cost pricing generally entails sacrifice is not to derive a cost standard for predation from a sacrifice test. Rather it is to characterise, in terms of sacrifice, a standard derived independently.

Necessary and/or sufficient?

It follows from the discussion above that the sacrifice test seems incapable of providing, by itself, a *sufficient* condition for a finding of unlawfully exclusionary behaviour by firms with market power. As a test of wilfulness or intent – saying, for example, that conduct is intentionally (or wilfully) exclusionary if it does not make business sense but for being exclusionary – it obviously has to be combined with an independent specification of what is substantively exclusionary (or anti-competitive or competition-distorting or whatever). Attempts to cast the test as a substantive standard appear to face a fundamental problem of being circular or ungrounded – as with, for example, saying that conduct is exclusionary if it does not make business

[25] Again, see Edlin and Farrell (2003).

sense but for distorting or harming competition. Such formulations restate the fundamental question, more or less helpfully, rather than answering it.

Should sacrifice nevertheless be a *necessary* condition for finding unlawfully exclusionary behaviour? One aspect of this question arose in relation to the *Trinko* case recently before the US Supreme Court.[26] The central issue in the case was whether the incumbent telecommunications company Verizon had violated section 2 of the Sherman Act by refusing to supply access to local telephone facilities to rivals, in contravention of pro-competitive regulatory requirements. The US Government, in its *amicus* brief to the Supreme Court, argued that, at least in the context of refusal to supply, conduct should not be found unlawful *unless* there was sacrifice.

Baumol et al (2003), though strong supporters of the usefulness of the sacrifice test, objected on the grounds that in some circumstances conduct could be wilfully exclusionary without entailing sacrifice. Just such a circumstance, they contended, was if a monopolist flouted pro-competitive regulatory requirements, and indeed that could itself show exclusionary wilfulness.

The broader issue here is whether and when conduct can harm competition, including wilfully, yet not involve sacrifice. Some strategies by dominant firms to raise rivals' costs fit this description. A related question is whether and when conduct can harm competition unlawfully but without any anti-competitive intent (let alone sacrifice). Recall that in European law abuse of dominance is an objective concept and can exist without anti-competitive intent – hence Richard Whish (2003, page 194) says that "intention is not a key component of the concept of abuse". The dominant firm has a special responsibility not to impair undistorted competition. This suggests that the dominant firm must not only refrain from deliberately impairing such competition but on occasion, because of its special responsibility, might have to depart from what would otherwise be profitable in order not to cause impairment. Then sacrifice would in a sense be *required* of the dominant firm. As a matter of European law, therefore, sacrifice is by no means necessary for abuse.

[26] *Verizon Communications Inc v Law Offices of Curtis V. Trinko LLP*, 124 S. Ct. 872 (2004).

In conclusion, the sacrifice test, appropriately specified, appears useful in a number of contexts – especially predation – but not to provide a general foundation for distinguishing competition on the merits from conduct that is exclusionary or distorting of competition. The appropriate specification of the test is anyway far from clear. As Aaron Edlin and Joe Farrell (2003) put it:

"'Sacrifice' – behavior that would be irrational without its exclusionary effect – is logically neither necessary nor sufficient for harm to competition. It could yet be a useful test, but only because of some (still unexplored) empirical correlation, not as a matter of economic logic. So it's hardly surprising that there's so much unfocused disagreement about the right version of the test".

In any event, the fundamental question remains – what is harm to competition?

The as-efficient competitor test

One way to approach this question is to ask whose exclusion should be prevented by the law against exclusionary practices by dominant firms? The answer cannot sensibly be rivals in general. A natural answer is in terms of rivals that are no less efficient than the dominant firm. When competition is effective, more efficient firms gain at the expense of less efficient firms, so the "as-efficient" competitor test appears to accord with protecting competition as distinct from competitors.

The test has some pedigree in case law. For example, as was evident from the discussion above, the standard applied to predatory pricing and margin squeeze abuse in some EC cases has been related to exclusion of competitors who are efficient – at the activity in question – relative to the dominant firm. Judge Richard Posner (2001, pages 194-5) proposes a general standard for deciding exclusionary claims under US antitrust law:

"the plaintiff must first prove that the defendant has monopoly power and second that the challenged practice is likely in the circumstances to exclude from the defendant's market an equally or more efficient competitor. The defendant can rebut by proving that although it is a monopolist and the challenged practice exclusionary, the practice is, on balance, efficient."

In the same vein Einer Elhauge (2003a) argues that above-cost price cuts to drive out entrants are not predatory, and that "costs" should be defined such that prices above costs cannot inflict losses on as-efficient rivals.

Clearly there are circumstances in which the entry of less-efficient rivals can improve social welfare because the gain in allocative efficiency through lower prices can outweigh the loss in productive efficiency through higher costs. (This can happen in the simple example above.) There are also circumstances in which rules against above-cost price cuts might result in the entry of less-efficient rivals that would not otherwise have occurred. Where these two sets of circumstances overlap, such rules would improve social welfare despite being more restrictive of dominant firm conduct than the as-efficient competitor test would imply.

However, such rules could well have adverse welfare effects in other circumstances.[27] As well as promoting the entry of less-efficient firms, they could keep prices up – especially if they had the effect of "telling a monopolist to hold the umbrella of monopoly prices over its competitors".[28] If prices fall, the entry of less-efficient firms might worsen productive efficiency more than it benefits allocative efficiency. (This too can happen in the simple example above.) The less-efficient firms might have entered anyway. Effects on possible rivals no less efficient than the dominant firm, and on incentives for efficiency, might also be relevant. And there may be implementation difficulties with rules stricter than the as-efficient competitor test. All in all, argues Elhauge in line with the as-efficient competitor test, it is best for competition law not to restrict above-cost price cuts.[29]

This disciplining principle has a clear logic but the breadth of its application is open to debate. For example, should it apply to all *selective* above-cost price cuts? And should it extend to all *conditional* price reductions – e.g. discounts conditional on exclusive dealing?

[27] See Elhauge (2003a) for an extensive analysis.
[28] Posner (2001, page 238).
[29] Elhauge (2003a, footnote 53) is however clear that *conditional* above-cost discounts (see below) should be treated differently from straight above-cost price cuts.

In EC law selective above-cost price cuts can sometimes be abuses of dominance. The finding of exclusionary abuse in the case of *Compagnie Maritime Belge* was mentioned earlier. Besides exclusion, selective low pricing can in some circumstances be an abuse under clause (c) of Article 82, which concerns discriminatory pricing that distorts downstream competition.[30]

In economic terms there is a dilemma. Given the apparently ambiguous welfare effects, there is little basis in economic theory for a rule that *always* permitted above-cost price discrimination by dominant firms in response to competition. Yet the natural and mostly desirable response to competition by dominant firms will often involve (above-cost) price discrimination. This suggests that hostility to this *form* of response to competition would be wrong, but that in limited economic circumstances the evidence as a whole might justify a finding of abuse (even when the price cuts are unconditional). Which circumstances is a matter in need of more economic analysis.

One factor is the undue denial of scale economies to rivals – a form of raising rivals' costs. This issue arises most sharply as regards (above-cost) price reductions *conditional* on the buyer not dealing with rivals. For example, by exclusive dealing in the presence of scale economies it is theoretically possible for a dominant incumbent profitably to exclude from the market a rival whose cost curve is nowhere higher than its own.[31] Each customer would individually do better to accept than reject an exclusive contract with the dominant firm at a price just below the unit cost (at small scale) of the rival even if that price is substantially above the unit cost of the (large-scale) dominant firm. It would be in the collective interest of the customers to deal with the rival at a large scale but none will do so individually because of the diseconomies of its small scale.

The dominant firm can thereby exploit to its advantage, but to the detriment of customers and efficiency, the co-ordination problem of the customers – a strategy of divide-and-rule. It is not obvious which way the as-efficient competitor principle points in this case, for the rival is by assumption as-efficient overall but is less-efficient at

[30] In the BA case mentioned earlier the CFI found abuse under this heading – affecting travel agents – as well as foreclosure of airline rivals.
[31] See Rasmusen et al (1991). A thorough survey of the modern economic theory of foreclosure is given by Rey and Tirole (2003).

supplying each individual customer because of its lack of scale economies. Be that as it may, this is an example of how inefficient exclusion *can* be profitable for a dominant firm. But this theory is not applicable unless, on the facts, the proportion of the market foreclosed would significantly affect scale economies. And it should be remembered that exclusive dealing can in some circumstances have beneficial effects (e.g. overcoming free-rider problems in the provision of retailer services).

Less restrictive than exclusive dealing conditions, but still possibly foreclosing in effect, are price terms conditional on such factors as the proportion of purchases made from the dominant firm, purchases relative to previous-period purchases, and retrospective rebates based on amount purchased. In the language of EC case law, these are loyalty rebates or at least can be "loyalty-inducing". Again there are some conditions in which such pricing practices – even if above the costs of the dominant firm – could exclude as-efficient rivals. But the *form* of the pricing practices does not by itself reveal whether or not those conditions hold; analysis of the surrounding economic circumstances (e.g. scale economies and extent of foreclosure) is needed for that. In an economics-based approach, possible benefits of the practices, depending on the facts, should also be weighed in the scales. As well as cost-saving justifications for discount schemes, it can be both natural and desirable for dominant firms to offer their customers incremental prices lower than average prices, which discount schemes can help achieve.

Article 81 of the EC Treaty, which deals with anti-competitive agreements, contains a framework for the assessment of possible efficiency benefits, but Article 82 does not do so explicitly. The principle of "objective justification" is however well-established in the case law, and its scope may develop over time. It will be interesting also to see whether the as-efficient competitor principle gains more extensive recognition as the case law evolves.

The consumer harm test

An alternative answer to the basic question posed at the start of the previous section is that the law against exclusionary practices by dominant firms should prevent the exclusion of rivals whose presence enhances consumer welfare.[32] (Whether "consumer

[32] In this sentence it is crucial that there is no comma after "rivals".

welfare" here means consumer surplus or social welfare more generally – i.e. including profit – is a large question that occurs in a range of competition policy settings but is beyond the scope of this paper.)

The consumer welfare (or harm) test returns us to the traditional distinction, mentioned earlier, between exclusionary and directly exploitative abuses of market power. The qualifier "directly" is important insofar as the main (only?) reason why we care about exclusionary behaviour is that, if unchecked, it would ultimately leave consumers worse off. Thus Eleanor Fox (2002) asks "Is there only *one* type of practice that is anti-competitive: that which is exploitative?"

Stated in terms of a necessary condition, the question in short is whether there is no exclusion without exploitation.[33] The affirmative response, which Fox identifies with prominent US antitrust thinking,[34] might be put as follows. Market power is the ability to raise price and restrict output. To count as exclusionary, conduct must be reasonably capable of maintaining or strengthening market power. On this view, conduct would not be deemed to be exclusionary unless shown to have the effect of raising price and restricting output.[35]

This standard of anti-consumer effect, stated as a necessary condition for a finding of unlawful exclusion, would place a more or less strict limiting principle on antitrust intervention against firms with market power, and a strong discipline against the pitfalls of *competitor*-protection. The strictness of the limiting principle depends in part on the standard of proof needed to establish the anti-competitive effects of higher prices or lower output. Must those effects be actual or probable? Or is it enough for the conduct in question to have the tendency, a reasonable capability, or merely a possibility of causing them?

Fox argues, however, that the issue is not just about the standard of proof of output-limiting effects, and that the *concept* of harm to competition is potentially much

[33] The consumer harm test could in principle be cast as a sufficient rather than necessary condition, so that conduct was held to be exclusionary if it was likely (say) to lead to consumer harm. But this by itself seems dangerously open-ended.
[34] In particular Muris (2000).
[35] On a broad interpretation, "output restriction" could embrace issues of quality and even innovation, not just quantity.

broader than negative output and price effects. In particular, should harm to competition include harm to the dynamic *process* of competition? If so, what does that mean in practical terms?

It is hard to separate the issue of the standard of proof of anti-consumer effect from the conceptual issue of whether the notion of harm to competition should extend beyond effect to process. The more that only demonstrable (and so presumably short-term) outcomes are allowed to weigh in the scales of "effect", the stronger is the case for including "process" harms. If, however, a reasonable exploitation story – not necessarily reliant on clear and present exploitation – could meet the standard, then the case for additionally including "process" harms would be less strong. In the limit, the idea that there could be harms to the competitive process, justifying competition policy intervention, that are not even capable of harming consumers is unattractive. Competition to serve the needs of the general public of consumers – not some abstract notion of competition for its own sake – is the point of competition policy.

Conclusion

The law on abuse of market power is far from settled. The law in Europe could now develop in either of two broad directions, with emphasis increasingly either on form or on economic effect. Form-based evolution of the law would further develop descriptions of conduct for dominant firms to avoid. Economics-based evolution would clarify underlying principles in terms of actual and potential economic effects, develop practically administrable rules and methods explicitly on the basis of those principles, and apply them to cases.

In the competition between economics- and form-based approaches the former has strong advantages. It can align the law with its economic purpose and in an internally consistent manner. It can prevent form from triumphing over substance at the cost of both allowing detrimental conduct and blocking benign conduct. And it can provide clarity at fundamental, rather than superficial, level. These advantages will be realised if European competition law on abuse of dominance becomes more firmly anchored to economic principles, and where those principles are practically applicable by competition authorities, lawyers and the courts.

References

Armstrong, M. and Vickers, J. (1993). 'Price discrimination, competition and regulation', *Journal of Industrial Economics.*

Baumol, W., Ordover, J., Warren-Boulton, F. and Willig, R. (2003). Brief of *amici curiae* economics professors to U.S. Supreme Court in *Verizon v Trinko.*

Brodley, J., Bolton, P. and Riordan, M. (2000). 'Predatory pricing: strategic theory and legal policy', *Georgetown Law Journal.*

Coase, R. (1972). 'Industrial organization: a proposal for research', in Fuchs, V. (ed.), *Policy Issues and Research Opportunities in Industrial Organization*, NBER.

Edlin, A. and Farrell, J. (2003). 'The American Airlines case: a chance to clarify predation policy', in Kwoka, J. and White, L. (eds.), *The Antitrust Revolution*, Oxford University Press.

Elhauge, E. (2003a). 'Why above-cost price cuts to drive out entrants are not predatory', *Yale Law Journal*.

Elhauge, E. (2003b). 'Defining better monopolization standards', *Stanford Law Review*.

Fox, E. (2002). 'What is harm to competition? Exclusionary practices and anti-competitive effect', *Antitrust Law Journal.*

Gerber, D. (1998). *Law and Competition in Twentieth Century Europe: Protecting Prometheus*, Oxford University Press.

Muris, T. (2000). 'The FTC and the law of monopolization', *Antitrust Law Journal*.

Nalebuff, B. (2004). 'Bundling as a barrier to entry', *Quarterly Journal of Economics*.

Posner, R. (2001). *Antitrust Law*, 2nd edition, University of Chicago Press.

Rasmusen, E., Ramseyer, M. and Wiley, J. (1991). 'Naked exclusion', *American Economic Review.*

Rey, P and Tirole, J. (2003). 'A primer on foreclosure', forthcoming in Armstrong, M. and Porter. R, (eds.), *Handbook of Industrial Organization*, vol. III, North Holland.

Vickers, J. (2004). 'Merger policy in Europe: retrospect and prospect', *European Competition Law Review*.

Whish, R. (2003). *Competition Law*, 5th edition, Butterworths.