

THE ENTERPRISE ACT AND INNOVATION

Talk by Peter Freeman* to CBI Competition Conference, Friday 5 March 2004

Introduction

This talk is about innovation and competition policy viewed mainly from the perspective of the Competition Commission (CC). We shall first review briefly the procedural framework in which the CC operates and then consider how we approach competition issues in innovative markets; all with a view to assessing whether the regime as a whole is fit for purpose. It will come as no surprise that the assessment is broadly positive.

A. THE ROLE OF THE COMPETITION COMMISSION—MERGERS AND MARKETS

What we are

The CC's role and responsibilities changed considerably last year as a result of the Enterprise Act.¹

It is first of all important to note that the CC is entirely separate from the Competition Appeal Tribunal (CAT) and from the Office of Fair Trading (OFT). We are a public body, independent of government in our decision-making, consisting of members supported by professional and administrative staff. Although created by the Competition Act 1998 to succeed the MMC, many of our functions now derive from the Enterprise Act 2002.

Our powers extend to investigating only cases referred to us, not to cases we might wish to examine on our own initiative. These may be merger references, market investigation references or regulatory references. I will not linger on the last category in the present context. Most mergers and market references are made by the OFT. Some sectoral regulators have concurrent powers, as have Ministers, to refer markets.

The CC's role in such cases used to be to report to Ministers who would make final decisions. Ministers, except in cases involving the public interest, have now given up this role and the CC is determinative in its own right. Our decisions may be reviewed by the CAT on judicial review principles.

How we work

In mergers and market inquiries, the CC reaches decisions in two stages. First, it applies new statutory tests to assess whether there is harm to competition. In the case of mergers, the question is whether there has been a 'substantial lessening of competition' (SLC). In the case of markets, the question is whether any feature or combination of features in a market prevents, restricts or distorts competition, creating an adverse effect on competition (an 'AEC'). How we do this is explained in the Guidelines we are required to publish and have published, under the Enterprise Act.²

*Deputy Chairman, UK Competition Commission. The contribution of Victor Frooms of the CC's economics staff to this talk is gratefully acknowledged but all views expressed are personal to the author.

¹For a general description, please refer to the CC's web site, www.competition-commission.org.uk.

²*Merger References: Guidelines*, CC2, June 2003.

Market Investigation References: Guidelines, CC3, June 2003.

If the CC has identified an SLC or AEC it so decides and then goes on to decide and itself to implement remedies appropriate to the case. When setting remedies we may take account of customer benefits, defined as higher quality, wider choice, lower prices and (of particular relevance here) greater innovation. Any such benefits must derive from the merger (or market feature) and be a necessary consequence of it.

Consultation

Throughout the process, the CC will consult so far as practicable any parties likely to be affected by the decisions it proposes to make on mergers and markets. As part of this commitment to consultation and transparency we publish our provisional findings on the competition tests not only to interested parties but also on the web site, and where appropriate, our possible remedies.

The Enterprise Act

Innovation is mentioned specifically as a possible customer benefit, both in relation to mergers (EA s30) and markets (EA s134). The possibility of these benefits is something we may take into account when considering remedies. In mergers, where a substantial lessening of competition has been identified, innovation may nonetheless be enhanced through economies of scale, specialization in R&D and/or the pooling of risks. We may in some circumstances consider that these may be put at risk by banning the merger.³ Equally, in market investigations greater innovation may be a potential benefit from high concentration. Prices may be higher than in a more competitive market structure, but commercially successful new products or processes may be introduced at a faster pace. In both mergers and market investigations, however, some competitive threat is likely to be necessary if the incentive to innovate is to be maintained.⁴

In addition to the assessment of innovation in considering possible remedies, innovation may be more directly relevant to the analysis of competition itself. For example, a merger in a market characterized by innovation may itself help to stimulate competition by increasing the ability and incentive for the merged company to innovate or the prospect of innovation by entrants may significantly affect existing competition in a market.⁵ There is, as yet, no Enterprise Act practice in this area but it is likely that the CC will take some account at least of previous reports of the MMC in relation to innovation and competition.

We therefore turn now to look at what we mean by innovation and consider the possible benefits of innovation and its disbenefits in relation to competition. We then consider whether innovative markets require special treatment concluding that in general they do not.⁶

³See *Guidelines* CC2, paragraph 4.42.

⁴See also *Guidelines* CC3, paragraph 4.34.

⁵Equally an aspect of a merger that lessens competition may be an adverse effect on product innovation and diversity: see *Safeway* etc, Cm 5950 (2003), paragraph 1.22(d).

⁶For a recent, general discussion of this issue, see OFT Economic Discussion Paper 3 (OFT 377), March 2002, prepared by Charles River Associates (the 'CRA Report'). See also the article by Professor Paul Geroski *Innovation, Technological Opportunity and Market Structure*, Oxford Economics paper 42 (July 1990), and, generally, *Industrial Market Structure and Economic Performance* by Sherer & Ross, Chapter 17 (Houghton Mifflin), Third Edition (1990).

B. COMPETITION POLICY AND INNOVATION

What is innovation?

Innovation can have radical or drastic effects—for example, the aeroplane, the telephone, the computer, the Internet, the television—or can be far more prosaic and incremental but nonetheless extremely valuable in its contribution to society, to the economy and to our lives generally. Examples include the vacuum cleaner,⁷ cats-eyes⁸ the ball-point pen⁹ and the Acrow prop.¹⁰ Fascinating though these examples may be, what interests us more in the present context is innovation seen as the process of applying scientific or technical advance to the market. Innovation in this sense can be in relation to processes (ie a new way of making something cheaper or better or both) or products (ie a new or significantly better product of some sort), or may be a mixture of the two. Process innovation can affect the competitive balance in existing markets while product innovation can create new markets or alter the segmentation of existing markets.

It is now commonplace to refer to ‘innovative’ or ‘high-tech’ markets or even to the ‘new economy’. In the present context we take an innovative market to mean a market in which innovation plays a major part in the competitive activity of the various players.

Innovation: the Good, the Bad and the Ugly

This somewhat crude categorization does at least give some hint that innovation and competition are not always free from mutual tension. The Good may be seen as consumer benefits and competitive advantage; the Bad as rigidity and anti-competitive practices leading to less efficient operation of markets; and the Ugly comprises the difficulty in applying standard competition analysis to innovative markets. These should each be considered in turn.

The Good ...

The ‘Good’ is almost self-evident, in that the past century or so has seen a vast array of inventions and innovations¹¹ successfully applied to the market. These have brought productivity gains, more diversity of products and real price reductions through quality increases.

Besides such obvious consumer benefits, innovation also brings competitive advantage to the innovator by giving the ability to offer entirely new products or processes or greater efficiency in existing techniques; and the threat of innovation is a check on the development of protected markets. It is not necessary for such competitive advantage to be permanent and one of the consequences of innovation is the spur to imitation, or further innovation, by competitors.¹² And the benefits may be widespread, arising from their dissemination through networks; an obvious example being the interoperability offered by access to the extensive Microsoft software.

⁷Invented by Hubert Booth in 1990 and improved by an Ohio janitor, James Spangler, before manufacture on a large scale by William Hoover.

⁸Invented in the mid-1930s by Percy Shaw, a Yorkshire-born inventor who famously did not obtain patent protection and earned little as a result.

⁹Invented in 1938 (but patented in 1945) by Lazlo Biro, a Hungarian journalist who moved to Argentina.

¹⁰Invented by Bill de Vigier, whose obituary appeared in the *Financial Times* on 15 January 2004. The Acrow prop (named after de Vigier's lawyer, A Crowe) rapidly displaced the use of wooden props which had been in use since biblical times.

¹¹Though whether or not the pace of technological development and innovation has accelerated in recent decades is discussed below.

¹²Prof John Kay stresses that competitive advantage from innovation may be transitory but may also lead to more permanent advantage through the use of intellectual property rights or through repeated innovation. *The Truth about Markets* (2003), page 71.

... The Bad ...

But what about the 'Bad'? Many inventions often result in some offsetting disbenefits. Some obvious examples are:

- deaths and injuries arising from car use;
- environmental pollution;
- repetitive strain injuries (RSI) from computer use; and
- email overload (on the Internet) and SPAM.

Besides this kind of harm there are the potential disbenefits in terms of the less efficient operation of markets and harm to competition policy objectives.

Abuse of intellectual property rights

Innovation frequently attracts protection from competition through intellectual property rights and there is a clear potential for conflict here with the objectives of competition policy.¹³ Taking patents as an example, the grant necessarily confers on the patentee a degree of exclusivity and often monopoly power, ie the ability to raise price above marginal costs and thereby earn profits above the competitive level. The justification of patents is that they are needed to induce R&D efforts, because, without patent protection, innovators may not be able to appropriate the full commercial rewards and cover the costs of developing the innovation in the first place.¹⁴ The MMC has historically recognized this justification in several cases, including *Chlordiazepoxide and Diazepam*¹⁵ where it found that price reductions were compatible with a sufficient return to the patentee, and *Photocopiers*,¹⁶ where it found Rank Xerox's monopoly position, based largely on widespread patenting, not to be against the public interest and gave credit for the successful development of a new invention and the substantial development risk involved. Viewed in this way, intellectual property rights can be seen as part of the dynamic process of competition. However, there are several possibly less desirable aspects to consider.

'Blanket' patenting

The first of these is the possibility of an incumbent monopoly innovator seeking to extend its monopoly rights either through time or into related markets by what might be described as mass or 'blanket' patenting, so as to exclude rivals. Such behaviour may well be either a wasteful use of resources or unfairly exclusionary, or both, and was criticized in *Photocopiers*, where Rank Xerox acknowledged that in 1975 it had more than 1,000 patents covering aspects of plain paper copying technology.¹⁷

Patent pools and cross-licensing

Where the distribution of patent ownership is among several players, 'pooling' the rights by agreement or by placing ownership in the hands of a jointly-owned structure provides access to those rights for the members of the pool. On the other hand, if access by third parties is restricted then the effect can be to solidify market structure and enhance the market power

¹³See generally the European Commission's draft Guidelines on the application of Article 81 to technology transfer agreements (OJ [2003] C235/1) and the accompanying draft block exemption regulation (OJ [2003] C235/11).

¹⁴Although it should be noted that the protection offered (normally 20 years) is the same whatever the economic or social importance of the invention or the effort and expenditure that went into it. For a full discussion see *Industrial Market Structure and Economic Performance* by Scherer & Ross, cited at note 6 above, pages 621–630.

¹⁵HC 197 (1972–73), see paragraphs 215 and 230 in particular; a decision of the pre-1973 Monopolies Commission.

¹⁶*Indirect Electrostatic Reprographic Equipment* (HC 47, 1976–77).

¹⁷HC 47 (1976–77), paragraphs 386–388.

of the pool members to an unacceptable degree.¹⁸ Cross-licensing is another way of addressing the same problem of increasing access to important, but patent protected, technology.

A useful approach to assessing possible anti-competitive effects of both these practices is to consider whether the rights in question are substitutes or complements with the arrangement being more problematic in the former case.¹⁹ In other words, if the effect of the pool or cross-licensing is to combine rights to different aspects of a product or process and enable each party to the arrangement to have access to the combined rights, the result is in principle beneficial. If each party already has such access, the effect is more likely to be a simple exclusion of third party access.

Litigation

Then there is the encouragement of litigation. If a firm has patented a good innovation and is earning monopoly profits, other firms have a natural incentive to try to invent around the patented invention in order to enter the market. This can, however, lead to high-cost legal challenges that are not necessarily to the benefit of the wider economy or society.²⁰

Striking the balance

In addition to these specific difficulties, innovation combined with intellectual property rights can lead to high levels of market concentration and a significant lessening of competition in the relevant markets, which itself may result in economic/allocative inefficiency in the static sense. Competition authorities may in some circumstances, therefore, find themselves having to judge whether the benefits from innovation are greater than the resource costs of allocative inefficiency. This is not—and is possibly never—an easy judgement to make. For example, in *Video Games*,²¹ the MMC recommended the granting of licences under copyright and other rights to competitors of the then market leaders SEGA and Nintendo. In *Chlordiazepoxide* and *Diazepam*,²² as we have seen, the Monopolies Commission took the view that Roche was simply charging too high prices towards the end of the patent term, and recommended price reductions. This view was controversial at the time and involves an encroachment on the exclusivity inherent in patent rights.

Tipping and network effects

A further problem may arise from so-called ‘spill-over’ effects arising from certain types of innovation. As we have said, demand-related ‘network effects’ may arise where the more consumers that are linked to a particular network, the greater the actual (or perceived) benefits to individual consumers and we referred to Microsoft Windows as an example. But the possible bad side (although this may be ‘ugly’ rather than bad) is that this can lead to a ‘tipping effect’ where the market tips over so that almost everyone is using the dominant technology. That is, the existence of such ‘network effects’ may greatly enhance or exacerbate the tendency toward high concentration or, ultimately, natural monopoly. The challenge for competition authorities is to recognize and understand such ‘tipping effects’ and the implications for market structure.

¹⁸See, for example, the European Commission’s decision in *Video Cassette Recorders* OJ [1978] L47/42.

¹⁹See the *CRA Report*, paragraph 1.24.

²⁰For recent examples see *Financial Times* 20 January 2004 (*SCO v IBM* concerning Linux software) and 5 February 2004 (*Apotex and Dr Reddy’s v Sanofi* concerning the pharmaceutical product Plavix).

²¹Cm 2781 (1995). This finding was heavily criticized in the *CRA Report*, mainly on grounds of the market definition being too narrow and the analysis too static.

²²HC 197 (1972–73).

Exclusionary practices

That is not to say that competition authorities should simply accept unquestioningly the inevitability of monopoly in some high-tech markets. Where firms have gained technological dominance and a degree of market power, there may be an equally natural tendency to try to hold on to that position over the course of time. Where that involves practices geared to excluding others from entering the market or from challenging the incumbent monopolist, then the authorities should be rightly concerned. Indeed, it could be argued that exclusionary practices (including predatory behaviour) are likely to be of more concern to competition authorities than the existence of monopoly profits because the potential for dynamic rather than static detriment is more relevant to innovation markets. Examples of the MMC's concern in this respect include the restrictive licensing issues in *Video Games*²³ and in *Photocopiers* various of Rank Xerox's practices such as the 'rental-only' supply policy.²⁴

Pricing practices

Pricing may also be used as an exclusionary practice. An example is the *Napp Pharmaceuticals* case²⁵ where the OFT found that the practice of pricing slow-release morphine to hospitals at low levels had the effect of excluding competitors wishing to supply the drug on GP prescription.

Summary

So the effect of innovation will not always be benign in competition terms and innovation may even serve to exacerbate the effects of particular practices compared with their effects in so-called normal markets.

... and The Ugly

Turning now to the 'Ugly' part, this refers to aspects of standard competition policy analysis that are more difficult to apply to high-tech markets (as opposed to 'normal' markets), and which might lead to perverse conclusions.

Market definition

Perhaps the obvious place to begin is market definition, where the CC and other competition authorities are very conscious of the difficulties that can arise even in respect of so-called normal markets. Nowadays one thinks immediately of the SSNIP test or hypothetical monopolist approach to delineating economic markets, which focuses on the effects of short-term static price competition (and largely assumes technology and cost structures remain unchanged). But applying the SSNIP test to a monopolized sector could lead to a conclusion that the market being looked at is far wider than the reality (because price is already at the profit-maximizing monopoly level).²⁶

Some would claim that applying the SSNIP approach to innovative markets could result in an inverse 'cellophane fallacy', where the test would or might indicate that the market is far narrower than is really the case. This could arise—it is said—for example where the industry pricing model is to keep hardware prices relatively low (ie below the short-term profit-

²³Cm 2781 (1995).

²⁴HC 47 (1976–77), paragraph 393.

²⁵The decision was upheld on appeal: *Napp Pharmaceutical Holdings v DGFT* [2002] CAT 1, [2002] Comp AR 13.

²⁶The so-called 'cellophane fallacy' derives from a US antitrust case involving Du Pont in 1947. Cellophane itself was invented by Jacques Brandenberger—a Swiss textile engineer—in 1908, with Du Pont acquiring the US manufacturing rights in 1923.

maximizing level) and to go for better margins on the related software.²⁷ Applying a hypothetical 5 per cent price rise in such cases would not be informative as arguably no one would switch until the price rise was much steeper.

More generally, it can be argued that in dynamic, innovative markets, market shares based on a particular definition of the market can be an unreliable indicator of market power, especially for the future, since the next generation of products could sweep away the dominance of current incumbents.²⁸

The first answer to this is that whatever the market—innovative or not—market shares are only one part of the information needed and used by competition authorities to make inferences about market power. The second point is that the nature of competition for the next big innovation may not be entirely independent of the now—that is the current developments in product markets. In particular, an incumbent with a profitable existing market position is less likely to introduce an innovation which threatens that position than is a fringe player or new entrant. Hence, whilst market definition and product shares should be used with caution in innovative sectors, they may still reveal very relevant information about the state of competition.

The process of rivalry

The CC has made it abundantly clear that it sees competition as a process of rivalry between firms seeking to win customers' business over time.²⁹ That process can occur in many ways apart from seeking to offer lower prices, including the use of innovative skills to develop new products and services. Competition in this sense can be as much 'for the market' as in the market and, as we have seen, existing or past market shares may therefore not be a reliable guide to future performance. The CC will clearly regard the likelihood and pace of technological advance as a relevant factor; and 'creative destruction' of this kind may be a feature of the uncertainty, turbulence and change that are characteristic of competition. In some cases, however, the CC may not be swayed by arguments as to technological change, as in *Mobile Phones*³⁰ where it did not consider that innovation arguments (viewed over a realistic timescale) should alter its conclusion that each mobile operator was effectively in a monopoly position for call termination on its own network.

Cooperation

Inter-firm cooperation is in many instances frowned upon by most competition authorities. However, high-tech markets are often characterized by high levels of technical complexity and the consequent need for complementary products to work together and to work effectively. This need for interoperability may necessitate cooperative behaviour in the setting of industry standards, so as to ensure or facilitate competition between firms using the same standard, rather than just competition for the market, followed possibly by (near) monopoly. A good example is the arrangement between banks for the interoperability of ATMs described in the OFT's decision exempting the LINK arrangements.³¹ The desirability of such arrangements is also recognized by the EC Block Exemptions for Research and Development Agreements³² and Specialisation Agreements³³ and the Guidelines on Horizontal Co-operation Agreements.³⁴ There remains the danger, however, that such

²⁷See the *CRA Report*, pages 54–56, for a fuller explanation.

²⁸See, for example, the impact of Sony's PlayStation 2 (and maybe Microsoft's Xbox) on the video games market.

²⁹See, for example, CC Guidelines CC3 (Market Investigation References), paragraphs 1.16 and 1.17.

³⁰*Vodafone, O2, Orange and T-Mobile* (December 2002).

³¹*Link Interchange Network Ltd* Decision of 16 October 2001.

³²Regulation 2659/2000 OJ [2000] L304/7.

³³Regulation 2658/2000 OJ [2000] L304/3.

³⁴OJ [2001] C3/2, see particularly Part 2.

'legitimate' cooperation may provide a vehicle or mechanism for less benign forms of market cooperation.

Predation

Another example is predation. In 'normal' markets, predatory behaviour is assumed to be price related, that is the setting of unsustainably low prices (or the incurring of extra costs) by a dominant incumbent to drive out rivals (or possibly to ward off new entrants). Where—as in new economy markets—competition is arguably more about innovation than price, predatory acts may be either costless or even cost-saving (eg refusing to share technical information necessary for rivals to compete). This suggests that a different and non-price-based approach to assessing predation is needed in such markets. One suggestion is that predation might be deemed to occur where a firm incurs costs, or undertakes other actions which may be cost-free or cost-reducing, that it would not otherwise have done had it not been for the benefits to the firm concerned. A possible example is *Microsoft* with its web browser (to which the US authorities objected) and its Media Player (on which the European Commission has yet to rule).

Price discrimination

Another difficult area is price discrimination. Some have suggested that competition authorities' long-standing concerns about apparent price discrimination may be inappropriate in innovative industries or sectors. High fixed to variable cost ratios may be a systemic characteristic of those industries and price discrimination (or 'metering') can be an efficient means of recovering such fixed costs, offering a good approximation of so-called Ramsey pricing (based on willingness to pay).³⁵ If output is increased as a result, then the practice is even likely to be welfare enhancing.³⁶ Ramsey pricing was considered in *Mobile Phones*³⁷ where the CC noted that it was only likely to be optimal when profits are limited to the normal competitive level.

The recovery of fixed costs in such circumstances certainly implies mark-ups of price over variable costs (although not necessarily differential mark-ups). For price discrimination to work effectively in raising revenues and profits there must be differences between customers in their willingness to pay, and also the absence of any market arbitrage.

Where market power—dominance in the extreme—is present, price discrimination is likely to have detrimental effects. For the most part, when different consumers face different prices, output is likely to be inefficiently allocated among the consumers concerned. Therefore, unless the practice of price discrimination leads to higher levels of output which are sufficient to fully offset this inefficiency—which it might or might not do—then the practice is likely to be bad for economic efficiency and also for consumers as a whole.

Profitability

In terms of performance, competition authorities may look at profitability. The classic statement of the MMC's position is:

We accept that ... high profits may be attributable to superior entrepreneurial activity, successful innovation, and more efficient techniques of production and organisation ... That is not to say that ... high returns necessarily indicate a high level of efficiency or that adequate conditions for competition can always be

³⁵From an article by Frank J Ramsey in the *Economic Journal*, March 1927 'A Contribution to the Theory of Taxation'.

³⁶See, for example, *Photocopiers* (1976) (paragraph 428) where the MMC acknowledged that Rank Xerox's policy of charging what the market would bear had increased output.

³⁷*Vodafone, O2, Orange and T-Mobile* (December 2002).

expected ... Each case requires an assessment of the economic circumstances

...³⁸

So the CC will not assume high profits mean a lack of competition and will look case by case.³⁹

Then there is the question of the appropriate measure. Even in normal or standard markets, accounting profits (ROCE) can be an inadequate measure of economic profits or monopoly rents. There can be various reasons for this, but one example was *Newspaper Wholesaling*,⁴⁰ where, because of the credit arrangements deployed within the vertical supply chain, the measured capital employed was usually or often negative, making nonsense of ROCE measures.

However, in high-tech markets (especially where there are network effects), the situation is potentially much more difficult, not least because the very high *ex ante* risks of failure arguably mean that the *ex post* returns to 'winning' firms and technologies should similarly be high. This may in some instances limit the usefulness of using profitability measures in such markets, at least in a short term or static sense. This does not mean that competition authorities should abandon any attempt to look at profitability performance, especially where high profits might be expected to persist over the longer term, but it does mean that facile assumptions should be avoided.⁴¹

Summary

So in a number of respects the standard tools of competition analysis have to be applied with some care if a perverse result is to be avoided.

C. A CASE FOR SPECIAL TREATMENT?

The new economy

We have so far been considering innovative markets and some of the possible difficulties for competition analysis arising from their special characteristics. But how special are they really, how pervasive are they within the economy, and do they in practice present challenges for the standard analytic tools of competition policy?

A recent John Kay article (based on an article by the economic historian Alexander Field) poured some cold and sobering water on the new economy hype promulgated by some.⁴² Although, for example, NASA has recently landed robot vehicles on Mars, no man has been to the moon for some 30 years now. More generally, the final decades of the 20th century appear to have been—according to Professor Field—rather less remarkable in terms of innovation and the impact on productivity than many appear to believe.⁴³ With some notable exceptions the flow of new and effective drugs for treating human diseases appears to have slowed rather than speeded up in recent decades. Moreover, many of the innovations that

³⁸*Tampons*, Cmnd 9705 (1986), paragraphs 8.31 and 8.32.

³⁹As in the recent *SME Banking* inquiry (Cm 5319 (2002)) where the CC linked profits to problems of market structure and conduct.

⁴⁰*The Supply of National Newspapers*, Cm 2422 (1993). See also *Video Games* (Cm 2781, 1995) where the MMC used the measure of return on turnover as capital employed could not be ascertained and sales excluded royalty income.

⁴¹See eg *Photocopiers* (HC 47, 1976–77) 'Without substantial profits ... funds on the scale required [for R&D] would not have been readily available ...' (paragraph 428).

⁴²See *Financial Times*, 23 January 2004. The article referred to was 'The Most Technologically Progressive Decade of the Century', Alexander Field, *American Economic Review*, September 2003.

⁴³Other economic research also suggests that much of the productivity growth in the USA in recent years has been heavily centred on the computer and information technology sectors rather than being more broadly based. Productivity and changes therein for office workers have also proved hard to measure in an accurate or meaningful manner (see *Financial Times*, 2 February 2004).

have occurred do not in fact exhibit significant demand-related network effects. If this is true, it carries with it two broad implications.

The relevance of the mainstream

First, our main concepts and tools of analysis—which are themselves becoming increasingly sophisticated and quantitative over time—are likely to remain generally suitable for the task. Allied to that, an evaluation of the market impacts of technology has always in practice played a part in MMC/CC competition cases, most obviously as a determinant of the underlying cost structure (eg leading to high fixed costs and low marginal costs) and as a possible entry barrier (via patent protection and trade secrets). In short, the CC—like other competition authorities—has considerable experience in dealing with technology issues,⁴⁴ and the problems it confronts will in principle be familiar, albeit maybe presented in a different form.

Network effects

The second point is almost the inverse of the first, in that systemic or substantive demand-related network effects may indeed be rather special and therefore rather rare. Moreover, the more systemic are network effects, the more likely the impacts are to be global in nature, (for example, Windows software). In that event, the less likely it is that such cases will be dealt with by national competition authorities—the European Commission (which is currently nearing the end of a three-year dominance and exclusionary practices case involving Microsoft) or the US antitrust authorities⁴⁵ are more likely to be seized of these cases. Where they do come to national bodies such as the CC, however, there is no reason to suppose they will not be properly dealt with.

First principles

In the face of these challenges, we are encouraged⁴⁶ to return to a ‘first principles’ approach to competition policy on the grounds that this is especially apposite to high-technology markets. This approach is attributed to Professor Steve Salop,⁴⁷ who proposed (with reference to the Kodak case⁴⁸ in the USA and innovative markets in general) that the competitive effects of market conduct (or practices) should be the main focus of attention, since competitive effects are:

... the true core of antitrust. Although market power and market definition have a rôle in antitrust, their proper roles are parts of and in reference to the primary evaluation of the alleged anti-competitive conduct and its likely market effects. They are not valued for their own sake but rather for the roles they play in an evaluation of market effect.’

That may be regarded as a statement of the obvious, although not everyone would agree with such a sweeping statement. A more measured approach would be that there need be no substantive tension or conflict between innovative markets and standard competition policy analysis where that analysis is applied sensibly and with flexibility, recognizing the true characteristics of the particular market being examined. For innovation is the appliance

⁴⁴See, for example, the MMC/CC monopoly investigations into: *Indirect Electrostatic Reprographic Equipment* (HC 47, 1976–77); *Opium Derivatives*, Cm 630 (1989); *Indirect electrostatic photocopiers*, Cm 1693 (1991); *Historical on-line database services*, Cm 2554 (1994); *Video games*, Cm 2781 (1995); and merger investigations into: *Alanod/Metalloxyd*, Cm 4545 (2000); *Vivendi/BSkyB*, Cm 4691 (2000); *VNU/Book Data*, Cm 5779 (2003).

⁴⁵A current US example is the proposed *Oracle/PeopleSoft* merger, see *Financial Times*, 1 March 2004. This may also be examined by the European Commission.

⁴⁶See the *CRA Report* (paragraph 1.2).

⁴⁷*The First Principles Approach to Antitrust, Kodak, and Antitrust at the Millennium* (Antitrust Law Journal, Vol 68 (No 1), 2000 quoted in the *CRA Report*).

⁴⁸*Eastman Kodak Co v Image Technical Services* (Supreme Court) 504 US 451 (1992).

to markets of science; and as Adam Smith said; 'Science is the great antidote to the poison of enthusiasm and superstition'.⁴⁹ Whilst we may have different views on the relevance of enthusiasm, we can all agree that superstition should play no part in competition analysis.

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⁴⁹*An Inquiry into the Nature and Causes of the Wealth of Nations* by Adam Smith, Oxford World Classics (1993), page 441.