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Rhetoric or Reform: Does the Law of Tying and Bundling Reflect the Economic Theory?

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I. INTRODUCTION

N RECENT YEARS, both tying and bundling have been a concern for competition authorities. In the *Microsoft* proceedings, the European Commission considered whether the tying of Windows Media Player (WMP) to Windows constituted an abuse of a dominant position under Article 82 EC.¹ Their finding of an abuse was upheld by the Court of First Instance (CFI) on appeal.² The case stressed the need for further clarification of the criteria defining harmful tying and bundling. The Commission is now considering action against Microsoft in the web browser market because of its policy of tying Internet Explorer to Windows.³

Tying has been seen as harmful for a long time, and has even been considered illegal in the United States.⁴ In EC law, tying is specifically covered by Article 82(d) of the Treaty, which lists as an abuse 'making the conclusion of contracts subject to acceptance by other parties of supplementary obligations which, by their nature or according to commercial usage, have no connection with the subject of such contracts'. Tying may take the form of contractual arrangements, a refusal to supply the tying product,

¹ Case COMP/C-3/37.792 *Microsoft* 2007/53/EC, [2007] OJ L32/23, Commission Decision (summary).

³ The Commission sent a statement of objections to Microsoft on the tying of Internet

Explorer to Windows, MEMO/09/15 of 17 January 2009.

⁴ Standard Oil Co (Cal) v United States, 337 US 293, 305–306 (1949): the Supreme Court held that 'tying agreements serve hardly any purpose beyond suppression of competition'. Note that in United States, contrary to European law, the per se illegality is a non-rebuttable presumption.

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² Case T-201/04 Microsoft v Commission [2007] ECR II-3601.

or pricing practices that have tying effects, such as rebates and discounts on a package of goods (bundling).⁵ Article 82(d) EC, read in conjunction with Article 82(b) of the Treaty, prohibits the foreclosure of competitors 'to the prejudice of consumers'.⁶

The fundamental concern is the ability of dominant firms to leverage market power from the market in which they were dominant to the tied one. As a consequence, other producers of the tied product could be seriously hampered, or foreclosed.⁷ Foreclosures resulting from tying have traditionally been treated more harshly than other types of abuse, because it was thought that there is no reason to tie products other than to reduce competition.⁸

However, recent court decisions have more extensively analysed the competitive effects of tying and reflected a progressive abandonment of the per se rule. In this regard, economics has played a significant role, especially in promoting the view that there are economic justifications for tie-ins. In the US *Microsoft* case, the Circuit Court of Columbia declared that 'the rule of reason, rather than per se analysis, should govern the legality of tying arrangements involving platform software products'. Similarly in Europe, the CFI confirmed the effects-based approach applied by the Commission in the *Microsoft* case.

Dominant undertakings commit an abuse if they engage in conduct that restricts competition. The trend toward an effects-based approach aims to analyse in depth the anticompetitive effects of conduct. Economic thinking is crucial to this analysis. The CFI made it clear, with respect to Article 82(d), that

while it is true that neither that provision nor, more generally, Article 82 EC as a whole contains any reference to the anti-competitive effect of bundling, the fact remains that, in principle, conduct will be regarded as abusive only if it is capable of restricting competition.¹³

⁵ Richard Whish, Competition Law, 6th edn (Oxford, OUP, 2008), 679.

⁶ See John Temple Lang, 'Anticompetitive Non-pricing Abuses under European and National Antitrust Law' in Barry E Hawk (ed), *Annual Proceedings of the Fordham Corporate Law Institute* 2003 (New York, Juris Publishing, 2004), 241–42.

⁷ Phillip Areeda, Antitrust Law: An Analysis of Antitrust Principles and their Application

(1991), Vol 9, Part III, Chapter 17, 1700d.

⁸ *Ibid*, 1700j.

⁹ Herbert Hovenkamp, Federal Antitrust Policy: The Law of Competition and Its Practice, 2nd edn (St Paul, Minn, West Publishing Co, 1999), 393.

¹⁰ See Robert Pitofsky, 'Policy Objectives of Competition Law and Enforcement' (2003) EU Competition Law and Policy Workshop Proceedings, European University Institute of Florence, 6.

¹¹ United States v Microsoft Corp, 2001 US App LEXIS 14324, HN36. Nevertheless, the ruling was criticised: see eg Herbert Hovenkamp, 'IP Ties and Microsoft's Rule of Reason' (2002) 47(2) Antitrust Bulletin 369, at 370.

¹² Microsoft v Commission, above n 2, para 859.

¹³ *Ibid*, para 867.

Therefore, the CFI does not consider the effects-based approach as a new legal theory. Crucially, the Commission is entitled not only to analyse the actual foreclosure effects, but also to assess the likelihood that tving would 'lead to a lessening of competition so that the maintenance of an effective competition structure would not be ensured in the foreseeable future'. 14 This is a welcome trend, since it is the effects-based approach, and not the form-based approach, that creates the appropriate legal framework for the introduction of the new economic approach.

The European Commission Guidance on the Commission's Enforcement Priorities in Applying Article 82 EC Treaty to Abusive Exclusionary Conduct by Dominant Undertakings¹⁵ (hereafter 'the Commission Guidance') and the Discussion Paper on the Application of Article 82 EC to Exclusionary Abuses ('the Discussion Paper'16) produced by the Commission intend to contribute to the process of introducing an economic-based approach into European competition law enforcement. Economic criteria improve the methodology for the assessment of exclusionary behaviour, and give guidance on the conditions under which an undertaking's conduct might cause harm to competition and consumers, thereby promoting clarity and predictability.¹⁷ When deciding its enforcement priorities, the Commission will consider a number of factors; the Guidance precisely sets out these factors. together with a general analytical framework for considering anticompetitive conduct.

The economic-based approach indisputably contributes to distinguishing harmful tying and bundling from benign tying and bundling, and focuses on the anticompetitive effects while taking into account efficiencies. Nevertheless, the business community and competition law enforcers are also afraid that it might reduce legal certainty. The interest of undertakings in a form-based approach was apparent in the Microsoft case. 18 Indeed, the relationship between law and economics is not straightforward. Competition law is governed by the law of evidence: competition authorities should prove anticompetitive foreclosure, using direct or circumstantial

¹⁴ *Ibid*, para 1089.

¹⁵ DG Competition, Communication from the Commission, Guidance on the Commission's Enforcement Priorities in Applying Article 82 EC Treaty to Abusive Exclusionary Conduct by Dominant Undertakings (Brussels, 3 December 2008), http://ec.europa.eu/comm/competition/ antitrust/art82/guidance.pdf.

¹⁶ DG Competition, Discussion Paper on the Application of Article 82 of the Treaty to Exclusionary Abuses (December 2005), http://europa.eu.int/comm/competition/antitrust/ others/discpaper2005.pdf.

¹⁷ Philip Lowe, 'The European Commission formulates its enforcement priorities as regards exclusionary conduct by dominant undertakings' February 2009 (1) Global Competition

¹⁸ Microsoft v Commission, above n 2, paras 866, 1032 and 1035. The CFI in Microsoft fully endorsed the effects-based approach, by rejecting the claim made by Microsoft that Article 82 does not include a separate condition on the foreclosure of competitors, and would therefore be adopting a new speculative theory.

evidence. While economic theory greatly contributes to building a general framework and to improving understanding of companies' business strategies, their incentives, and the likely impact of their behaviour on the market, the evidential value of economic models is questionable. Therefore, the issue is not only whether the law is consistent with economic theory, but also whether the latter can be reconciled with the requirements of the law.

This chapter analyses the recent developments in European competition law with regard to tying and bundling, and assesses them in the light of economic theory. I consider the role of economic theory, whether the case law or the new Commission Guidance is consistent with economic thinking, and whether it is flexible enough to allow for economic learning to be taken into account. I begin with a discussion of different economic theories of tying and bundling. There then follows an analysis of the recent developments in European Community competition law, and the chapter concludes with some remarks on the consistency of the Commission activity with economic theory.

II. ECONOMIC ANALYSIS OF TYING AND BUNDLING

Before presenting a brief economic analysis of tying and bundling, some remarks are required on the use of economic theory in competition law. The use of formal economic models as an indispensable part of the antitrust process requires a good understanding of what a model can offer. Economic models offer a formalisation of a foreseeable market situation and its resulting effects on competition. However, they cannot consider all the parameters that have an influence in real markets; these models are thus necessarily simplified. A genuine economic approach requires the implementation of theories in real-world situations, and the construction of a framework able to direct authorities or judges in their work.²⁰

With these limitations in mind, it is now possible to consider four specific economic theories that relate to tying and bundling. The underlying idea of the 'leverage theory' is that tying and bundling can be used by a firm with a dominant position in one market to extend or leverage its power in a second market (offensive leverage). A variant of the theory has been

²⁰ See Jay Pil Choi, 'Antitrust Analysis of Tying Arrangements' in Choi (ed), *Recent Developments in Antitrust. Theory and Evidence* (Cambridge, Mass; London, MIT Press, 2007), at 8, who expresses the general consensus that the appropriate antitrust policy depends on the specifics of the case.

¹⁹ See eg 'Suggested best practice for submissions of technical economic analysis from parties to the Competition Commission', available at http://www.competition-commission. org.uk/rep_pub/corporate_documents/corporate_policies/best_practice.pdf. The CC requires the submissions to present all the assumptions and the reasons for making them. Indeed, it reminds that 'all economic models make assumptions for convenience and tractability' (point 28), and often these assumptions are of questionable evidential value.

developed: the foreclosure on the tied market may effectively protect the market power on the tying market (defensive leverage). Economic theory has also studied the use of tying and bundling as an entry deterrent device, and finally their likely impact on innovation. These theories will now be analysed to consider the impact which they have had on the development of EC competition law.

A. Offensive leveraging

Leverage theory in its classical form has come under attack by scholars of the Chicago School. According to this School, a monopolist would not tie a good supplied competitively to his own product, since the only monopoly rent he could extract would be on his own product.²¹ In short, the profit of the firm would not increase as a result of tying; therefore the firm will have no incentive to do so. Other explanations for bundling, for instance its use as a price discrimination device, have reinforced the view that there are other motivations for tying and bundling much more plausible than the leverage of market power.²² Nevertheless, the fact that, in general, firms have no incentive to tie, is irrelevant when assessing real cases where tying and bundling might have anticompetitive effects. A later generation of scholars studied the market conditions under which tying and bundling may foreclose competition, which is very useful for competition law enforcers. In this section, I examine a number of these studies.

The criticisms of the Chicago School were examined by Whinston, who questioned the assumptions made about the nature of the tied market.²³ While the Chicago School assumed that the tied market has a competitive, constant, returns-to-scale structure, Whinston builds a model with an oligopolistic structure of the tied good market. He shows that in the presence of economies of scale, tying can lead to the monopolisation of the tied good market through foreclosure. Existing competitors will be excluded as a consequence of the reduction of their residual demand, and thus of their sales. The focus of attention in this model is not pricing but the effect on the *structure* of the tied good market, which is much closer to the concerns expressed by the European Commission with regard to anticompetitive foreclosure.

²¹ See eg George Stigler, 'A Note on Block Booking' in George Stigler (ed), *The Organisation of Industry* (Homewood, Richard D Irvin, 1968), 165.

²³ Michael Whinston, 'Tying, Foreclosure, and Exclusion' (1990) 80 American Economic Review 837, at 838. He also relaxed the fixed-proportion assumption.

²² See eg Arthur Lewbel, 'Bundling of Substitutes or Complements' (1985) 3(1) *International Journal of Industrial Organisation* 106, concluding that a single product monopoly cannot increase its profits by leveraging (on a competitive market), 'unless it is coupled with either price discrimination via mixed bundling, or with some joint production cost savings'.

The altering of the market structure of the tied good market is linked with profitability, and this depends on whether the monopolist is able to make a pre-commitment to tie, for instance through product design or designing incompatible interfaces between his products and those of his competitors.²⁴ When tying leads to exclusion of competitors, consumers may be worse off because prices may rise, and choice in the tied market necessarily falls.²⁵

The effect on total welfare is not always negative. It is recognised by the author that whereas the model presents a coherent leverage hypothesis, its normative implications are less clear.²⁶ The study of Martin focuses specifically on welfare effects, and shows that in the absence of reductions of the marginal and fixed costs, bundling reduces social welfare compared with the case of no bundling.²⁷

Independently of the considerations related to welfare effects, the work of Whinston explored the conditions under which foreclosure is likely to occur, and highlighted the importance of the market structure and the study of the impact of a company's behaviour on that structure. In a market characterised by economies of scale, tying and bundling are liable to have a negative impact on competitors, and consequently on market structure and the market's ability to ensure effective competition. The approach of the Commission in focusing on the effect of the firm's behaviour on the market structure is consistent with the work of Whinston demonstrating competition policy that takes into account economic thinking.

B. Defensive leveraging

The modern concept of defensive leverage was developed by Carlton and Waldman.²⁸ The key insight of this dynamic model is that foreclosure today

²⁴ *Ibid*, 839. For independent products, tying is not useful absent pre-commitment, but can be a profitable strategy with pre-commitment. In this latter case, the competitors in the tied product market can be excluded by the 'strategic foreclosure' effect of tying (*ibid*, 840). In the presence of heterogeneous preferences among consumers for the tying good, especially when a significant number of consumers in the tied market have low valuation for the tying good, tying does not necessarily result in strategic foreclosure. For complementary products used in fixed proportions, a monopolist may find the presence of other competitors in the tied market more profitable (*ibid*, 850).

²⁵ *Ībid*, 845. Although the incentive to lower the price of the tied product is also present when the monopolist in the tying market succeeds in monopolising the tied market, one should expect the price for the tied product (and the bundle) to rise when the gains from this market are substantial. In this case, the consumers are worst off.

²⁶ Ibid, 855.

²⁷ Stephen Martin, 'Strategic and Welfare Implications of Bundling' (1998) CIE Working Paper 98-14.

²⁸ Dennis Carlton and Michael Waldman, 'The Strategic Use of Tying to Preserve and Create Market Power in Evolving Industries' (2002) 33 RAND Journal of Economics 194–220; see

in the tied market for a complementary product, may protect the monopoly in the tying market later on. Since the model is of a dynamic nature, it could realistically be applied in the *Microsoft* case (bundling of Windows with Internet Explorer). Strategic behaviour to reduce the scale of a rival in the tied market in the first period, can create significant competitive advantages in the second period, especially in the presence of network effects,²⁹ scale economies and installed base.³⁰ The latter assumptions and the possibility of future competition in the tying market distinguish this model from previous ones.³¹ Reducing the scale of a rival in the tied market, or reducing the products available in that market, has the effect that inefficient production or reduced choice in the tied market make entry into the tying market more difficult. This is because future competitors in the tying market must enter both markets (or contract with the supplier of the tied market), and it will be difficult for them to have an efficient supply source or a sufficient number of complementary products on the tied market.³²

When the complementary product may become a substitute in the second period, as was the case with Internet Explorer, monopolisation of the 'future substitute' will protect the position of the firm in the tying market. The overall effect is that the strategic behaviour in the secondary (tied) market is aimed to preserve or defend the existing market power in the primary (tying) market. Moreover, the model shows how a firm can transfer its monopoly power to other complementary products. Although the Commission does not refer explicitly to the work of Carlton and Waldman, the defensive leverage is the underlying hypothesis of its finding that the control of the media player market would enable Microsoft to extend its power to a range of other related markets. The Commission's analysis

also Dennis Carlton, 'A General Analysis of Exclusionary Conduct and Refusal to Deal—why Aspen and Kodak are Misguided' (1998) NBER Working Paper Nr 8105.

²⁹ Network effect (or network externalities) means that the benefit to a user of a product depends on how many other customers use the same product and on how many other complementary products are available. Dennis Carlton and Jeffrey Perloff, *Modern Industrial Organization*, 3rd edn (Reading, Mass; Harlow, Addison-Wesley, 2000), 374.

³⁰ Installed base is a measure of the number of units of a particular type of system (usually a computing platform) actually in use, as opposed to market share which only reflects sales over a particular period. Because installed base includes machines that may have been in use for many years, it is usually a higher figure than market share. Carlton and Waldman, above n 28, at 205; Carlton, above n 28, at 13.

³¹ See eg Whinston, above n 23, at 852 ff.

32 Carlton, above n 28, at 14.

³³ Carlton and Waldman, above n 28, at 212; Carlton, above n 28, at 16. The hypothesis applies in the case where the newly emerging market for, say, product C is associated with the same complementary good (B) as is the primary market (A). After leveraging the market power from A to B, the firm can leverage its market power to C by tying B to C. In this case the firm transfers its market power from A to C, and if C is a future substitute for A (or B), this strategy can protect the market power it has on both A and B markets.

³⁴ Microsoft (Commission Decision), above n 1, para 212. See considerations in section III.A below.

focuses on the same mechanisms, which again shows that the concerns and the approach of the Commission are consistent with economic theory.

C. Tying and bundling as an entry deterrent device

Tying and bundling have also been considered as an entry deterrent device.³⁵ Nalebuff focuses specifically on a model in which bundling is used not to leverage a monopoly from one market to another, but rather to protect both markets of a multigood monopolist against entry. A rival who produces only one of these goods finds it harder to enter one of these markets. Unlike previous authors, Nalebuff's work suggests that bundling is credible even without any commitment device.³⁶ This strategy can protect both markets not only when entry is deterred, but also in situations where entry succeeds or when a one-product competitor already exists in the market. In the former situation. Nalebuff's model shows that the profits of the incumbent can more than double. In both situations the result is consistent with the findings of Whinston: bundling reduces the profitability of the competitor through foreclosure. The concerns of the Commission on the ability of tying and bundling to raise barriers to entry are therefore justified.

Entry deterrence is more effective³⁷ when the same group of consumers is used to buying both products; entry with only one of the products cannot satisfy customers, who will prefer buying the bundle. With no discount by the incumbent, the bundle reduces the entrant's profit and, as the bundle is sold at a discount relative to the independent pricing, entry becomes even less profitable.³⁸ Similarly, complementarities in consumption make bundling more profitable, and consumers are even less attracted by only one product.³⁹ While the presence of negative correlation makes the price discrimination strategy profitable, it makes the entry-deterrent effect less valuable. Nevertheless, even if this effect is diminished, it does not disappear with substitutes.⁴⁰

The Commission reflects these lessons in its Guidance, and considers that when the products composing the bundle are complements, bundling raises barriers to entry because customers prefer buying both products

³⁵ See eg Whinston, above n 23; Jay Pil Choi and Christodoulos Stefanadis, 'Tying, Investment, and Dynamic Leverage Theory' (2001) 32 RAND Journal of Economics 52–71; Carlton and Waldman, above n 28; Barry Nalebuff, 'Bundling as an Entry Barrier' (2004) 119 The Quarterly Journal of Economics 159-87.

Nalebuff, above n 35, at 162–63.
 Ibid, 160.

³⁸ Ibid, 168-69.

³⁹ *Ibid*, 178.

⁴⁰ *Ibid*, 174.

together, rather than acquiring them from separate producers.⁴¹ Conversely, the Commission considers that tying and bundling are not liable to lead to foreclosure when customers are interested in buying only one of the products.42

The entry-deterrent effect increases if the incumbent adds more goods to the bundle. 43 Thus, bundling becomes an effective competitive tool against a competitor with a limited product line. Nalebuff analyses the effects of large bundles in another of his papers. 44 He suggests that the price advantage of a firm that sells bundles of complementary products will grow as the bundle grows in scale. When four or more products are aggregated to a bundle, the advantage of an incumbent is difficult to contest for actual or potential rivals. The difficulty for competitors to replicate bundles is also stressed by the Commission Guidance. 45 In the case where actual rivals respond by bundling their products (a bundle-versus-bundle competition), the profits will fall for both of them, and the result is worse as the size of the bundle grows.46

The competitive effects of large bundles were analysed in detail by Bakos and Brynjolfsson.⁴⁷ The authors examine the case of information goods available on the Internet. The Internet has radically reduced the marginal cost of reproducing and distributing information goods to consumers, and this difference makes possible the bundling of a large number of information goods, such as different types of software and Internet content. The authors analyse how a firm can exploit 'economies of aggregation', a different type of demand-side economies which may be created when the information goods are 'aggregated' and offered in large-scale bundles. 48 These economies of aggregation can significantly increase the profit of the firm. The increased profitability is made possible precisely because of the low (almost zero) marginal cost. The authors conclude that the firm that offers a large bundle can price it very low, which has the effect of making the entry of a single-product firm (or a firm with a small bundle) very unattractive, despite a superior cost structure or quality level.⁴⁹

⁴¹ Commission Guidance, above n 15, para 57.

⁴² *Ibid*, para 54.

⁴³ Nevertheless, according to Nalebuff, above n 35, the value of the bundle does not seem to grow proportionately.

Barry Nalebuff, 'Competing against Bundles' (2000), Yale School of Management.

⁴⁵ Commission Guidance, above n 15, para 53.

⁴⁶ Nalebuff above n 44, 11-12.

⁴⁷ Yannis Bakos and Erik Brynjolfsson, 'Bundling and Competition on the Internet' (2000) 19(1) Marketing Science 63-82.

⁴⁸ *Ibid*, 64.

⁴⁹ *Ibid*, 77. The authors emphasise that this entry-deterrent effect is not based on strategic behaviour, for instance by lowering the price in the short run. The incumbent chooses a price level that maximises its profits in the current period.

D. Impact on innovation

Tying and bundling can affect not only prices and the competitive structure of the market, but also innovation. Among others, Choi has explored the dynamic aspect of bundling.⁵⁰ Extending Whinston's model, Choi focuses on the long-term effects of tying on incentives to innovate. In contrast to earlier work, his model does not rely on the exit of rivals. Even in the absence of exit, the model shows that tying can be a profitable strategy in the long term, since it increases the tying firm's incentive to innovate and decreases the rivals' incentives. Tying allows a dominant firm to extend its market power from the tying to the tied good market, by expanding its market share in the latter market. In doing so, it can spread the sunk cost of research and development over a larger number of units, which allows the firm to recover its costs and profit from the research. Conversely, since the market shares of the rivals will decrease, they will have little possibility to recover their costs, decreasing their incentives to innovate in the long term.⁵¹ In this model, tying does not necessarily lead to foreclosure in the product market, but rather to foreclosure in the research and development market. In dynamic markets, if this long-term effect outweighs the reduction of the profitability from reduced prices, bundling may be profitable for the dominant firm even in the absence of exit by rival firms. The same reasoning applies to mergers: since a merger with bundling can reduce the scale of the existing competitors, bundling reduces their incentive to invest in research and development.⁵²

Choi also analyses the welfare effects of bundling. He concludes that the effects of tying in his model on social welfare were 'unambiguously negative': social welfare decreases with bundling.⁵³

The Commission Guidance does not make any statement on the impact of bundling on the competitor's incentive to innovate. However, in highly innovative markets, the maintenance of a high incentive to innovate for all market participants is crucial not only because innovation is liable to increase consumer welfare in the long run, but also because the entry of innovative new products would challenge the market power of incumbents by limiting their ability to foreclose competition.

To summarise, the likelihood of anticompetitive foreclosure increases if an undertaking has substantial market power in the tying market, and the

⁵⁰ Jay Pil Choi, 'Tying and Innovation: A Dynamic Analysis of Tying Arrangements' (2004) 114 The Economic Journal 83.

⁵¹ *Ibid*, 93.

⁵² Jay Pil Choi, 'Antitrust Analysis of Mergers with Bundling in Complementary Markets: Implications for Pricing, Innovation, and Compatibility Choice' (October 2003) Net Institute Working Paper #03-02, http://www.netinst.org/Choi.pdf, 15.

⁵³ Choi, above n 50, 97–98. He emphasises that this strong result is due to various assumptions made in his model.

tied good market structure is of an oligopolistic nature, characterised by economies of scale, network effects or problems of installed base. In these situations, tying and bundling are likely to have a negative effect on the structure of the tied good market, increase barriers to entry into the tied and the tying markets, and have a negative impact on innovation. We shall see below that this condition is not sufficiently discussed in the Commission Guidance.

Further, the economic theory shows that under these conditions, the more products added to the bundle, the more effective the entry-deterrent effect. A commitment to tie is not always a necessary condition, although it increases the likelihood of a negative impact. We shall now discuss in greater detail how these economic principles are reflected in the Commission Guidance and its decision-making practice.

III. RECENT DEVELOPMENTS REGARDING TYING AND BUNDLING IN EC COMPETITION LAW

The reform of EC competition law on tying and bundling is visible in individual decisions and in the Commission Guidance. This section discusses the influence of economic theory on the analysis of the Commission in the Microsoft case and on the new Guidance.

In line with the economic approach, the Commission's recent policy with regard to Article 82 emphasises the protection of consumers. 54 Nevertheless, while economic theory relies on consumer welfare and, therefore, harm to final consumers, 55 competition law should take into account the restriction of competition at any level of the market, and assess the harm to consumers and any other customer of the dominant undertaking. 56 Article 82 covers 'not only practices which may prejudice consumers directly but also those which indirectly prejudice them by impairing an effective competitive structure'.⁵⁷ Moreover, the *Microsoft* case emphasised that consumer prejudice captures not only parameters, such as price and quantity, but also quality, choice and, most importantly, innovation.⁵⁸ These latter criteria are crucial for the assessment of tying and bundling practices in dynamic industries characterised by rapid innovation; they also constitute the basis of the Commission's intervention regarding the business strategy of Microsoft. Consequently,

⁵⁴ Antitrust: consumer welfare at heart of Commission fight against abuses by dominant undertakings, IP/08/1877 of 3 December 2008.

⁵⁵ See eg EAGCP, Report on an Economic Approach to Article 82 EC (July 2005), http:// europa.eu.int/comm/competition/publications/studies/eagcp_july_21_05.pdf, 8-9.

⁵⁶ Commission Guidance, above n 15, para 19, n 2. ⁵⁷ Microsoft v Commission, above n 2, para 664.

⁵⁸ *Ibid*, paras 648–49. The Court considers that the prejudice to consumers relates also to the limitation of innovation, and not only to the limitation of markets and production.

prejudice to the final consumer does not constitute an additional condition for the finding of an abuse of a dominant position; the foreclosure of competitors as such is liable to have an adverse impact on consumer welfare.

This broad interpretation of consumer prejudice in EC competition law does not mean that it is inconsistent with economic theory. The work of economists on tying and bundling has also been focused on the impact of such practices on the market structure, and on the impact on the ability of competitors to compete effectively.

On the other hand, it should also be stressed that economics is a positive science; although it offers concepts like 'efficiency' or 'welfare,' these are only tools to help build an idea of how the markets work. Any conclusion about how competitors and regulators should act requires the involvement of institutions which express value judgements, and should be the result of a democratic process. The main contribution of economic analysis is to reduce the margin of error and the risk of over- and under-intervention. In this respect, the consumer welfare concept is a useful tool to ensure that enforcing bodies remain focused on the need to protect competition as a process and do not get sidetracked into protecting individual competitors.

Two areas of particular importance are highlighted in the Guidance. First, the 'equally efficient competitor' test adopted by the Commission in its Guidance shows concern to protect competition, and not competitors, and promotes economic efficiency. Similarly, the possibility of taking into account efficiencies and the benefits for consumers at the justification stage is an important step in ensuring that the law reflects the economic theory, and will be further discussed below.

A. Integrating economic theories in individual cases

Microsoft was one of the first Commission investigations to take into account the new economic thinking with regard to tying and bundling. The Commission explicitly mentions four general conditions for abusive tying:

- a) the tying and tied goods are two separate products;
- b) the undertaking is dominant in the tying product market;
- c) the undertaking does not give customers a choice to obtain the tying product without the tied product; and
- d) tying forecloses competition.⁵⁹

Its analysis has been confirmed by the CFI, and the Commission adopts the same conditions in the new Guidance, with the exception of the absence of

⁵⁹ Microsoft (Commission Decision), above n 1, para 794.

choice for customers. 60 The main developments relate to the confirmation of the effects-based approach, to the distinct analysis of the existence of separate products, and to the assessment of the anticompetitive effects.

The requirement that separate products exist has been implicit in the previous cases handled by the Commission, but has proved to be central to the finding of abusive tving in the *Microsoft* case. Generally, Article 82(d) is applicable to separate products or services, rather than to integrated ones. 61 Intuitively, the mere act of tying or bundling two or more products shows that the latter have an existence of their own in the market, otherwise there would be no conduct that could be considered abusive. This condition can be used to identify genuine efficiencies and to identify separate markets and, therefore, market power. Moreover, it contributes to the understanding of the strategy of incumbent undertakings and of the mechanism of anticompetitive foreclosure.

Assembling components in a bundle can create real value for consumers. This is reflected in competition law⁶² by distinguishing between packages that constitute 'inherently one product' and those that do not.⁶³ Consequently, the finding of a composed product identifies genuine efficiencies for consumers, and serves as a 'screening device' to distinguish between useful 'assembling' and other kinds of tying or bundling that might impact the market. A plausible explanation of the wide acceptance of tying and bundling is consumers' desire not to assemble the products themselves. Put in different terms, there is no need to unbundle, because there is almost no demand for it.64

One of the efficiency arguments put forward by Microsoft was that it offered an integrated product; in its view, there were not two separate markets. In addressing this, the Commission and the Court focused on consumer demand⁶⁵; if there is no separate demand for distinct components, the assembling of components in one product would result in a distinct product that is of value for consumers.66

61 Bellamy and Child, European Law of Competition, 5th edn (London, Sweet & Maxwell,

63 Robert Bork, The Antitrust Paradox. A Policy at War with Itself (New York, The Free Press, 1978), 379. See also Microsoft (Commission Decision), above n 1, para 955.

65 Commission Guidance, above n 15, para 50.

⁶⁰ Commission Guidance, above n 15, para 50.

⁶² See Robert Dansby and Cecilia Conrad, 'Commodity Bundling' (1984) 74(2) American Economic Review 377.

⁶⁴ Barry Nalebuff, 'Bundling, Tying, and Portfolio Power, Part I'. DTI Economics Paper Nr 1 (2003) 31; Carlton and Perloff, above n 29, at 304. Obviously, for many bundled products the manufacturer can integrate the products better than customers can.

⁶⁶ This is the case for 'composed products', such as radio stations, car bodies or computers, where the choice left to consumers to assemble or to pick and choose different package options would result in increased complexity and higher costs for both manufacturers and consumers.

The Commission's analysis in Microsoft is consistent with other Commission publications, and shows that the reform of Article 82 is part of wider reform to integrate economic analysis in competition law. According to the Commission Guidelines on vertical restraints, two products are distinct if the demand side (the buyers) considers them to be part of two distinct relevant markets; in other words, they would buy them separately in the absence of tying.⁶⁷ The customers' preference for the simultaneous use of two products induces producers to offer them together, considered in other terms 'commercial usage' or 'accepted practice'. In those latter cases, there is no tving or bundling involved.⁶⁸

Another key area where the influence of economic analysis is obvious in the Microsoft case, is the assessment of anticompetitive effects. In its decision, the Commission held that Microsoft infringed Article 82(d) by tying the Windows Media Player (WMP) to the Windows PC operating system.⁶⁹ Considering the fact that the users can obtain media players from rivals through the Internet, it held that '[t]here are ... good reasons not to assume without further analysis that tying WMP constitutes conduct which by its very nature is liable to foreclose competition'. 70

First, the Commission considers the market power in the tying market, where Microsoft has a market share of 90 to 95 per cent and which gives Microsoft the ability to control the distribution of both products through PC sales.⁷¹ Since downloading and other distribution channels are not as effective, the practice used by Microsoft is likely to have a harmful effect on the structure of the market for media players. The negative effects will also expand onto the markets for complementary software and content. It should be noted that exit of rivals is not necessary to prove foreclosure effects.⁷² Although Original Equipment Manufacturers (OEMs) like DELL could offer another media player, the technical integration operated by Microsoft creates disincentives for the latter to bundle an additional product, 73 and one of the remedies obliges Microsoft to provide OEMs with a version of Windows without WMP.

The Commission's decision demonstrated that it took into account the economic theory on defensive leverage and those on the entry-deterrence effects of bundling. First, the Commission rejected the arguments put forward by Microsoft that media players are not substitutes for the operating

⁶⁷ Commission Notice, Guidelines on Vertical Restraints [2000] OJ C291/1, para 216. The Commission takes the same view at consideration 191 of the Guidelines on the Application of Article 81 of the EC Treaty to Technology Transfer Agreements [2004] OJ C101/2.

⁶⁸ Guidelines on Vertical Restraints, above n 67, para 216. ⁶⁹ Microsoft (Commission Decision), above n 1, paras 792 ff.

⁷⁰ *Ibid*, para 841.

⁷¹ *Ibid*, paras 843–44.

⁷² *Ibid*, para 946.

⁷³ *Ibid*, para 851.

system and could not threaten Windows; the Commission maintains, for example, that in combination with Java, they could be a 'general platform substitute'. 74 Here we find all the assumptions of the defensive leverage theory. 75 Secondly, the Commission adopts the second hypothesis of Carlton and Waldman: the transfer of the monopoly power to complementary products of the tied product. 76 According to the Commission, the media player market is a gateway to a range of related markets, such as those for content encoding software, wireless device software and online music delivery.⁷⁷ Gaining a leading position in the media player market will give Microsoft the possibility to transfer its market power to these complementary products. Lastly, the decision is consistent with the theory on entrydeterrent effects of tving and the literature that considers the effect on innovation: incompatibilities may reduce the prospect of successful entry in both the operating system and the applications market, and reduce innovation incentives for rival technologies. 78 The Microsoft case clearly identifies the elements of a harmful tying, and recognisably articulates the theories underlying the concerns of the Commission. It is, therefore, a very welcome development in EC competition law and suggests that not only is the Commission fully committed to the move to a more economic approach. but also that it has begun to develop the tools to implement it.

B. Commission's Guidance: identifying criteria for harmful tying and bundling

The Commission Guidance gives a general overview of the factors that increase the likelihood of a finding of anticompetitive foreclosure. The Guidance takes a different approach from the Discussion Paper, in that it starts with a description of relevant factors for the assessment of any kind of abusive exclusionary conduct.⁷⁹ This is helpful in that it identifies the common grounds between different types of abuse. However, the Guidance does not explicitly clarify the relationship between these general criteria and the specific factors relevant to each particular type of exclusionary conduct. The clarification of this link is important to explain the extent to which individual market conditions contribute to anticompetitive foreclosure of tving and bundling.

⁷⁴ *Ibid*, paras 971–72.

⁷⁵ See Carlton and Waldman, above n 28, 198 ff.

⁷⁶ *Ibid*, 212 ff.

⁷⁷ Microsoft (Commission Decision), above n 1, para 975.

⁷⁸ *Ibid*, paras 974 and 979 ff.

⁷⁹ Commission Guidance, above n 15, para 20.

The Guidance makes it clear that its objective is only to present the factors which increase the likelihood of intervention. ⁸⁰ The two general relevant criteria with regard to tying and bundling are, first, the undertakings' dominant position in one of the product markets⁸¹ and, secondly, the existence of economies of scale and/or scope and network effects on the relevant market. ⁸² As discussed above, foreclosure effects are likely to occur when the tied product market is characterised by scale economies, network effects or an installed base, since only in those cases are tying or bundling able to reduce the ability of competitors to achieve scale economies, to reduce their profitability and their ability to grow or innovate. The Discussion Paper section on tying and bundling explicitly mentioned scale economies, learning curve or network effects on the tied market, and the foreclosure mechanism. It is unfortunate that this was not carried through into the Guidance on tying and bundling but was left in the general principles section. ⁸³

Another general factor relates to the proportion of the foreclosed sales.⁸⁴ The Guidance discusses the extent of the allegedly abusive conduct, stating that the higher the total sales in the (tied) market affected by the conduct, and the longer the duration of the conduct, the greater is the likely foreclosure effect. Such a criterion was also present in the Discussion Paper, and was expanded in relation to tying and bundling.⁸⁵ There the Commission considered that when 'the dominant company ties a sufficient part of the market, it raises a rebuttable presumption that the tying practice has a market distorting foreclosure effect'.⁸⁶

The main issue, which also arises in the context of other kinds of exclusionary conduct, is what constitutes a 'sufficient part of the market', taking into account that the foreclosure of competitors depends on their own cost structure and economies of scale. Economic theory has not given an answer to these questions, although it is clear that in the presence of substantial

⁸⁰ Ibid, para 1.

⁸¹ The Commission has always stressed the importance of a second condition, namely the existence of market power in the tying product market. See eg Case T-30/89 Hilti v Commission [1991] ECR II-1439; Case C-333/94 Tetra Pak International SA v Commission [1996] ECR I-5951 ('Tetra Pak II'). These cases involved high market shares in the tying market: Hilti had 70% of market shares in the cartridge market, while Tetra Pak had 90% of the aseptic sector (both carton and packaging machines). See also Case 311/84, Centre Belge d'Etudes de Marché-Télémarketing v CLT [1985] ECR 3261, at 26. The Court held that the fact that CBEMT, a statutory monopoly, subjected the sale of broadcasting time to the condition that the advertisers should use the telephone lines of an advertising agent belonging to the same group as the television station, amounted to an abuse.

⁸² Commission Guidance, above n 15, para 20.

⁸³ Discussion Paper, above n 16, para 199. Although these factors were mentioned, it is submitted that the Discussion Paper on Article 82 EC did not attached a lot of importance to the conditions in the tied product market.

⁸⁴ Commission Guidance, above n 15, para 20.

⁸⁵ Discussion Paper, above n 16, paras 196 ff.

⁸⁶ *Ibid*, para 188.

economies of scope or network effects, tying or bundling artificially reduces the scale and the profitability of competitors. Nevertheless, concentrating on the proportion of the tied sales without making any reference to the required level of economies of scale, or similar market conditions, on a given market is insufficient. This might lead to an automatic finding of exclusionary effect even in highly competitive markets, and therefore to over-intervention.

The Guidance sets out a number of specific factors that would contribute to foreclosure effects of tying and bundling. First, the Guidance states that a lasting tying strategy—for instance through technical tying—would increase the risk of anticompetitive foreclosure. 87 This criterion relates to coercion, or the absence of choice for customers, which is one of the conditions set out in the *Microsoft* decision but which is not made explicit in the Guidance. The law on tying and bundling has evolved to cover any direct or indirect form of coercion. In rejecting the argument of Microsoft, the CFI held that for this condition to be fulfilled, the facts that the consumers do not pay a price for the tied product, and that the consumer is not forced to use the tied product or prevented from using the same product when supplied by a competitor of the dominant undertaking, are not relevant criteria. 88 Most importantly, the Court confirmed that bundling acts as a deterrent to the pre-installing of other media players, and as a disincentive to use other competitors' media players, even though the latter may be of better quality.⁸⁹ The CFI is also right to point out that, as long as WMP remains pre-installed, consumers will have a limited incentive to install and use competing products. 90 Therefore, even if technical tying might be easy to reverse, the effect on competition will remain the same if consumers have no incentive to choose another competing product.

The emphasis on consumers' incentives enables economic theory to play its role in full, and to assess the incentive mechanisms and the situations where tying and bundling may harm competition. For instance, economics shows that mixed bundling forecloses competition, even when consumers have a choice to buy the components of the bundle separately.91 What counts is the exclusionary effect on the market. In this respect, the fact that the Guidance does not expressly refer to coercion shows greater flexibility from a legal point of view.

The Guidance gives limited direction concerning bundled rebates, 92 or rebates coupled with mixed bundling. When undertakings offer large

⁸⁷ Commission Guidance, above n 15, para 53.

⁸⁸ Microsoft v Commission, above n 2, paras 967 and 970.

⁸⁹ *Ibid*, para 971. 90 *Ibid*, para 974.

⁹¹ The Discussion Paper, above n 16, paras 182 and 189, dealt expressly with mixed bundling, and presented it as a form of economic incentive to buy the bundle. ⁹² Commission Guidance, above n 15, para 59.

rebates on a bundle, there is no incentive for consumers to buy competing products separately, so that even equally efficient competitors would risk being excluded from the market. To assess this probable effect of the rebate, the Guidance refers to the incremental costs as a benchmark, ⁹³ but recognises that the assessment is complex in practice.

The Commission does not provide a complete analysis of the incentives and the market conditions that would make tying and bundling a harmful practice. The Guidance only gives the example of technical tying, a practice that can produce significant efficiencies. How order to reduce antitrust risk: if the price of the bundle covers the long-run incremental cost of including such a product in a bundle, the antitrust risks are minimised. This approach is, however, limited in some cases; for example, it is not appropriate for information goods, which present an almost zero marginal cost.

Another situation which increases the likelihood of intervention occurs when the firm is dominant on more than one product market. However, the Guidance describes the situation without presenting the market conditions that may contribute to anticompetitive effects. While intuitively such analysis may be correct, in the absence of economies of scale or scope, the network effect or installed base in the tied market, competitors can compete for each of the markets without offering a large bundle of products. This is particularly the case if the consumers are not used to buying and consuming these products together.

With regard to the bundling of substitute products, the Guidance does not exclude possible anticompetitive effects but limits its analysis to substitute input products used in variable proportions.⁹⁷ Indeed, bundling of substitute products may be less frequent, but the Guidance rightly states that the effect on competition is directly related to increases in price.

The Guidance takes into account the main conclusions of the economic analysis and remains at the same time flexible to avoid a straitjacket effect in individual cases. There is no change in the outcomes of tying and bundling cases—to date there have not been any tying cases which have been criticised for over-intervention, nor does the Guidance signal a more lenient approach. Rather, the Commission is reforming its decision-making process by integrating economic analysis in a case-by-case and effects-based approach.

⁹³ *Ibid*, para 60.

⁹⁴ See Daniel Gaynor, 'Technological tying' (2006) FTC Working Paper 284.

⁹⁵ See Guidance, above n 15, para 59.

⁹⁶ *Ibid*, para 53.

⁹⁷ *Ibid*, para 56.

C. Taking into account efficiencies

Contrary to Article 81(3), Article 82 does not provide for an explicit legal basis for considering efficiencies. However, the courts have accepted that the behaviour of defendant undertakings may be objectively justified provided that it is proportional.⁹⁸ If this is found to be the case then the conduct in question is not considered abusive. 99 However, even if objective justifications can be invoked by the undertakings and are part of the analysis—indeed, in tying cases, 'there are almost always efficiency arguments' 100—the courts have been reluctant to take these reasons into account. 101

In recent years, the Commission's policy towards dominant undertakings attempting to justify their apparently abusive conduct on efficiency grounds has evolved. In the first guidelines influenced by economic analysis, Article 81(3) EC was interpreted as precluding any application of this provision to restrictive agreements concluded by dominant undertakings. 102 In later guidelines, the Commission clarified that this limitation applies only to agreements that constitute an abuse of a dominant position. 103 The application of Article 81(3) to the conduct of dominant undertakings is a step toward the integration of efficiencies in the overall assessment. It also suggests that Article 82 should have the ability to take into account possible efficiencies in a coherent way.

The Commission has abandoned the view that the exclusionary conduct of dominant undertakings cannot be justified because it causes substantial harm to the competitive structure of the market which cannot be counterbalanced by any efficiency. These developments are welcomed, first, because tving and bundling have great potential to produce economic efficiencies; and, secondly, because the finding of a dominant position in European competition law does not necessarily require a large market share. 104 Consequently, even limited anticompetitive effects can be captured

101 For instance, the courts rejected as disproportionate the claims of Hilti and Tetra Pak (see above n 81) on the grounds of health and safety obligations of these undertakings.

⁹⁸ See Whish, above n 5, 206–07.

⁹⁹ *Ibid*, p 207.

¹⁰⁰ John Temple Lang, above n 6, 324.

¹⁰² Guidelines on Vertical Restraints, above n 67, paras 135, 153, 221 and 222; Communication for the Commission, Notice, Guidelines on the applicability of Article 81 of the EC Treaty to horizontal cooperation agreements [2001] OJ C3/2, paras 36, 71, 105, 134

¹⁰³ Communication from the Commission, Notice, Guidelines on the application of Article 81(3) of the Treaty [2004] OJ C101/97, para 106; Communication from the Commission, Notice, Guidelines on the application of Article 81 of the EC Treaty to Technology Transfer Agreements [2004] OJ C101/2, para 151.

¹⁰⁴ See eg Case IV/D-2/34.780 Virgin/British Airways [2000] OJ L30/1, Commission Decision. Upheld by the CFI, Case T-219/99 British Airways v Commission [2003] ECR II-5917, where the Court held that a market share of 39.7% is large enough to support a finding that a firm holds a dominant position.

by Article 82, and the possibility of putting forward justifications based on efficiency reasons mitigates the risk of over-intervention.

On the other hand, the Commission takes the necessary precautions to avoid justification when the undertaking has a significant market position. It stresses that

exclusionary conduct which maintains, creates or strengthens a market position approaching that of a monopoly can normally not be justified on the grounds that it also creates efficiency gains ...¹⁰⁵

Bundling may be used to increase efficiency, especially in the form of cost savings or quality improvement. For instance, selling two goods together may lower the transaction costs, and may also be valuable to consumers, in particular when consumers would buy both goods when sold separately. ¹⁰⁶ Efficiencies usually arise in the form of economies of scale or scope in production, distribution, specialisation, and research and development; synergies, in so far as cost and knowledge, can be shared, and learning by doing spills over from one product to another. ¹⁰⁷

It is recognised by the Guidance that tying and bundling are common practices that can be intended to provide customers with better products or offerings in a more cost-effective way. As discussed above, efficiencies could be taken into account at the stage of the assessment of the existence of separate products. If at this stage efficiencies are not so significant as to render the bundle a 'composed product', in that there is also an individual demand for separate products, then the negative effect of bundling should be considered.

Another step toward recognition of the importance of efficiencies is the use of the *as efficient competitor* test for price-based exclusionary conduct. Bundling is regarded as harmful when it is able to exclude or foreclose competitors which are as efficient as the incumbent company. Alternatively, when anticompetitive exclusionary effects are identified, they can be taken into account at the stage of justification on economic efficiency grounds if the weighing-up of negative effects against substantial efficiencies shows no net harm to consumers. ¹¹⁰

If efficiencies are present, they must outweigh the negative effects of tying or bundling. Although tying and bundling may reduce costs and thereby improve production efficiency, the foreclosure of competitors strengthens

¹⁰⁵ Commission Guidance, above n 15, para 30.

¹⁰⁶ *Ibid*, para 62.

¹⁰⁷ Patrick Rey, Paul Seabright and Jean Tirole, 'The Activities of a Monopoly Firm in Adjacent Competitive Markets: Economic Consequences and Implications for Competition Policy' (2001) Institut d'Economie Industrielle, Université de Toulouse 1, 9.

¹⁰⁸ Commission Guidance, above n 15 para 49; Discussion Paper, above n 16, para 178.

¹⁰⁹ Commission Guidance, above n 15, para 22.

¹¹⁰ Ibid, paras 29 and 31.

the market power of the dominant undertaking, which may reduce allocative efficiency and ultimately harm consumers. The improved framework for taking into account economic efficiencies is a significant improvement and a real reform toward integrating economic analysis and reducing intervention errors.

IV. CONCLUDING REMARKS

Tying and bundling may have anticompetitive effects by transferring market power from one market to another and raising barriers to entry in one or more markets where the dominant undertaking is operating, thereby protecting its position. An economic analysis offers an explanation of mechanisms that lead to anticompetitive foreclosure, and identifies a number of factors that increase the likelihood of anticompetitive effects. The effects-based approach will improve the methodology for finding anticompetitive effects, and the possibility to consider efficiencies will act as a supplementary screening device to avoid over-intervention.

The Microsoft case and the Commission Guidance integrate economic analysis to differing degrees. By definition, the Guidance gives general directions on criteria for harmful tying and bundling. On the other hand, in the Microsoft case, the Commission carried out a detailed analysis on a specific set of facts, guided by economic thinking. This demonstrates what economic analysis can offer to competition law: general guidance which should be adapted to the specific facts of the case. In both instances, the Commission shows that it is carrying out a real reform in terms of approaching tying and bundling cases, and is consolidating the principles governing tying and bundling.

The risk of competitors' foreclosure is linked to their reduced capacity to realise economies of scale or scope, or to create and maintain a sufficient base of consumers for profitability, to continue to compete in a market, and to introduce new products or bring innovation to the market. In Microsoft, such economies of scale and network effects were present and fully analysed by the Commission. In contrast, the Guidance fails to clarify that anticompetitive foreclosure may arise only if the tied market structure is not competitive.

However, the general framework for finding anticompetitive exclusionary conduct is much improved, and the flexibility of the CFI judgment in the Microsoft case allows the Commission to analyse market conditions and a company's conduct on a case-by-case basis and fully to consider economic theory.

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