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Dynamic Efficiency Considerations in EC Merger Control

An Intractable Subject or a Promising Chance for Innovation?

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Abstract

Dynamic efficiencies theoretically bear greater potential than static efficiencies. Yet, their role in merger control is limited, not least due to difficulties in their practical implementation. At the same time, the new EC Merger Control Regulation (ECMR) and the Commission's Horizontal Merger Guidelines explicitly acknowledge dynamic efficiencies as a cognizable type of merger-related benefits.

This thesis aims to contribute to the analysis of two questions: (i) do the new Guidelines represent a workable analytic framework for the evaluation of dynamic efficiency claims and is there room for dynamic efficiencies in the current merger control regime, and (ii) what are the main problems in practice, and what would adequately improve the current framework of efficiency analysis?

In its first part, this thesis provides an introduction to the economic implications of the analysis of merger-related efficiencies. The second part analyses the role of dynamic efficiencies under the new merger control regime, focusing on the requirements stipulated in the ECMR and the Guidelines. Part three analyses crucial problems and according benchmarks which have to be considered when discussing proposals to refine dynamic efficiency analysis. It identifies four crucial problems: (i) insufficient information about potential efficiencies, (ii) existent information asymmetrically distributed between the Commission and the parties, (iii) a lack of legal certainty and business predictability for the firms and (iv) potential detrimental cost effects of the respective approach to efficiency analysis.

Part five discusses various suggestions for reform of the procedural approach to efficiency analysis. Finally, the paper suggests the introduction of an *ex post* audit regarding merger-related efficiencies. It constructs a four-stage decision framework within which the *ex post* audit aims to – in the long term – provide both merging parties and the Commission with more solid information about the potential of mergers to create (dynamic) efficiencies and the particulars of such benefits.

CONTENTS

1 Introduction

Innovation is enormously influential to the development of economic growth and welfare. The future prosperity of an economy crucially depends on its success in promoting technological progress.[1] According to the European Commission, innovation has the 'potential to change completely the competitive situation in a market'.[2] EC merger control appears to have embraced innovation as an important part of its mission statement. The EC Merger Regulation explicitly refers to the 'development of technological and economic progress' as to be taken into account in substantial merger assessment,[3] and so do the new Horizontal Merger Guidelines.[4] While concentrations represent a risk to innovation (through reduction of potential innovators causing a decrease of innovation competition), they also have the potential to increase innovative output through pooling of R&D resources, faster product innovation, etc. Merger control therefore has to separate innovation enhancing transactions from those in which anticompetitive effects outweigh such innovative gains (or 'dynamic efficiencies').

In the past, efficiencies have not played a decisive role in European merger control. One of the focal points of the 2004 reform of merger control, however, was their explicit acknowledgement as a factor in the Commission's substantial appraisal of a transaction, which is illustrated *inter alia* by the introduction of a separate chapter on efficiencies in the new Horizontal Merger Guidelines.[5]

Among the various kinds of efficiencies, dynamic efficiency is said to be the potentially most considerable merger-related economy. Yet it is assumed to be the most difficult to assess and therefore arguably the most neglected.[6] Taking this as a starting point, this paper focuses on the approach that European merger control takes to dynamic efficiency considerations. It raises the following questions:

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[1] R Solow, 'Technical Change and the Aggregate Production Function' (1957) 39 Rev Econ Stat 312; G Cameron, 'Innovation and Economic Growth' (LSE Center for Economic Performance Discussion Papers, No 277 1996) 3.

[2] OECD *Report DAFFE/COMP(2002)20, Merger Review in Emerging High Innovation Markets* (2003) 161 (contribution of the EU Commission).

[3] Article 2(1)(b) Council Regulation (EC) 139/2004 of 20 January 2004 on the Control of Concentrations between Undertakings (the ECMR) [2004] OJ L24/1.

[4] Guidelines on the Assessment of Horizontal Mergers under the Council Regulation on the Control of Concentrations between Undertakings (EC) OJ C31/03 (Guidelines) [8].

[5] ibid [77]/[87].

[6] U Schwalbe, 'Die Berücksichtigung von Effizienzgewinnen in der Fusionskontrolle - Ökonomische Aspekte' in P Oberender (ed) *Effizienz und Wettbewerb* (Duncker&Humblot, Berlin 2005) 63, 81; D Balto, 'The Efficiency Defense in Merger Review: Progress or Stagnation?' (2001) 16 Antitrust ABA 74, 76.

(i) Do the new Guidelines represent a workable analytic framework for the evaluation of dynamic efficiency claims in merger cases and is there room for dynamic efficiencies in the current merger control regime?

(ii) What are the main problems in practice, and what would adequately improve the current framework of efficiency analysis?

The paper will argue that there is very little room for dynamic efficiency claims under the current legal framework. It will further contend that there are options to at least reach a better informed view of this type of efficiency gains over the long term. At the same time, it rejects various suggested (more ambitious) ways for giving more weight to dynamic efficiencies in practice. The discussion will proceed as follows:

Chapter 2 offers an introduction to the economic and competition policy background of dynamic efficiency analysis. We will see that while dynamic efficiencies theoretically bear greater potential than static efficiencies, numerous difficulties in their practical implementation make their integration into substantial merger assessment a challenging task.

Following a brief analysis of the Commission's pre-2004 case practice regarding merger-related efficiencies, chapter 3 leads over to the first question raised above. The *status quo* of dynamic efficiency analysis under the new legal framework is examined in detail. The requirements stipulated in the ECMR and the Guidelines are discussed, highlighting practical difficulties with their application to dynamic efficiency claims. The chapter concludes that the prospects for such claims under the new EC merger regime are rather limited.

The reasons behind this result and the basic problems within the present analytical framework (information problems, lack of legal certainty and detrimental cost effects) are further discussed in chapter 4. This chapter aims at identifying a set of aspects that has to be considered in refining the current structure of efficiency analysis.

This establishes a basis for the discussion of possible alternatives to improve dynamic efficiency analysis in Chapter 5. Initially, it discusses various changes to the procedure of merger review in order to give more weight to efficiency considerations. In the light of the basic problems identified in chapter 4, however, most of these alternatives yield unsatisfactory side effects and have to be rejected. Against this background, chapter 5 then explores the possibility of introducing a regular empirical ex-post evaluation of merger cases. In the long term, this might build up the Commission's and the parties' expertise in assessing dynamic efficiency claims in individual merger cases and could thus contribute to a better informed analytical approach.

2 Dynamic efficiencies and horizontal mergers: the economics

2.1 Introduction

A decisive objective behind mergers is the attainment of economic efficiencies.[7] The term 'efficiencies' in the merger context is as such not formally defined. A common *economic* definition is based on the Pareto superiority principle, i.e. the ideal state equilibrium where no person can be made better off without worsening someone else's position.[8] Conceptually, efficiencies resulting from mergers can be described as welfare gains arising from the amalgamation of previously distinct entities. If, for example, as a result of a merger the new entity's production costs for a given product have decreased due to economies of scale, this will – in principle – be deemed as a merger-related efficiency.

A general definition of efficiencies can, however, only be a first step, since it does not illustrate *which* efficiency gains should be taken into account nor *how* they should be assessed. In order to be equipped for the discussion of the present approach to dynamic efficiency analysis, its benefits and drawbacks and possible improvements further below in chapters 3, 4 and 5, the present chapter outlines the theoretical background of merger-related efficiencies. It will introduce a typology of efficiencies (see section 2.2), thereby particularly focusing on dynamic efficiencies, followed by a brief discussion of the relevant benchmarks to determine efficiency 'gains' and 'losses': the different welfare standards (see section 2.3). The rationale of efficiency consideration in merger review, particularly focusing on the so-called *Williamsonian* welfare trade-off, will be demonstrated (see section 2.4). Building on these concepts, the specific difficulties underlying a substantial appraisal of dynamic efficiencies will be outlined (see section 2.5).

2.2 Definitions and typology of efficiencies

Efficiencies from mergers may arise in various ways. Three types are commonly distinguished:[9] Allocative and productive efficiency (together '*static* efficiencies'), and *dynamic* efficiency.[10]

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[7] HW Friederiszick and L-H Röller, 'Ökonomische Analyse in der EU-Wettbewerbspolitik' (EU Commission, Brussels 2005) http://europa.eu.int/comm/competition/speeches/text/sp2005_012_de.pdf (12 January 2006) 15.

[8] MAA Warner, 'Efficiencies and Merger Review in Canada, the European Community, and the United States: implications for Convergence and Harmonization' (1993) 26 Vanderbilt Journal of Transnational Law 1059, 1062.

[9] WJ Kolasky and AR Dick, 'The Merger Guidelines and the Integration of Efficiencies into Antitrust Review of Horizontal Mergers' (2003) 71 Antitrust LJ 207, 242ff and L-H Röller, J Stennek and F Verboven, *Efficiency Gains from Mergers, Report for EC Contract II/98/003* (CEPR, London 2001) 14ff (four categories).

2.2.1 Static efficiencies

Allocative efficiency refers to the allocation of resources in a market. It is achieved when the market process leads to all available final and intermediate resources being allocated to their highest valued use among all market participants.[11] In the long-run competitive equilibrium, the price charged for a particular good is therefore just equal to the producer's marginal cost, being (from the perspective of society) the total cost of the resources consumed in producing and distributing one additional unit.[12] Consequently, the marginal value consumers place on the goods equals the marginal value of the resources used for producing them. Horizontal mergers, at least if occurring in already concentrated markets, usually cause a decrease in allocative efficiency, since in the long-run equilibrium the price charged for one unit by firms possessing market power usually lies above marginal cost.[13]

Productive efficiency describes cost effects within the production process of a particular good. It is achieved when goods are produced with the minimum possible input (raw materials and intermediates, labour etc.), so that a possible rearrangement of resources could not lead to an increase in output. Compared to the outset, either a given output is produced with a reduced input, or a given input leads to a maximised output.

Mergers can obviously play an important role in reorganizing ownership and use of production resources and may *inter alia* lead to productive efficiencies in the form of economies of scale by moving the merging parties closer to the optimal scale of production for their industry.[14] Other examples of productive efficiencies are economies of scope or purchasing efficiencies through increased firm size.[15]

2.2.2 Dynamic efficiencies

Dynamic or *innovation* efficiency refers to the extent to which a firm innovates by introducing new as well as improving existing products or processes of production. It differs from static efficiencies in that it possesses a temporal dimension.[16] Whereas static efficien-

[10] U Böge, 'Reform der Europäischen Fusionskontrolle' (2004) 54 WuW 138 f.

[11] Kolasky and Dick (n9) 242; de la Mano, 'For the Customer's Sake: The Competitive Effects of Efficiencies in European Merger Control' (EU Commission (DG Enterprise) Paper No 11/2002) 8.

[12] Kolasky and Dick (n9) 242.

[13] ibid 243.

[14] GJ Stigler, 'The Economies of Scale' (1958) 1 J L&Econ 54.

[15] Overview: RE Caves, 'Mergers, Takeovers, and Economic Efficiency: Foresight vs. Hindsight' (1999) 7 Int J Ind Organ 151.

[16] JF Brodley, 'The Economic Goals of Antitrust: Efficiency, Consumer Welfare, and Technological Progress' (1987) 62 NYU L Rev 1020, 1033.

cies relate to a fixed point in time and therefore a given technological know-how, the concept of dynamic efficiency acknowledges the fact that technology and know-how are in a process of constant evolution through research and development (R&D), learning by doing, and entrepreneurial activity.[17]

The variety of merger-related dynamic efficiencies is manifold: *inter alia*, there are economies of scale and scope through horizontal integration of complementary R&D resources, avoidance of parallel R&D, joint exploitation of intellectual property,[18] larger and more stable internal funds to finance costly R&D projects which the pre-merger firms alone could not handle, reduction of economic risks resulting from uncertain R&D activity, faster product innovation and higher returns from product or process innovation through economies of scale.[19]

As early as 1912, Joseph Schumpeter emphasized the significance of innovation for the growth of a national economy and found certain interdependences between market structure and innovative activity of firms.[20] Based on his research, later economic literature devised the two so-called 'Neo-Schumpeter-Hypotheses' postulating that innovation increases (i) with firm size and (ii) with market concentration. More recent literature on these hypotheses, however, has to a certain extent weakened the market structure - innovation activity interdependence.[21] This may also be a result of acknowledging measurement problems: in comparison to static efficiencies, practical evaluation of dynamic efficiency claims faces considerable difficulties, as will be seen in sections 2.5 and 3.4.1. The lack of empirical studies directly focusing on the effects of mergers on technological progress does therefore not come as a surprise. The *potential* of mergers to generate significant gains in dynamic efficiency is, however, widely acknowledged.[22] A case study provided by *Petrin*[23] may serve to demonstrate the possible magnitude of dynamic efficiencies: In 1984, the Chrysler Corporation introduced a car combining the features of a family station wagon and

[17] Kolasky and Dick (n9) 247.

[18] J Lerner and J Tirole, 'Efficient Patent Pools' (2004) 94 Am Econ Rev 691.

[19] M Bennett, P de Bijl and M Canoy, 'Future Policy in Telecommunications: An Analytical Framework' (CFB Document no 005, Centraal Planbureau, Den Haag 2001); F Ilzkovitz and R Meiklejohn, 'European Merger Control: Do We Need an Efficiency Defence?' (5th Annual EUNIP Conference, Vienna 2001) 6.

[20] JA Schumpeter, *Theorie der wirtschaftlichen Entwicklung* (Duncker&Humblot, Leipzig 1912).

[21] See WM Cohen and RC Levin, 'Empirical Studies of Innovation and Market Structure' in R Schmalensee and RD Willig (eds), *Handbook of Industrial Organization* (Handbooks in Economics, Amsterdam, Oxford and Tokyo 1989) 1060; U Böge, 'Effizienz und Wettbewerb aus Sicht des Bundeskartellamts' in P Oberender (ed) *Effizienz und Wettbewerb* (Duncker&Humblot, Berlin 2005) 133.

[22] RJ Gilbert and SC Sunshine, 'Incorporating Dynamic Efficiency Concerns in Merger Analysis: The Use of Innovation Markets' (1994) 63 Antitrust LJ 569ff; International Competition Network, *Project on Merger Guidelines, Report for the Third Annual Conference in Seoul* (2004) 19; Federal Trade Commission, *Anticipating the 21st Century. Competition in the New High-Tech, Global Market Place* (1996) 32.

[23] A Petrin, 'Quantifying the Benefits of New Products: The Case of the Minivan' (2002) 110 J Polit Econ 705, 727.

a full-size van, called a 'minivan'. The venture's commercial success was enormous. Today, every major car manufacturer worldwide has at least one minivan in its product portfolio. *Petrin's* estimation is that during the first five years of production alone the minivan resulted in a consumer surplus[24] of $2.8 billion. Although it is not the result of a merger, this case demonstrates that if merging firms produce different types of products (in this case, cars and vans) that can lead to the creation of a *new* product, enormous efficiency gains can be realised.[25]

2.3 Measuring the effects of a merger: The welfare standards

In order to distinguish such efficiency 'gains' from the 'losses' resulting from a merger requires a reference point or benchmark, i.e. a standard measuring concept. Economists apply the concept of economic welfare, calculated by aggregating the surplus of different interest groups in society to assess how well an industry performs.[26] The two standards widely focused on in economic and legal literature are introduced in the following:[27] section 2.3.1 is concerned with the total welfare standard, section 2.3.2 deals with the consumer welfare standard.

Note, however, that it is strictly a question of competition *policy* to determine in practice how much weight to give to each group of market participants, i.e. to choose a welfare standard.[28] The choice of EU and US merger control is described in section 2.3.3.

2.3.1 Total welfare standard

The total welfare standard (TWS) looks at the sum of gains and losses to consumer and producer surplus;[29] i.e. it takes account of the effects of the merger on the economy as a whole. Even if it results in an increase in prices (and therefore a loss in consumer surplus), the TWS may view a merger as socially desirable as long as there is a net gain in to-

[24] The amount that consumers benefit by being able to purchase a product for a price that is less than they would be willing to pay. Cf. M Motta, *Competition Policy: Theory and Practice* (CUP, Cambridge 2004) 19ff.

[25] DS Evans and AJ Padilla, 'Demand-side Efficiencies in Merger Control' (2003) 26 World Comp 167, 181; JA Hausman, 'Valuation of New Goods under Perfect and Imperfect Competition' in T Bresnahan (ed) *The Economics of New Goods* (University of Chicago Press, Chicago 1997) 209; PJ Klenow, 'Measuring Consumption Growth: The Impact of New and Better Products' (2003) 27 Fed Res B Minneapolis Q Rev 10.

[26] Motta (n24) 18.

[27] cf. Federal Trade Commission (n22) 25ff (explanation of the *Hillsdown* or the *balancing weights* standard).

[28] Ilzkovitz and Meiklejohn (n19) 17

[29] The amount that producers benefit by selling at a market price that is higher than they would be willing to sell for, i.e. higher than marginal costs; cf. Motta (n24) 19ff.

tal welfare through a greater gain in producer surplus.[30] Cost savings from efficiencies must set off the deadweight loss[31] caused by expected anti-competitive effects (mainly price increases). There is no preference of either group of market participants. The logical consequence is that efficiencies need not be passed on to consumers (see section 3.4.4).

2.3.2 Consumer welfare standard

The consumer welfare standard (CWS), in contrast, focuses solely on consumer surplus, thus favouring consumers to producers. In case of price increases the CWS can only find a merger to be socially desirable if other effects it generates exceed the (increase in) the resulting deadweight loss. The only way to set-off negative unilateral effects of a merger is therefore to pass on efficiencies to consumers (see scenario 2, section 2.4) through reduced or at least equal prices.

2.3.3 Welfare standards in practice

Economists usually favour the TWS to the CWS. It is as difficult in practice to determine the ultimate incidence of the respective wealth redistribution resulting from a merger, as it is to see which group is more deserving, not least because of a certain blur of the borders between them. Consumers are often also producers, either with their own firms or as shareholders. Moreover, the CWS is one-dimensional, focusing on price reductions while arguably neglecting firm-internal efficiencies.

Both standards are commonly criticised for being based on a static, short-term comparison.[32] Long-term dynamic aspects such as changes through innovative activity, technological progress, emergence of new markets, cross-market consideration of efficiencies etc. are difficult to incorporate into the analysis. As will be seen below, this causes certain problems with dynamic efficiency claims.

Notwithstanding the economists' preference for the TWS, the choice of a welfare standard is largely a policy decision.[33] Former Competition Commissioner Mario Monti em-

[30] cf. Scenario 3, section 2.4.3.

[31] The reduction in society's welfare due to potentially mutually beneficial transactions not occurring because the firm produces less output.

[32] U Schwalbe, 'Die Berücksichtigung von Effizienzgewinnen in der Fusionskontrolle - Ökonomische Aspekte' in P Oberender (ed) *Effizienz und Wettbewerb* (Duncker&Humblot, Berlin 2005) 63, 67.

[33] P Camesasca, *European Merger Control: Getting the Efficiencies Right* (Intersentia-Hart, Antwerpen&Oxford 2000) 2.

phasised consumer welfare as 'the goal of competition policy'.[34] This is illustrated in the legal basis of efficiency consideration in the EC: the ECMR explicitly requires economies to be 'to the consumers' advantage'[35] and emphasizes that efficiencies may counteract anti-competitive effects, 'and in particular the potential harm to consumers'.[36] According to the Horizontal Merger Guidelines,[37] in turn, '[t]he relevant benchmark in assessing efficiencies is that consumers will not be worse off as a result of the merger'.

Neither the ECMR nor the Guidelines leave room for a TWS, but have clearly adopted the CWS. Looking at US merger control, this does not come as a surprise. EC merger control, especially the Merger Guidelines, heavily rely on the US experience, both in wording and theoretical background: whereas Section 7 of the Clayton Act is silent as regards efficiencies, the US Merger Guidelines have contained a section on the issue since 1968.[38] Although it does not expressly refer to the requisite welfare standard, it indicates that consumer welfare is at its baseline: '[t]he Agency considers whether cognizable efficiencies likely would be sufficient to reverse the merger's potential harm to consumers'.[39] Or, in the words of former FTC-Commissioner Thomas Leary: the question for efficiency analysis under US merger control is 'in short, will prices be increased or will they not?'.[40]

Although Mario de la Mano in a 2002 Commission policy paper views consumer welfare as a 'multi-dimensional concept including, together with prices, other aspects such as the quality of the product, the speed and security of supply, etc.',[41] it remains to be seen whether such an extended concept of consumer welfare is compatible with the Commission's approach to substantial merger appraisal.[42]

[34] M Monti, 'The Future of Competition Policy in the European Union' (Speech at the Merchant Taylor's Hall July 9 2001, Commission Press Release SPEECH/01/340 of July 10 2001).

[35] Article 2(1)(b) Council Regulation (EC) 139/2004 of 20 January 2004 on the Control of Concentrations between Undertakings (the ECMR) [2004] OJ L24/1.

[36] ibid [29].

[37] Guidelines on the Assessment of Horizontal Mergers under the Council Regulation on the Control of Concentrations between Undertakings (EC) [2004] OJ C31/03 (Guidelines) [79].

[38] The 1992 Department of Justice and Federal Trade Commission Horizontal Merger Guidelines, 1997 Revision (The US Merger Guidelines) Section 4.

[39] ibid Section 4, 31; P-E Noel, 'Efficiency Considerations in the Assessment of Horizontal Mergers under European and US Antitrust Law' (1997) 18 ECLR 498, 501; P Areeda, H Hovenkamp and JL Solow, *Antitrust Law : An Analysis of Antitrust Principles and their Application* (2nd edn Aspen Law & Business, New York 2000) 940.

[40] TB Leary, 'Efficiencies and Antitrust: A Story of Ongoing Evolution' (ABA Section of Antitrust Law, Fall Forum 2002) 2; cf. Röller, Stennek and Verboven (n9) 61.

[41] de la Mano (n11) 18.

[42] section 3.4.1.

2.4 Anti-competitive effects vs. efficiency gains: The rationale for considering efficiencies in merger control

Economic literature has been advocating the appraisal of economic efficiencies in merger control for a long time. The main arguments will be addressed in the following sections: First, efficiencies may, through external output expansions, enhance welfare even though prices rise (see section 2.4.1). Second, they may destabilise ability and incentives for coordinated behaviour in oligopolies prone to tacit collusion (see section 2.4.2). Third, they may have spill-over effects leading to the diffusion of new technologies (see section 2.4.3). Fourth, they may offset anticompetitive effects of mergers (see section 2.4.4). Section 2.4.5 will then illustrate that welfare standards are not merely theoretical issues, but can in practice determine the outcome of a merger case.

2.4.1 External effects I: Output expansion by competitors

Joseph Farell and Carl Shapiro suggest the taking into account of *external* effects of mergers on consumers and competitors in a Cournot oligopoly setting.[43] They emphasize that considerable economies of scale or learning are required for a merger to lead to price reductions. Yet they also acknowledge that even in case of output reductions resulting from a merger, external effects could benefit consumers and competitors: if in a Cournot oligopoly the merged entity reduces its output, the remaining competitors may respond by expanding their production. Output reduction and corresponding price increases may therefore be offset.[44]

A related approach is taken by Matthias Pflanz and Cristina Caffara: they argue that efficiency gains passed on to consumers may create desirable incentives for the remaining competitors to reduce costs and qualitatively improve their product.[45]

2.4.2 External effects II: Destabilising effect on oligopolies

Barry Harris and David Smith also focus on external factors.[46] They show that merger-related efficiencies may serve as a factor destabilizing coordination in oligopolistic markets prone to tacit collusion. Accordingly, merger-related cost reductions can lead to a

[43] J Farrell and C Shapiro, 'Horizontal Mergers: An Equilibrium Analysis' (1990) 80 Am Econ Rev 107.

[44] and that the minimum size of such economies is larger when the market shares of the merging firms is higher and the elasticity of demand lower (ibid 113ff).

[45] M Pflanz and C Caffarra, 'The Economics of GE Honeywell' (2002) 23 ECLR 115.

[46] BC Harris and DD Smith, 'The Merger Guidelines vs. Economics: A Survey of Economic Studies' in ABA (ed) *Perspectives on Fundamental Antitrust Theory* (2001).

variation among the cost structures of firms in the market.[47] A merged firm being more efficient has, as a result of its decreased costs, a greater incentive to cheat and adopt an independent profit-maximising behaviour. It will therefore be more difficult for the oligopoly to reach and sustain terms of tacit coordination.[48]

2.4.3 External Effects III: Diffusion and spill-over effects

Other scholars (particularly Joseph Schumpeter,[49] Gary Roberts, and Stephen Salop[50]) emphasize potential diffusion through and spill-over effects of mergers. Competition is not a static, but a dynamic process, and efficiency analysis is thus not limited to effects on the level of the merged entity. Efficiencies materialising may spread within the industry or to other markets. As a result, competitors have additional incentives – in order to keep up with the innovator – either to copy such innovations[51] or to innovate on their part.[52] Cost savings generated by the merged entity, in turn, are likely to cause additional competitive pressure on its rivals, thereby leading to diffusion of such economies: competitors may put additional effort in keeping the innovator's pace by searching for ways to reduce own costs and to improve their products.[53]

2.4.4 Internal Effects: The *Williamsonian* welfare trade-off

In contrast to the scholars cited above, *Williamson* focuses on *internal* phenomena, i.e. cost and price reduction on firm level.[54] He argues that the deadweight loss resulting from increased market power must be balanced against a corresponding reduction in average costs of production. In the resulting trade-off between anticompetitive effects and poten-

[47] Friederiszick and Röller, (n7) 15.

[48] M Motta and H Vasconcelos, 'Efficiency Gains and Myopic Antitrust Authority in a Dynamic Merger Game' (CEPR Discussion Paper Series, DP 4175/2004) 19.

[49] JA Schumpeter, *Capitalism, Socialism, and Democracy* (G. Allen & Unwin, London 1943).

[50] GL Roberts and SC Salop, 'Efficiency Benefits in Dynamic Merger Analysis' (1995) World Comp L&Econ Rev 5.

[51] E Mansfield, 'How Rapidly Does New Technology Leak Out' (1985) 34 J Ind Econ 217, 219.

[52] SC Salop, 'Prepared Remarks' (1995) US Federal Trade Commission Hearings on Global and Innovation-Based Competition 2; RC Levin and others, 'Appropriating the Returns from Industrial R&D' (Cowles Foundation Discussion Papers, Yale University, No 862/1988) 788.

[53] JA Ordover and RD Willig, 'Antitrust for High-Technology Industries: Assessing Research Joint Ventures and Mergers' (1985) 28 J L&Econ 311, 313ff.

[54] OE Williamson, 'Economies as an Antitrust Defence: The Welfare Tradeoffs' (1968) Am Econ Rev 18; OE Williamson, 'Economies as an Antitrust Defense: Correction and Reply' (1968) 58 Am Econ Rev 1372; OE Williamson, 'Economies as an Antitrust Defense: Reply' (1969) 59 Am Econ Rev 954; OE Williamson, 'Economies as an Antitrust Defence Revisited' in A Jacquemin and HW de Jong (eds), *Welfare Aspects of Industrial Markets* (Leiden 1977) 237.

tial productive efficiencies, society as a whole obviously enjoys a net welfare gain if efficiencies prevail. *Williamson's* conclusion was that a merger yielding non-trivial economies must lead to substantial increases in market power and prices for the net allocative effects to be negative.[55]

The academic debate on *Williamson's* model was largely focused on implementation considerations.[56] The main criticisms can be summarized as follows: first, a precondition of performing the trade-off is to know the elasticity of demand in the market(s) at issue. Its determination in real life antitrust enforcement is a complex if not impossible task, let alone the provision of firm-internal information needed for the model.[57] Second, competition is a dynamic scenario. The *Williamsonian* model does not consider temporal and potentially detrimental effects of an increase in market power, but analyses the effect of market power as a merely static 'snapshot' of the market in equilibrium.[58] Third, the model neglects to consider how one merger can induce others, resulting in higher concentration with corresponding anti-competitive effects.[59] A fourth criticism, as will be seen below, is specifically related to dynamic efficiencies, which are very difficult to reconcile with the focus of the *Williamson* trade-off on price effects.

Notwithstanding all criticism of the model, it should – as with any model – not be misunderstood as a guide to the practical implementation of efficiency considerations in merger control. Rather, it represents a useful tool in explaining and illustrating the role of efficiency considerations in substantial merger appraisal. In contrast to the abovementioned approaches, the *Williamsonian* model is open to graphic illustration. It is based on a relatively straightforward number of variables and provides – at least in theory – the merit of quantifiability of effects. I will therefore use it as a basis for an illustration of merger effects in the following section.

2.4.5 Illustration

Welfare standards are not just a theoretical issue, but can predetermine the outcome of a merger case. It will be seen in the following that, though the choice of a welfare stan-

[55] AA Fisher and RH Lande, 'Efficiency Considerations in Merger Enforcement' (1983) 71 Calif L Rev 1582, 1583. Roberts and Salop (n52) show that greater efficiency gains are needed than expected by Williamson.

[56] cf. K Kinne, *Effizienzvorteile in der Zusammenschlusskontrolle* (Nomos, Baden-Baden 2000) 66ff.

[57] Farrell and Shapiro (n43) 109; DA Yao and TN Dahdouh, 'Information Problems in Merger Decision Making and Their Impact on Development of an Efficiencies Defense' (1993) 62 Antitrust LJ 23ff.; cf. section 4.3.

[58] Fisher and Lande (n55) 1634ff; RA Kassamali, 'Reviewing the E.C. Merger Regulation's Community Dimension-Thresholds in the Light of Economics and Experience in Merger Control' (1996) 21 ELR CC/89 93.

[59] Kinne (n56) 67.

dard does not make a difference in every single case, there are cases in which a case would be blocked under a CWS, but allowed under a TWS.

Consider a duopolistic market, the two firms producing a homogenous good.[60] Figure 2.1 shows the corresponding demand function (DD') and marginal revenue function (MR).

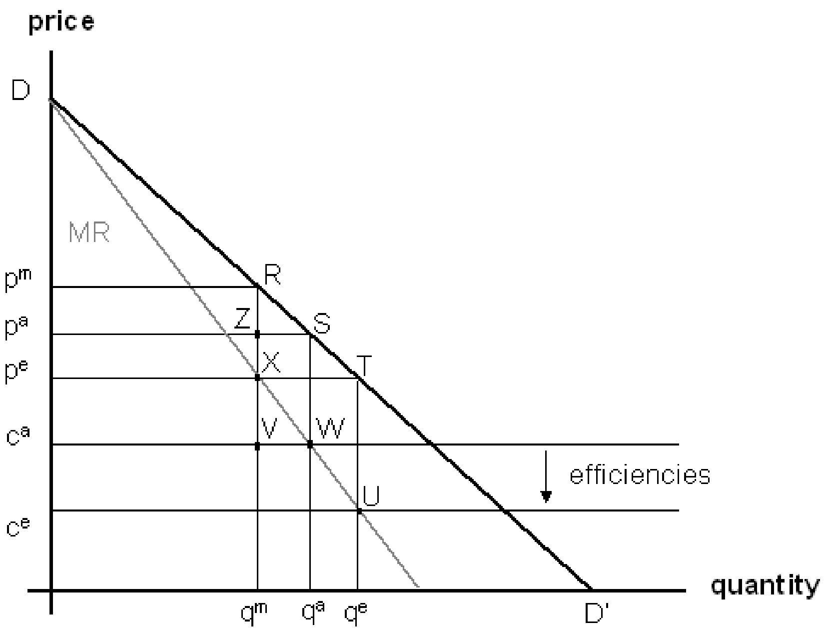

Figure 2.1 (Scenario 1 and Scenario 2)

Three assumptions will be made: First, there is a linear demand curve (indicated by the line DD'). Second, returns to scale technology is constant (described by the lines of constant marginal costs c^a and c^e, respectively). Third, the firms in the market will act rationally in a way that maximizes profits.

Pre-merger total output of the two firms together is q^a units at a price of p^a per unit. Marginal costs amount to c^a. As a result, consumer surplus is equivalent to the triangle DSp^a, whereas producer surplus amounts to the rectangle p^aSWc^a. Now the two firms merge. Figure 2.1 shows two alternative scenarios:

Scenario 1

In scenario 1, marginal costs stay at the level of c^a, but output is reduced to monopoly level q^m (which lies below pre-merger output) and price rises to p^m per unit, which lies

[60] The following model can be transferred to non-monopolising mergers and differing demand and marginal revenue functions, see M Waterson, 'Economies of Scope within Market Frameworks' (1983) 1 Int J Ind Organ 223ff.

above the pre-merger price. No efficiencies occur. As a consequence, consumer surplus decreases to an amount equivalent to the triangle DRp^m, whereas producer surplus increases to the rectangle p^mRVc^a.

All things considered, however, total welfare has decreased as a result of an increase in deadweight loss (represented by triangle RSZ). The gain in producer surplus is a mere transfer from consumer surplus and is therefore not a gain in total welfare.[61] Both from the perspective of consumer and total welfare standard, the merger is socially undesirable.

Scenario 2

In scenario 2, marginal costs fall, as a result of efficiencies due to the merger, to c^e. Output therefore increases to q^e, whereas price falls to p^e per unit, which lies below both the monopoly price p^m and the pre-merger price p^a. In consequence, both consumer and producer surplus increase: The former to the triangle DTp^e, the latter to the rectangle p^eTUc^e. As a consequence, consumer and total welfare increases. The merger is socially desirable, regardless of which welfare standard is chosen.[62]

Scenario 3

In contrast to this, Figure 2.2 shows a third scenario, where even in the presence of efficiency gains post-merger prices are higher than those pre-merger:

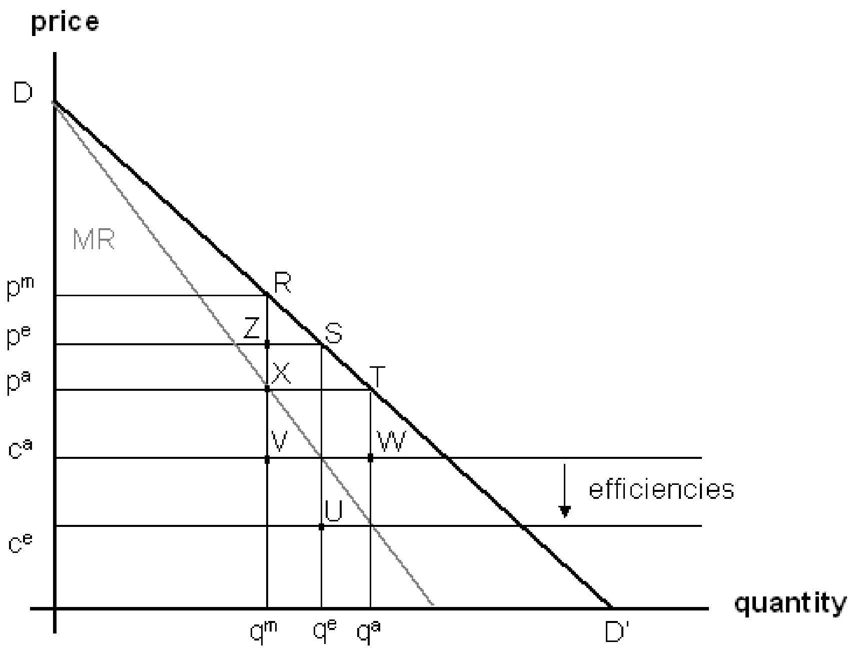

Figure 2.2 (Scenario 3)

[61] Kinne (n56), 66.
[62] section 3.3.2.

Marginal costs fall, again, to c^e. Output is now decreased to q^e (which lies below pre-merger output q^a, yet above output q^m in Alternative 1, where no efficiency gains occured). The post-merger price p^e now lies between p^a and p^m. The result is ambivalent: Whereas consumer surplus has decreased from triangle DTp^a to DSp^e, producer surplus has increased from rectangle p^aTWc^a to p^eSUc^e. The gain in producer surplus is, however, greater than the loss in consumer surplus.

In this scenario, the choice of the welfare standard makes a difference. Under the CWS, the merger could not be cleared. Under the TWS, however, the transaction would be allowed, for the gain in producer surplus exceeds the loss in consumer surplus. The fact that the choice of a welfare standard can determinate the outcome of a merger case is an important issue to be kept in mind by competition policymakers: only merger-related effects conceptually within the scope of the chosen standard can be taken into account in practice.

This leads to a further issue: the focus of the *Williamsonian* model is clearly on cost or price effects on the market where the merger takes place. If a merger leads to other effects than that (be it non-price effects or effects in a different market), the model has considerable difficulties in taking them into account. This will be analysed in more detail below (see section 3.4.1).

2.5 Specific difficulties with dynamic efficiency claims

Section 2.2.2 showed that, over the long run, dynamic efficiencies are capable of having significant effects on consumers.[63] It may thus at first sight seem somewhat striking that they play a very limited part in practice: competition authorities tend to be sceptical about dynamic efficiency claims. Should there be a more receptive attitude? There is, as it appears, no easy answer to this question, and it is important to be aware of the difficulties in the practical assessment of such claims. Former Competition Commissioner Monti emphasized that it was important to 'maintain a touch of healthy scepticism' towards efficiencies.[64] In what follows, I will briefly present the most important reasons why this is particularly true with regard to dynamic efficiencies:

[63] Evans and Padilla (n25) 1.

[64] M Monti, 'Review of the EC Merger Regulation - Roadmap to the Reform Project' (Conference on Reform of European Merger Control, British Chamber of Commerce, Brussels, Commission Press Release SPEECH/02/252 of 4 June 2002).

Problems of objective measurement and predictability

There is often a direct relation between static efficiencies and post-merger prices and/or costs. Technological progress, in contrast, is much more difficult to measure. Whereas the *Williamsonian* trade-off is focused on allocative and productive efficiencies, dynamic efficiencies do not easily fit in. Even where they have the potential to lead to lower prices, the inherent uncertainty of timing and extent lies considerably beyond that of static efficiencies.[65] Objective measurement is therefore a much bigger hurdle to overcome for dynamic efficiencies in merger review.[66]

Information and evidentiary problems

Dynamic efficiency claims are usually of a complex nature. Their appraisal requires a considerable amount of information often difficult to acquire both for the merging parties themselves and the competition authorities: either the information is not existent (dependent on future events such as the development of a new technology), or it is internal to the merging firms.[67] The usual consequence will be (i) information insufficiency, i.e. the competition authorities will have an insufficient basis for a decision on the transaction, and (ii) information asymmetry, i.e. a material information disparity between merging firms and competition authorities. What follows is that firms often overstate the potential impact of efficiencies.[68] Closely connected with this are evidentiary problems for the merging parties: claims of dynamic efficiencies are easy to assert, but – due to their highly speculative and stochastic nature[69] – difficult to prove.[70] The more sympathetic an approach adopted by the competition authorities, however, the higher the probability of type I errors.

Timing

In practice, the delay with which the claimed efficiency is expected to realise has considerable impact on the relative weight of that particular claim. Generally, dynamic efficiencies are rather a long-term than a short-term concept. They are therefore rather difficult

[65] TM Jorde and DJ Teece, 'Rule of Reason Analysis of Horizontal Arrangements: Agreements Designed to Advance Innovation and Commercialize Technology' (1993) FTC <http://www.ftc.gov/opp/global /jorde2.htm> (12 February 2006) 2.

[66] section 3.4.1; de la Mano (n11) 17.

[67] Schwalbe (n32) 89.

[68] A Cosnita and J-P Tropeano, 'Merger Control with Asymmetric Information - What Structural Remedies Can and Cannot Achieve' (EUREQua, Universite de Paris I 2005) 6; Böge (n21) 138; for a theoretical basis: Röller, Stennek and Verboven (n7) 119; cf. sections 3.4.6/4.3.

[69] J Kattan, 'The Role of Efficiency Considerations in the Federal Trade Commissions Antitrust Analysis' (FTC Hearings on Global and Innovation-Based Competition, November 14, 1995); J Kattan, 'Efficiencies and Merger Analysis' (1993) 62 Antitrust LJ 513.

[70] U Böge and W Jacobi, 'Die Berücksichtigung von Effizienzen in der Fusionskontrolle' (2005) 60 BB 113, 138; sections 3.4.6/4.3.

to offset against potential short-term anti-competitive effects. Considerable depreciation is usually the consequence.[71]

Cross-market consideration

Mergers involving dynamic efficiencies such as the development of new products are likely to impact multiple markets. A transaction may cause certain anti-competitive effects in one market, but at the same time create dynamic efficiencies in another non-affected market.[72] To trade-off efficiency gains across markets, however, may pose great difficulties to competition authorities, not least because this involves complex issues of inter-personal income redistribution.[73]

Mergers can be detrimental to innovation

Considering that a merger usually yields the greatest dynamic efficiencies where the firms are conducting overlapping R&D programmes, the incentive to innovate might be substantially reduced where they are 'major "poles of innovation" in relation to a particular product'.[74] Above this, merging two paths of R&D into one can mean potential elimination of a future alternative product and thus potential lessening of future competition.[75] Furthermore, competitive pressure might be weakened so that the merged entity does not feel compelled to achieve efficiency gains anymore, or to pass them on to the consumer.[76]

2.6 Summary

We have seen so far that mergers can result in certain anticompetitive effects, but at the same time lead to gains in economic efficiency. We have identified two types of such gains, static and dynamic. Economists view the potential benefit from efficiencies from various perspectives, be it internal (Williamson) or external effects (Farell, Shapiro and others). Common to these approaches is the acknowledgement that, under certain conditions, efficiency gains may indeed offset anti-competitive effects. It has been pointed out above that dynamic efficiencies, at least theoretically, bear greater potential than static efficiencies. At the same time, however, there are numerous difficulties as regards their practical implementation which have to be kept in mind in the course of the following analysis. From this point,

[71] de la Mano 47; section 3.4.2.
[72] ibid (n11) 24.
[73] Section 3.4.3.
[74] Ilzkovitz and Meiklejohn (n19) 20; Böge, ' Effizienz' (n21) 141.
[75] AJ Padilla, 'Efficiencies in Horizontal Mergers: Williamson Revisited' (unpublished, August 2005) 9; Gilbert and Sunshine (n22) 590.
[76] Böge (n21) 141.

we can now go on to explore the position of European merger control towards dynamic efficiencies. The following chapter will proceed as follows: in a first step, I will examine the Commission's attitude towards efficiency claims under the old merger control regime. This is necessary to understand the background of the introduction of a separate chapter on efficiencies in the new Guidelines and, more specifically, the requirements stipulated therein. In a second step, I will briefly explain the legal basis and the methodology of how the Commission integrates efficiency considerations in its substantial appraisal of a transaction. In a third step, I will critically analyse the aforementioned requirements and their application towards dynamic efficiency claims in order to be able to assess the practical prospects for such claims.

3 Assessing dynamic efficiency claims under the ECMR – Economic and legal implications

3.1 Introduction

In the previous chapter, we looked at the basic economics of merger-related efficiencies. We saw that mergers can lead to substantial economies, which potentially causes a conflict of interest for competition enforcers: while risks of increasing market power, potential collusion, etc. may argue against a transaction, chances of realising merger-related efficiency gains may militate for the transaction to be cleared.[77] In the following chapter, we will analyse how the new EC merger control regime treats dynamic efficiency claims in practice. Under the old ECMR, efficiencies did not have an important part to play. Under the new framework, they are for the first time explicitly taken into account. Is there – *de lege lata* – room for dynamic efficiencies in the current merger control regime, i.e. does the new openness to efficiency considerations represent a shift to a more receptive attitude – especially as regards dynamic efficiencies – providing parties with an additional layer of arguments to offset adverse competitive effects otherwise resulting from the merger? Or is it more of a rhetorical nature?

The analysis will start with a brief account of the Commission's pre-2004 decisions regarding merger-related efficiencies in general (see section 3.2). This will be followed by a short analysis of the legal basis for efficiency considerations within the new framework and the methodology of their integration into the Commission's substantial appraisal of a transaction (see section 3.3). Section 3.4 then provides a detailed discussion and evaluation of the requirements for efficiencies contained in the Guidelines and their practical applicability to dynamic efficiencies.

3.2 Efficiencies under the old merger control regime

EC merger control used to be reluctant towards acknowledging efficiency claims.[78] There were no hints in the Recitals of the old ECMR and no merger guidelines, so that the sole reference to efficiencies in Article 2(1)(b) ECMR[79] could not provide much guidance.

[77] OE Williamson, 'Economies as an Antitrust Defence: The Welfare Tradeoffs' (1968) Am Econ Rev 1834; I Schmidt, 'Kommentar: Fusionskontrolle - Effizienz durch Wettbewerb oder Konzentration? ' (2004) 54 WuW 359; P Camesasca, *European Merger Control: Getting the Efficiencies Right* (Intersentia-Hart, Antwerpen&Oxford 2000) 403.

[78] There are no CFI or ECJ judgements on merger-related efficiency claims.

[79] Council Regulation (EEC) 4064/89 of 21 December 1989 on the Control of Concentrations between Undertakings [1989] OJ L395/1.

The Commission was (and is) required to take into account 'the development of technical and economic progress provided that it is to consumers' advantage and does not form an obstacle to competition'. This translates into two criteria: (i) consumers have to benefit from the claimed 'technical and economic progress', and (ii) the claimed 'technical and economic progress' may not become an obstacle to competition. The second requirement was arguably the main reason for some commentators to believe that efficiencies should not be treated as a 'defence' to an otherwise anticompetitive merger, and that the Commission should view efficiencies as an additional reason for prohibiting a merger on the ground that they would further entrench the parties' dominant position.[80]

In *de Havilland*, the first decision made under the old ECMR, the Commission explicitly left open 'whether such [efficiency] considerations are relevant for assessment under Article 2 of the Merger Regulation'.[81] Nevertheless, it outlined certain requirements by emphasizing that efficiencies had to be both merger specific and substantial, with the burden of proof resting on the merging firms.[82] It remained unclear, however, whether such economies would have to be passed on to the consumer.

In *ACCOR/Wagon-Lits*, the relevance of efficiency gains was not explicitly questioned, yet the Commission observed 'that the increases in productivity (…) remain vague, and have not been evaluated' and, in any case, appeared to be insubstantial.[83] The decision made clear that evidence for merger-related efficiencies would have to be substantiated.[84] Irrespective of the evidence provided, the claimed economies were not seen as merger specific, and it was doubted that the merged entity would have any incentive to pass on the assumed gains to consumers.[85]

In *Saint-Gobain/Wacker-Chemie*, the advantages of potential synergies were for the first time weighed against the expected anticompetitive effects of the merger. Nevertheless the Commission refused a clearance decision since the claimed efficiencies were (i) outweighed by the possibility of a price increase, and (ii) would not be passed on to consumers.[86]

[80] cf. IK Gotts and CS Goldman, 'The Role of Efficiencies in M&A Global Antitrust Review: Still in Flux?' in BE Hawk (ed) *Annual Proceedings of the Fordham Corporate Law Institute, International Antitrust Law and Policy* (Fordham Corporate Law Institute, 2003) 201, 220.

[81] *Aerospatiale Alenia/de Havilland* (Case IV/M043) Commission Decision 91/619/EEC [1991] OJ L 334/42 [65]; L Hawkes, 'The EC Merger Control Regulation: Not an Industrial Policy Instrument' (1992) 13 ECLR 34, 36.

[82] *Aerospatiale Alenia/de Havilland* (n81) [65]-[67]/[69] .

[83] *ACCOR/Wagons-Lits* (Case IV/M126) Commission Decision 92/385/EEC [1992] OJ L 204/1 [26 (2) (f)].

[84] Camesasca (n77) 295 f.

[85] *ACCOR/Wagons-Lits* (n83) [26].

[86] *Saint-Gobain/Wacker-Chemie* (Case IV/M774) Commission Decision 97/610/EC [1997] OJ L 247/1 [246].

In *MSG Media Service*, the first merger case after *AT&T/NCR*[87] to explicitly consider dynamic efficiencies[88], the Commission acknowledged that the transaction might actually promote progress and innovation in the field of digital television technologies. The merger was nevertheless prohibited: the transaction was assessed to 'lead to a sealing-off of and early creation of a dominant position on the future market for technical and administrative services and to a substantial hindering of effective competition on the future market for pay-TV',[89] thereby triggering the exception clause in Article 2(1)(b) ECMR. A similar position was taken in *Bertelsmann/Kirch/Premiere*[90] and *Nordic Satellite Distribution*[91]. In the latter case, the Commission acknowledged beneficial effects for the telecommunications infrastructure, but saw a high probability of potential foreclosure due to the potentially strong market position of the merged entity. Additionally, the occurrence of efficiencies only in the long term was seen as a discounting factor.[92]

Dynamic efficiencies also played a part in *Ciba-Geigy/Sandoz*, where the Commission found that '[o]n account of the synergies in R&D (…), the economies of scale just described will lead to an additional strengthening of [the merged entity's] R&D potential'.[93] This was, however, not crucial to the Commission's decision, since resulting from a high probability of strong market entry, the firms' expected dominant position would quickly be eroded, so that the transaction would not be anticompetitive in the first place.[94]

In *ABB/Daimler-Benz*, the Commission arguably considered efficiencies as a factor undermining coordination within the post-merger duopolistic market: '[t]he chances of competitive offers against Siemens [the remaining competitor] will in fact be improved, so that the competitive structure inside the duopoly will be improved'.[95]

In contrast, the Commission at times took a virtually hostile approach: in *AT&T/NCR*, it stated that '[i]t is not excluded that potential advantages flowing from synergies may cre-

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[87] cf. n96.

[88] Dynamic efficiency cases under Article 81 have been considered with a more receptive attitude, cf. *Carbon Gas Technologie* (Case IV/29955) Commission Decision 83/669/EEC [1983] OJ L 376/17; *Fujitsu AMD Semiconductors* (Case IV/34891) Commission Decision 94/823/EC [1994] OJ L 341/66; *Mercedes-Benz/Kässbohrer* (Case IV/M477) Commission Decision 95/354/EC [1995] OJ L 211/1 [66 (e)]/[67]ff (implicit reference to dynamic efficiencies); M Glader, 'Research and Development Cooperation in European Competition Law - A Legal and Economic Analysis' (CFE Working Paper Series No 6 2000).

[89] *MSG Media Service* (Case IV/M469) Commission Decision 94/922/EC [1994] OJ L 364/1 [100]ff.

[90] *Bertelsmann/Kirch/Premiere* (Case IV/M993) Commission Decision 1999/153/EC [1999] OJ L 53/1 [122].

[91] *Nordic Satellite Distribution* (Case IV/M490) Commission Decision 96/177/EC [1996] OJ L 53/20.

[92] ibid [146].

[93] *Ciba-Geigy/Sandoz* (Case IV/M737) Commission Decision 97/469/EC [1997] OJ L 201/1 [171].

[94] ibid [170].

[95] *ABB/Daimler-Benz* (Case IV/M580) Commission Decision 97/25/EC [1997] OJ L 11/1 [112]–[115]. See also *Mannesmann/Vallourec/Ilva* (Case IV/M315) Commission Decision 94/208/EC [1994] OJ L 102/15 [55]ff; cf. section 2.4.2.

ate or strengthen a dominant position'.[96] The same occurred in *De Beers/LVHM*.[97] In *GE/Honeywell*, the Commission took cost efficiencies and corresponding chances to market product packages at lower prices as leading to substantial foreclosure effects.[98] In *Agfa-Gevaert/Du Pont*, economies of scale in production and sales were deemed to lead to such an improved market position that potential competitive constraints would not suffice to counteract a risk of dominance.[99]

In general, it can be said that in cases where the merger would create or strengthen a dominant position on the relevant market, efficiencies were not taken into account. This was most clearly spelled out in *Danish Crown Vestjyske Slagterier*: '[t]he creation of a dominant position (…) means that the efficiencies argument put forward by the parties cannot be taken into account'.[100] In cases where the transaction did not lead to anticompetitive effects, however, the Commission regularly found that 'the assessment of claimed efficiencies (…) [is] not necessary for the purposes of the decision'.[101] Summing up, the Commission's decisional practice reflects the motives at the centre of the (old and new) ECMR, i.e. the protection of competitive structures and therefore the prevention of merger-related increases in market power. The insignificant part efficiencies played in the past does thus not come as a surprise.[102]

At the same time, the case practice indicates a number of essential requirements for any efficiency claim: gains would have to be (i) substantial, (ii) merger-specific, (iii) passed on to the consumer, (iv) timely, and (v) verifiable.

3.3 Efficiencies under the new merger control regime: methodology

3.3.1 The legal basis

When the Commission decides whether a transaction will 'significantly impede effective competition', efficiency claims are (still) considered under Article 2(1)(b) ECMR.[103] Efficiencies *as such* are not mentioned in the legally binding part of the new ECMR. Read in

[96] *AT&T/NCR* (Case IV/M0050) Commission Decision of 18 January 1991 [1991] OJ C 016/00 [30].

[97] *De Beers/LVMH* (Case COMP/M2333) Commission Decision 2003/79/EC [2003] OJ L 29/40 [102]–[105].

[98] *General Electric/Honeywell* (Case COMP/M2220) Commission Decision 2004/134/EC [2004] OJ L 48/1 [350]ff.

[99] *Agfa-Gevaert/Du Pont* (Case IV/M986) Commission Decision 98/475/EC [1998] OJ L 237/26 [61]ff.

[100] *Danish Crown/Vestjyske Slagterier* (Case IV/M1313) Commission Decision 2000/42/EC [2000] OJ L 20/1 [198].

[101] *Office Depot/Guilbert* (Case IV/M3108) Commission Decision of 23 May 2003 [2003] OJ C 186/26 [69]; *Boskalis/HBG* (Case IV/M1877) Commission Decision of 4 July 2000 [2000] OJ C 320/8 [22].

[102] F Montag, 'Effizienz und Wettbewerb in der rechtlichen Praxis am Beispiel der europäischen Fusionskontrolle' in P Oberender (ed) *Effizienz und Wettbewerb* (Duncker&Humblot, Berlin 2005) 95, 107.

[103] section 3.2.

conjunction with Recital 29 (‘it is appropriate to take account of any substantiated and likely efficiencies put forward by the undertakings concerned’), however, Article 2(2) ECMR now contains an unwritten exception to the prohibition of mergers resulting in significant impediments to effective competition.[104] Moreover, the Merger Guidelines published in January 2004[105] contain a separate chapter on efficiency considerations.[106]

3.3.2 Integration into the decision making procedure

The consideration of efficiencies under the ECMR and the EC Guidelines is sometimes referred to as an ‘efficiency defence’. This is not quite correct, since it would imply a sequential approach, i.e. efficiency considerations only intervening after a finding of significant impediment to effective competition. In contrast, the Commission follows an integrated approach by assessing all aspects of the merger before arriving at a conclusion whether or not the transaction is anticompetitive.[107] Recital 29 of the ECMR articulates the possibility that, following the realisation of efficiencies, ‘the concentration would not significantly impede effective competition’. Similarly, Article 2(1)(b) ECMR and Recital 76 of the Guidelines refer to the ‘overall competitive appraisal of the merger’ as the stage where efficiency claims are to be considered.[108] Once the proposed merger exceeds the thresholds stipulated in Article 1 ECMR, efficiency considerations therefore form a part of the Commission’s review.

This resembles the US approach, where efficiency analysis is a matter of prosecutorial discretion in the competitive effects stage of the substantial appraisal of a transaction.[109]

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[104] On the *pre-2004* debate on whether or not the ECMR leaves room for efficiency considerations at all see PD Camesasca, 'The Explicit Efficiency Defence in Merger Control: Does it Make the Difference?' (1999) 20 ECLR 14, 24; U Immenga in U Immenga, EJ Mestmäcker and V Emmerich, *GWB: Gesetz gegen Wettbewerbsbeschränkungen: Kommentar* (2nd edn C.H. Beck, München 1992) Art. 2 ECMR 168ff; T Heineke, *Entlastungsgründe in der europäischen und US-amerikanischen Zusammenschlusskontrolle* (Nomos, Baden-Baden 2004) 64ff.

[105] Guidelines on the Assessment of Horizontal Mergers under the Council Regulation on the Control of Concentrations between Undertakings (EC) [2004] OJ C31/03 (Guidelines).

[106] ibid [77]-[87].

[107] A Strohm, 'Effizienzgesichtspunkte und Europäische Wettbewerbspolitik' in P Oberender (ed) *Effizienz und Wettbewerb* (Duncker&Humblot, Berlin 2005) 114, 116.

[108] U Böge and W Jacobi, 'Die Berücksichtigung von Effizienzen in der Fusionskontrolle' (2005) 60 BB 113ff; D Gerard, 'Merger Control Policy: How to Give Meaningful Consideration to Efficiency Claims?' (2003) 40 CML Rev 1367, 1399ff; discussion of different approaches: L-H Röller, J Stennek and F Verboven, *Efficiency Gains from Mergers, Report for EC Contract II/98/003* (CEPR, London 2001) 58ff/90ff; Camesasca (n77) 8/34ff.

[109] Case examples at Gerard (n108) 1371ff; Federal Trade Commission, *Anticipating the 21st Century (FTC Staff Report)* (1996) 14.

Claimed economies come into play as a potential rebuttal of the DOJ's/FTC's *prima facie* case of illegality.[110]

3.4 The new EC merger control regime: How much room for dynamic efficiencies does it leave?

According to the EC Merger Guidelines,[111] claimed efficiencies should be quantified wherever possible (see section 3.4.1), occur within a certain time frame (see section 3.4.2), and should arise in the same market where the anticompetitive effects are realised (see section 3.4.3). They should be a specific result of a merger, not otherwise reasonably attainable (see section 3.4.4), benefits should be passed on to the consumer (see section 3.4.5), and should be verifiable (see section 3.4.6). The following analysis focuses on difficulties with these requirements arising in relation to dynamic efficiency claims. The question at the core of this is whether the new Guidelines represent a workable analytic framework for the evaluation of dynamic efficiency claims in merger cases. Is there room for dynamic efficiencies in the current merger control regime?

3.4.1 Dynamic efficiencies and quantification

According to the Guidelines, efficiency claims have to be 'substantiated', 'verifiable', 'precise and convincing', and should be quantified '[w]here reasonably possible'.[112] Otherwise, the requirement appears to be relaxed: if 'the necessary data are not available to allow for a precise quantitative analysis', a claim must at least be sufficiently precise to enable the Commission 'to foresee a clearly identifiable positive impact on consumers, not a marginal one'.

Section 9.3 of Form CO[113] invites notifying parties to make efficiency claims and to provide detailed quantification, including estimated cost savings and assessments of the significance of new product introductions and improvements. Notwithstanding the voluntary nature of completion, it should be in the parties' interests to give a full response with their notification, in order to provide a proper commercial framework for the deal, and to give the

[110] *FTC v. Butterworth Health Corp.* 946 F Supp 1285 (WD Mich 1996) 1300ff.; *FTC v. Butterworth Health Corp., affirmed* 121 F3d 708 (6th Cir 1997); *FTC v. University Health, Inc.* 938 F2d 1206 (11th Cir 1991) 1218/1222; P Areeda, H Hovenkamp and JL Solow, *Antitrust Law : An Analysis of Antitrust Principles and their Application* (2nd edn, Aspen Law & Business, New York 2000) 153ff.; Camesasca (n77) 281ff.

[111] Guidelines (n105) [79]-[88].

[112] Guidelines [77]/[86].

[113] Annex I to Commission Regulation (EC) 802/2004 of 7 April 2004 Implementing Council Regulation (EC) 139/2004 on the Control of Concentrations Between Undertakings [2004] OJ L133/1.

Commission time to verify the claims.[114] As will be seen below, however, quantification of dynamic efficiencies encounters serious difficulties.

Are dynamic efficiencies open to quantification at all?

Innovation does hardly present itself in countable units of any sort. It is difficult to say that a firm's innovative activity has generated a certain 'output'. The development of a new product, for instance, does not say much about its future market success, nor does the fact that one firm registers more patents than another – both can only play the role of proxies.[115] The question asked when assessing the effect of a merger on the innovative activity of a new entity can therefore not be 'how much innovation will take place', but has to relate to an (at least theoretically) measurable reference point. In a system where this reference point is consumer welfare, one has to ask for the extent of merger-related gains in consumer surplus.

The precise quantification of consumer surplus in any static situation is very difficult due to the fact that reserved prices, elasticity of demand, etc. are complex concepts difficult to fasten down to numbers.[116] Not surprisingly, in a dynamic setting (focusing on a firm's innovative activity) this difficulty even increases.[117] In what follows, we will look at three particularly problematic aspects of dynamic efficiency as regards quantification: (i) the fact that alternative innovation decisions bear numerous different results, (ii) the problem that innovation is highly stochastic in nature and therefore necessarily encumbered with uncertainty, and (iii) the systematic difficulty that dynamic efficiencies sit uneasily with a consumer welfare standard that is essentially focused on price effects.

(i) Consequences of alternative innovation decisions

Forecasting a post-merger increase or decrease in consumer welfare is not restricted to predicting *one* outcome. As regards dynamic efficiencies, the consequences of *alternative* innovation decisions have to be taken into account.[118] If a merger is prohibited, the participating firms will not give up their innovative efforts, but will try to achieve similar results through alternative means. Consequently, there will be two alternative innovation decisions, i.e. two alternative outcomes to that following a merger of the firms. When quanti-

[114] EU Commission, 'DG Competition Best Practices on the Conduct of EC Merger Control Proceedings' (2003) [16]-[19].

[115] Areeda, Hovenkamp and Solow (n110) ¶975g; M Trajtenberg, 'The Welfare Analysis of Product Innovations, with an Application to Computed Tomography Scanners' (1989) 97 J Pol Econ 444, 446.

[116] section 2.4.5.

[117] WJ Kolasky and AR Dick, 'The Merger Guidelines and the Integration of Efficiencies into Antitrust Review of Horizontal Mergers' (2003) 71 Antitrust LJ 207, 229.

[118] JF Brodley, 'The Economic Goals of Antitrust: Efficiency, Consumer Welfare, and Technological Progress' (1987) 62 NYU L Rev 1020, 1029.

fying dynamic efficiencies, it is not enough to compare the *status quo ante* to the post-merger hypothetical outcome. The comparison will rather have to be drawn between three hypothetical outcomes (this does, as should be noted, not necessarily relate to the additional requirement of merger specificity. Even if a claimed efficiency can only be achieved through a merger, this does not tell us whether it will cause a greater gain in consumer welfare as the result of an alternative innovation decision).

Attempting to quantify dynamic efficiencies therefore necessarily entails a combination of uncertainty and speculation. It is speculative even to calculate an *ad hoc* demand curve, let alone to calculate one *ad hoc* and two *hypothetical* demand curves (and, of course, a few more variables).

(ii) Highly stochastic nature of innovation

All types of efficiency claims are by definition forward-looking, necessarily encumbered with uncertainty. The likelihood of an efficiency claim materializing must thus be a decisive factor when assessing its prospects. The degree of uncertainty, however, varies with the type of efficiency claim. Whereas comparatively simply-structured productive efficiencies can be predicted in a rather straight-forward manner, the situation becomes highly complex when it comes to dynamic efficiencies: even though the prospects of success held to an innovation decision may be high, it may still turn out not to result in any marketable output. Innovation is by definition a risky and uncertain venture. What makes it so difficult to predict is that the analysis is burdened with two kinds of uncertainty: there is uncertainty as to whether there will be an output *at all*, and there is uncertainty as regards the market success of an expected outcome. This adds further problems to the quantification task.

(iii) Dynamic efficiencies and a price-focused consumer welfare standard

The chosen reference point *as such* causes problems in quantifying dynamic efficiencies. Since consumer surplus appears to be the only meaningful quantifiable magnitude under the CWS, quantification has to focus on price effects.[119] It is (relatively) easy to perform a trade-off analysis in case of productive efficiency claims usually translatable into price terms through referral to decreased production costs.[120] To relate innovation to price effects is a much more challenging task.[121] In case of process innovation directly transferred

[119] CW Conrath and NA Widnell, 'Efficiency Claims in Merger analysis - Hostility or Humility?' (1999) 7 Geo Mason L Rev 685, 694: concentrating 'solely on price effects for convenience in modelling'.

[120] ibid 701; GJ Werden, 'An Economic Perspective on the Analysis of Merger Efficiencies' (1997) 11 Antitrust Mag 12; TJ Muris, 'The Government and Merger Efficiencies: Still Hostile After All These Years' (1999) 7 Geo Mason L Rev 729.

[121] Gerard (n108) 1379; W Kolasky, 'Remarks' (FTC/DOJ Joint Workshop on Merger Enforcement, Washington, DC 2004) 4ff.

into cost savings, there may be less of a problem.[122] Dynamic efficiencies do, however, mostly translate into unchanged costs producing a better product or an entirely new quality/cost combination that consumers prefer over previous offerings. This is difficult to integrate into a price-focused welfare analysis: if the price focus is kept, can improved quality or new products be expressed in beneficial price effects?[123] If it is relaxed, how much of an increase in price could be compensated for by a certain percent increase in quality or a new product?[124]

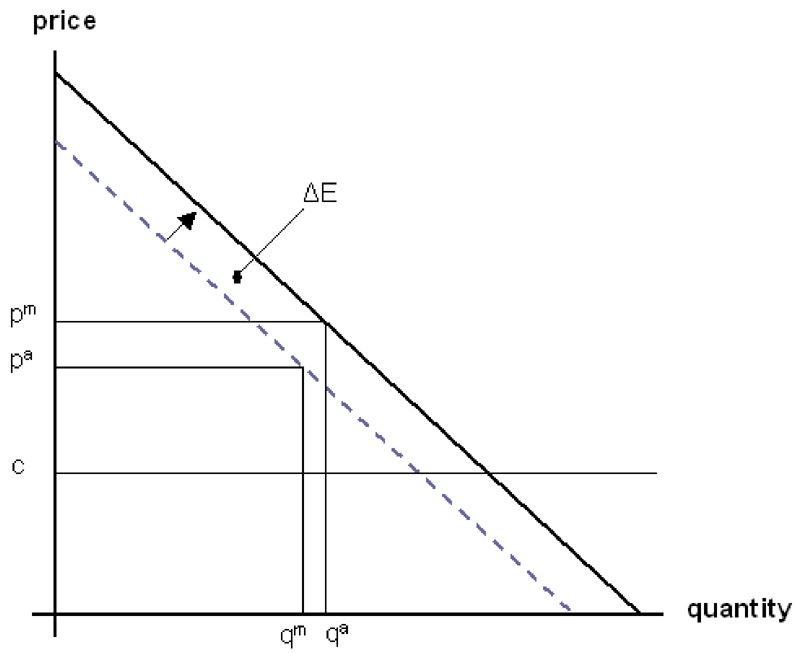

Figure 3.1 (Shift of the demand curve)

There are existing models to accommodate innovation and price effects in economic literature, based on hedonic price functions[125], discrete choice models[126] (and the corresponding welfare analysis):[127] consider a technologically dynamic product class whose different brands can be categorized using quality and price dimensions. Product innovation is

[122] KA Bockus, DW Northcut and ME Zmijewski, 'Criteria for Cognizable Efficiencies in Antitrust Litigation: Lessons from United States v. Oracle Corporation' (Chicago Partners, Chicago 2004) 8.

[123] A Strohm and L Röller, 'Ökonomische Analyse des Begriffs „significant impediment to effective competition"' (EU Commission, Brussels 2005) http://europa.eu.int/comm /competition/speeches/text/sp2005_012_de.pdf (12 January 2006) 12; Strohm (n107) 111.

[124] AA Fisher and RH Lande, 'Efficiency Considerations in Merger Enforcement' (1983) 71 Calif L Rev 1582, 1634.

[125] For an introduction to hedonics: Z Griliches, *Price Indexes and Quality Change: Studies in New Methods of Measurement* (Harvard University Press, Cambridge, Mass. 1971); S Rosen, 'Hedonic Prices and Implicit Markets: Product Differentiation in Pure Competition' (1974) 82 J Pol Econ 34.

[126] D McFadden, 'Econometric Models of Probabilistic Choice' in C Manski and D McFadden (eds), *Structural Analysis of Discrete Date, with Economic Applications* (MIT Press, Cambridge, Mass. 1981).

[127] Trajtenberg (n115) 446.

then described as a change in the composition of this product class, following either the introduction of a new product or the qualitative improvement of an existing product. Under certain assumptions, the application of such a model to data of sales per brand could then estimate the parameters of the respective demand functions. As a consequence, the magnitude of innovation between two periods could be calculated as the benefits of having the latest rather than the previous choice set.[128] This would then be expressed through a shift of the demand curve to the right (Figure 3.1).[129] The gain in consumer surplus would then amount to area ΔE.

Despite its usefulness for the understanding of dynamic efficiency gains, the model carries certain difficulties: it involves purely subjective judgments in determining the value and extent of a particular quality improvement to consumers. Since the model operates within a given product class, it only works with quality improvements, but not with new products generating new product classes. Finally, the data requirements are prohibitively enormous.[130] Imagine products whose quality changes frequently, e.g. fashion or technologically complex goods: predicting or assessing the effect of a merger, even restricted to the next model change, would be extremely difficult *in theory*. Expecting that the Commission could reasonably balance expert witnesses' conflicting predictions of quality changes and balance the opinions tolerably accurately in practice is 'virtually hopeless'.[131]

Jerry Hausman and Gregory Leonard suggest a different model focussing on the introduction of a new brand, dividing the effects of product innovation into two aspects: first, it measures the 'variety effects' following product innovation, i.e. the increase in consumer welfare resulting from the availability of the new brand, while prices of existing brands remain constant.[132] The magnitude of this gain in consumer welfare is a function of how closely substitutable consumers view new and existing products. Second, it measures price effects of the introduction of a new product and the corresponding increase in competition. The extent to which the price of an existing (competing) product is affected by the new product is a function of the substitutability of the existing by the new product and the form competition takes on the market.[133] The problem with this model is, however, that it requires post-introduction data – naturally unavailable in an *ex-ante* situation where the product has

[128] ibid 447.

[129] DS Evans and AJ Padilla, 'Demand-side Efficiencies in Merger Control' (2003) 26 World Comp 167, 177ff.

[130] F Ilzkovitz and R Meiklejohn, 'European Merger Control: Do We Need an Efficiency Defence?' (5th Annual EUNIP Conference, Vienna 2001) 19.

[131] Fisher and Lande (n124) 1635.

[132] JA Hausman and GK Leonard, 'The Competitive Effects of a New Product Introduction: a Case Study' (2002) 50 J Ind Econ 237, 241ff.

[133] ibid 238ff.

neither been developed nor introduced. In addition, most of the practical difficulties of the former model apply.

Gregory Werden and Luke Froeb, in contrast, use a 'clever trick'[134] to avoid the problem: they predict the welfare effects of a merger by assuming that the merged entity's marginal costs will be identical to that of the more efficient firm to the merger, i.e. drawing upon the pre-merger marginal cost structures.[135] Unfortunately, this approach necessarily excludes synergies: if one firm can produce an output *as efficient* as two firms together, there is (from a costs perspective) no need to merge. Moreover, there is – as will be seen below[136] – a 'problematic leap of faith'[137] as regards the ascertainability of pre-merger marginal costs, and it would arguably be extremely difficult for a firm to prove that its reported estimate of costs is correct.

New methods and much ado about nothing ?

Notwithstanding the abovementioned difficulties, US competition authorities have been using structural game theory models to predict the price effects of mergers ('merger simulation') for more than a decade.[138] There is evidence that the EU Commission has also repeatedly made use of merger simulation.[139] At the same time, there is scarce manifestation that merger simulation could actually make reasonably accurate predictions of merger-related effects in practice.[140] It might appear that it can currently only serve as a supportive

[134] K-U Kühn, 'Reforming European Merger Policy: Targeting Problem Areas in Policy Outcomes' (University of Michigan and CEPR, Paper #02-012 2002) 32.

[135] GJ Werden and LM Froeb, 'The Effects of Mergers in Differentiated Products Industries: Logit Demand and Merger Policy' (1994) 10 J Law Econ&Org 407, 408-09.

[136] section 3.4.5.

[137] Kühn (n134) 33.

[138] cf. M Ivaldi and F Verboven, 'Quantifying the Effects of Horizontal Mergers in European Competition Policy' (The Yrjö Jahnsson Working Paper Series in Industrial Economics, No 8 2002).

[139] *GE/Instrumentarium* (Case COMP/M3083) Commission Decision of 2 September 2003 [2004] OJ L 109/1; case comment: G Loriot, F-X Rouxel and B Durand, 'GE/Instrumentarium: A Practical Example of the Use of Quantitative Analysis in Merger Control' (2004) (1) ECCPN 58; L Hutchinson, 'EC Increasingly Using Merger Simulation Techniques in Antitrust Probes (Editorial)' (2005) <http://www.mergermarket.com/public/ default.asp?pagename=editorial_detail&docid=600> (31 January 2005); S Bishop, 'The Role of Economics in EC Antitrust, Interview with Lars-Hendrik Röller' (2004) 18 ABA Antitrust Mag 75, 79.

[140] C Peters, 'Evaluating the Performance of Merger Simulation: Evidence from the U.S. Airline Industry' (US Department of Justice, Antitrust Division, Economic Analysis Group Discussion Paper 03-1/2003) (MS underestimates price effects); GJ Werden, LM Froeb and DT Scheffman, 'A Daubert Discipline for Merger Simulation' (FTC, Washington DC 2004) (references to MS studies); useful overviews: DT Scheffman and M Coleman, 'Quantitative Analyses of Potential Competitive Effects from a Merger' (2003) 12 Geo Mason L Rev 319; RJ Epstein and DL Rubinfeld, 'Merger Simulation: A Simplified Approach with New Applications' (2001) 69 Antitrust LJ 883.

tool for a better understanding of merger effects.[141] '[I]t can usefully complement a fact-intensive analysis of consumers, competitors and the institutional settings of an industry, but it cannot substitute for such an analysis'.[142] This may, however, change in the future when more studies on competitive effects are undertaken, contributing to a further sharpening of such tools. In the meantime, given all the assumptions necessary, considerable differences in expert estimates about efficiencies and price effects issues are more than likely. Dynamic efficiency consideration and an objective approach to quantification can therefore not (yet) be reconciled with each other.

It has nevertheless been argued frequently that assessments of concepts such as market structure or future ease of entry into a market eventually bear the same imponderableness as efficiency analysis, so that the argument of difficult measurement[143] could be overstated.[144] A number of important differences should, however, not be forgotten: the criticism usually comprises measurement of static efficiency, not mentioning the various specific quantification difficulties with dynamic efficiency. Moreover, *structural* market power effects are mainly concerned with externalities, whereas efficiencies focus on *firm internal* effects. Anticompetitive effects are more predictable for their relation to *present* structural market conditions such as barriers to entry, high concentration rates etc.[145] Such predictions can, in turn, be reviewed using certain adversarial procedures (e.g. competitors' comments).[146] With (dynamic) efficiencies, this is much more difficult:[147] in the light of infinite individualities on firm level, experience from other firms can to a much more limited extent serve as a test for efficiency claim quantification. The firms themselves, in turn, will rarely have prior experience with the likelihood and significance of claimed efficiencies.

[141] A Jacquemin, 'Theories of Industrial Organisation and Competition Policy - What are the Links?' (European Commission, Forward Studies Unit 2000) 28ff; C Shapiro, 'Mergers With Differentiated Products' (Speech at the ABA/IBA Conference 'The Merger Review Process in the US and Abroad' 1995); LH Röller in an interview with Bishop (n139) 79 ('They don't provide all the answers to merger analysis'); U Böge, 'Der "more economic approach" und die deutsche Wettbewerbspolitik' (2004) 54 WuW 726, 732.

[142] Werden, Froeb and Scheffman (n140) 2; for a general critique: M Walker, 'The Potential for Significant Inaccuracies in Merger Simulation Models' (2005) 1 J Comp L&Econ 473.

[143] D Schmidtchen, 'Schlussvortrag' in P Oberender (ed) *Effizienz und Wettbewerb* (Duncker&Humblot, Berlin 2005) 177 with reference to RA Heiner, 'The Origin of Predictable Behavior' (1983) 73 Am Econ Rev 560 and to Hayek's concept of institutional uncertainty.

[144] Gerard (n108) 1393; de la Mano, 'For the Customer's Sake: The Competitive Effects of Efficiencies in European Merger Control' (EU Commission (DG Enterprise) Paper No 11/2002) 40/70; R Pitofsky, 'United States and European Competition Policy' (2002) Adress before the European Policy Centre in Brussels, Belgium (10 April 2002) <http://www.usdoj.gov/atr/public/speeches/10999.pdf> (3 December 2005); Federal Trade Commission (n109) 17.

[145] JF Brodley, 'Proof of Efficiencies in Mergers and Joint Ventures' (1996) 64 Antitrust LJ 575, 576; Conrath and Widnell (n119) 700.

[146] cf. section 3.4.6.

[147] cf. Federal Trade Commission (n109) 36.

Comment

In conclusion, quantification of dynamic efficiencies appears to be beyond the (present) powers of economic analysis, let alone of enforcement practice.[148] The quality of econometric calculation increases with the amount and quality of data. If substantial data has to be left unconsidered due to its lack or low quality, econometric analysis risks being a mere 'educated guess' of the outcome, casting into doubt the huge effort of quantification.[149] The US competition authorities, accordingly, 'do not spend much effort on quantifying efficiencies. Arguing that efficiencies are small is not their favourite argument in court.'[150] And even the EU Commission itself doubted the workability of a quantitative approach prior to issuing the Guidelines, as indicated in a 2002 policy paper: 'Overall, precise quantification of the magnitude and likelihood of claimed efficiencies is impossible' and '[d]ynamic efficiency is the least quantifiable form of efficiency'.[151]

Qualitative analysis of dynamic efficiencies?

Where quantification is not reasonably possible, Recital 86 of the Guidelines seems to point out that efficiency claims could still find their way into the Commission's appraisal by way of *qualitative* analysis.[152] With dynamic efficiencies, the first requirement of Recital 86 (i.e. that 'necessary data [is] not available to allow for a precise quantitative analysis') will usually be met. When considering the second requirement, however, the practical significance of qualitative analysis is cast into doubt: firms have to provide material on the basis of which a '*clearly identifiable* positive impact on consumers, not a marginal one' (emphasis added) can be inferred. 'Clearly identifiable' suggests a high standard, arguably close to what has been abolished for being too strict under the US Merger Guidelines in 1997: the requirement of 'clear and convincing' proof.[153] To give any prospect to dynamic efficiency claims, the term 'clearly identifiable' cannot be understood as an objective standard. Any assessment of likelihood and significance of potential innovative gains necessarily involves subjective value judgements. Can those result in 'clearly identifiable' positive effects on the consumer? Can an increased ability to undertake R&D be 'clearly identifiable' – considering the abovementioned uncertainties, which naturally also apply to a *qualitative* analysis?

[148] Ibid, 34; A Jones and BE Sufrin, *EC Competition Law* (2nd edn OUP, Oxford 2004) 324; TB Leary, 'Efficiencies and Antitrust: A Story of Ongoing Evolution' (ABA Section of Antitrust Law, Fall Forum 2002) Fn 49.

[149] Bundeskartellamt, 'Wettbewerbsschutz und Verbraucherinteressen im Lichte neuer ökonomischer Methoden' (Diskussionspapier, Bonn 2004).

[150] Röller, Stennek and Verboven (n108) 62; Areeda, Hovenkamp and Solow (n110) ¶975g.

[151] de la Mano (n144) 52.

[152] Presumably with regard to the understanding of the rationale of the transaction or the determination of acceptable undertakings.

[153] Gerard (n108) 1393; cf. the new The 1992 Department of Justice and Federal Trade Commission Horizontal Merger Guidelines, 1997 Revision (The US Merger Guidelines) § 3.

A considerable margin of discretion

Under a case-by-case approach, general answers to these questions are by definition impossible. On the one hand, the Guidelines appear to particularly endorse dynamic efficiency claims by explicitly referring to 'new or improved products or services' which, *inter alia*, 'may bring about the type of efficiencies that the Commission can take into account'.[154] On the other hand, the term 'clearly identifiable' implies a rather strict approach towards qualitative analysis. Judging from the wide margin of discretion the Commission enjoys under the new merger control regime, qualitative analysis will thus hardly be susceptible to proof and court contestation.[155] In close cases, prospects for dynamic efficiency claims are limited.

It is settled law that the Commission needs and actually maintains a margin of discretion as regards its appraisal of a transaction 'which the Community courts must take into account and respect when reviewing the Commission's assessment of an economic nature'.[156] Although the ECJ in *Tetra Laval II* has recently stressed that such discretion is not unlimited,[157] i.e. the Community courts must not 'refrain from reviewing the Commission's interpretation of information of an economic nature',[158] it is not entirely clear to what extent complex economic assessments can actually be reviewed by the European Courts.[159] In *EDP*, for example, the CFI (without referring to the ECJ's ruling in *Tetra Laval II*) stated that the Commission retains a 'wide discretion', the Community courts' review therefore being 'limited to ensuring the absence of manifest errors of assessment'.[160] Where the Commission's margin of discretion is, however, so extensive as in the sphere of efficiency analysis, it potentially leaves the parties with little chance to have the Commission's analysis reviewed in court.

Comment

We have seen so far that, in practice, attempts to quantify dynamic efficiencies objectively will most likely fail. *Ex ante* measurement of innovation is extremely complex and difficult, and the various models discussed above do not yield reliable results. While the op-

[154] Guidelines (n105) [81].

[155] S Voigt and A Schmidt, 'The Commission's Guidelines on Horizontal Mergers: Improvement or Deterioration?' (2004) 41 CML Rev 1583, 1593.

[156] Joined Cases C-68/94 and C-30/95 *France et al v Commission* [1998] ECR I-1375 [223]ff; Case C-12/03 P *Commission v Tetra Laval* [2005] ECR I-987 [38].

[157] *Commission v Tetra Laval* (n156) [39]; MF Bay and J Ruiz-Calzado, 'Tetra Laval II - The Coming of Age of the Judicial Review of Merger Decisions' (2005) 28 World Comp 433.

[158] *Commission v Tetra Laval* (n156) [39].

[159] L Prete and A Nucara, 'Standard of Proof and Scope of Judicial Review in EC Merger Cases: Everything Clear After Tetra Laval' (2005) 26 ECLR 692, 697ff.

[160] Case T-87/05 *EDP-Energias de Portugal v Commission* [2005], judgment of 21 September 2005, not yet published in the ECR, [63] and [151].

tion of a qualitative analysis of dynamic efficiency claims remains, it is yet unclear how strict a standard will be applied. In any case, the Commission retains a considerable margin of discretion – providing 'clearly identifiable' evidence of dynamic efficiencies could be difficult in practice.

3.4.2 Dynamic efficiencies and timing

Where a firm claims merger-related dynamic efficiencies, it will – in addition to quantifying or qualitatively explaining its claim – also have to say something about the expected time of their realisation. While the ECMR is silent on the time frame underlying efficiency analysis, the Guidelines appear to establish a sliding scale approach: 'the later the efficiencies are expected to materialise in the future, the less weight the Commission can assign to them'.[161] This implies that more remote efficiencies are not totally disregarded but rather discounted to some extent against short-term anticompetitive effects.

Which efficiencies fit into the time frame?

The timing of efficiencies was addressed in only one pre-2004 Commission decision, where timely remote realisation was considered as a discounting factor.[162] Under the new regime, the abovementioned first sentence of the Guidelines' Recital 83 implies a rather flexible sliding scale approach. The second sentence appears to impose a stricter time line – 'to be considered as a counteracting factor, the efficiencies must be timely'. Construed restrictively, an efficiency expected after a certain point in time will not be discounted, but receives a weight of zero in the decision calculus. A less restrictive interpretation would be that the applied discount would turn a long term efficiency into a negligibility. The wording rather argues for the first construction. In any case, the meaning of 'timely' appears crucial.

Analogous application of entry time frame?

The Guidelines' chapter on efficiencies does not further clarify the term. A potential hint could be contained in the Guidelines' section on entry analysis: '[w]hat constitutes an appropriate time period depends on the characteristics and dynamics of the market (…), entry is normally only considered timely if it occurs within two years'.[163] To draw an analogy in the context of efficiencies would require an unintended regulatory gap. Considering that the sliding scale approach of Recital 83 was introduced to retain flexibility as to timing, however, it is hard to see why the Commission should considerably reduce this by applying firm

[161] Guidelines (n105) [83].
[162] *Nordic Satellite Distribution* (n91) [146]ff.
[163] Guidelines (n105) [74].

time frames. Additionally, on a comparative basis, the EC Guidelines are modelled on the US Guidelines. The US section on entry analysis also contains a two-year time frame,[164] whereas the efficiency section does also not further detail the timing issue. Considering that timing of efficiencies has been explicitly discussed during the 1995 Global FTC Hearings on innovation issues eventually leading to the 1997 Guidelines revision,[165] it is rather unlikely that the Commission would *unintentionally* take over such a regulatory gap.

Moreover, entry into a market and the occurrence and extent of efficiencies are two quite different events, the former having more of a *structural*, the latter more of a *behavioural* nature. Drawing analogies between the two events does therefore not necessarily suggest itself.

Hints from the ratio legis?

The background of the timing requirement is somewhat enlightened when recalling basic price theory:[166] The price model arguably underlying the Guidelines focuses on a given point in time (pre-merger), i.e. it is comparative-static. The situations before and after the merger are compared on the basis of the *same* demand curve. Considering that with a changing demand curve, the optimal constellation of prices and output changes as well, the results of this comparison largely depend on the form of the demand curve. If efficiencies cannot be realised timely, relevant demand curves will likely have changed before realisation. The comparison scenario becomes obsolete. EC merger control focuses on a time line as short as possible to avoid additional uncertainty through extensive referral periods. From this point of view, 'timely' can hardly comprise more than a period of approximately two years, depending on the industry under scrutiny.[167] Proposals of some commentators for four years or more can thus hardly be reconciled with the Guidelines' underlying theory.[168]

There is also a link to the quantitative/qualitative analysis problem discussed above. Only substantial, clear dynamic efficiencies are likely to find consideration. Substantial benefits through new or improved products can, however, rarely be achieved short term – in

[164] US Merger Guidelines (n153) § 3.

[165] cf. Federal Trade Commission (n109) ch 2, 16.

[166] Strohm (n107) 123.

[167] de la Mano (n144) 47; Canadian Competition Bureau, 'Treatment of Efficiencies in the Competition Act (Consultation Paper)' (Gatineau 2004) 34ff.

[168] M Kocmut, 'Efficiency Considerations and Merger Control - Quo Vadis, Commission' (2006) 27 ECLR 19, 23; M Kocmut, 'The Role of Efficiency Considerations under the EU Merger Control' (The University of Oxford Centre for Competition Law and Policy Working Papers, (L) 09/05 2005) 33; F Jenny and others, 'Substantive Standards for Mergers and the Role of Efficiencies' in BE Hawk (ed) *International Antitrust Law & Policy: Annual Proceedings of the Fordham Corporate Law Institute* (Juris Publishing, Huntington, 2003) 319 f.

many industries (e.g. the pharmaceutical industry) the process of developing new or improving existing products will take too long for the Guidelines' time frame.[169]

A contradiction?

The timing problem was also identified in the US, where the FTC in its 1996 Staff Report states that 'the agency needs to employ a sufficiently flexible time frame (…) in order to capture adequately the dynamic effect of efficiencies that (…) likely result over time in a downward pressure on price of improved quality goods'.[170]

Does this flexibility also apply to dynamic efficiencies in EC merger control? Alternatively, is there a contradiction between the Guidelines stressing the importance of dynamic efficiency gains[171] and applying a time frame arguably inadequate for such innovative gains? The second alternative seems more likely: if a merger results in anticompetitive effects, they will often occur soon after closing. Offset through the claimed efficiencies should thus occur as soon as possible.[172] To set off short-term, relatively certain anticompetitive effects with timely remote and uncertain efficiencies is a risky venture a competition authority is hardly willing to undertake. The emphasis of the Guidelines clearly is on short-term productive efficiencies[173] and thus essentially on short-term price effects, which likely results in counting only considerable cost savings as benefits. The potential for such cost savings will usually be restricted to markets under high competitive pressure so that the merger would not lead to lessened competition anyways.[174] Finally, long term analysis of price effects is technically difficult and costly and produces uncertain results. All this argues against a 'more flexible' approach to timing.[175]

Comment

The Guidelines' restrictive timing requirement is hard to reconcile with the nature of dynamic efficiencies, thus representing a considerable hurdle for their consideration. The Commission will not only discount many dynamic efficiency claims due to their potentially

[169] Canadian Competition Bureau (n167) 34; Schmidt (n77) 359; Brodley (n118) 1031.

[170] Federal Trade Commission (n109) 28.

[171] Guidelines (n105) [81].

[172] U Schwalbe, 'Die Berücksichtigung von Effizienzgewinnen in der Fusionskontrolle - Ökonomische Aspekte' in P Oberender (ed) *Effizienz und Wettbewerb* (Duncker&Humblot, Berlin 2005) 63, 71.

[173] Ilzkovitz and Meiklejohn (n130) 20.

[174] K Kinne, *Effizienzvorteile in der Zusammenschlusskontrolle* (Nomos, Baden-Baden 2000) 81ff; Camesasca (n77) 4; Röller, Stennek and Verboven (n108) 27.

[175] Schwalbe (n172) 67/68; Schmidt (n77) 359; Brodley (n118) 1026/1031; Federal Trade Commission (n109) 15/37; E-J Mestmäcker and H Schweitzer, *Europäisches Wettbewerbsrecht* (2nd edn C.H. Beck, Munich 2004) 748.

remote realisation, but also attach a considerably diminished weight to them in the decision calculus.

3.4.3 Dynamic efficiencies and cross-market analysis

Merger-related effects are not necessarily restricted to *one* market. A merger resulting in a significant impediment to competition on one market may well have beneficial effects on other (related or unrelated) markets. Such effects can be of a structural nature, e.g. a merged entity representing a counterweight to a currently dominant firm, but may also take the form of efficiency gains. Can the Commission thus settle for analysing effects on the market(s) on which anticompetitive effects realise, or does it also have to take into account all other markets (positively) affected by the merger? There are mainly two groups of cases, different *product* and *regional* markets.[176] Consider a merger of two software firms. Anticompetitive effects may occur in one product market (word processing software), while cognizable efficiencies may occur in another product market (antivirus software). Similarly, if merging firms operate on more than one regional market: while anticompetitive effects are expected on the German market, the merger may result in efficiencies on the Italian market.

Applied to dynamic efficiencies, the claim that a merger would lead to the development of a new product, i.e. not a mere improvement of an existing good, may also relate to a market separate from that on which anticompetitive effects are expected – depending on the degree of substitutability of the two products. Can such efficiencies be taken into consideration? The trend in the Commission's practice to define markets narrower, not least as a consequence of the application of the SSNIP test and a more economic approach to the issue of market delineation, adds special relevance to the issue.[177]

Article 2(1)(b) ECMR is silent on the question of cross-market effects. Subsection (a), however, stresses 'the need to maintain and develop effective competition within the common market in view of (…) the structure of *all markets concerned*' (emphasis added). This implies that both the market on which anticompetitive effects occur and other markets on which beneficial effects realise have to be considered under Article 2(3).[178] Additional support for this view can be drawn from Article 2(5) which, though regarding joint ventures, shows that it is a common technique under the ECMR to take into account effects on other markets (in this case, downstream, upstream or neighbouring markets to that of the JV).

[176] R Bechtold, 'Abwägung zwischen wettbewerblichen Vor- und Nachteilen eines Zusammenschlusses in der europäischen Fusionskontrolle' (1996) 7 EuZW 389, 391-392.

[177] Kolasky (n121) 5.

[178] Bechtold (n176) 390; Heineke (n104) 91.

Regrettably, pre-2004 Commission decisions have discussed cross-market issues only in a non-efficiencies context: in *Skanska/Scancem*, regarding undertakings by merging firms, the Commission considered improved competitive conditions on other regional markets.[179] What argues for cross-market analysis is that the Commission considers *detrimental* effects of the merger on adjacent markets, e.g. in *de Havilland* (anticompetitive effects on various jet markets).[180] *Vice versa*, *beneficial* effects on other markets (such as merger-related efficiencies) should also be taken into account.[181]

The Guidelines' wording is ambiguous: '[e]fficiencies should (…), in principle, benefit consumers in those relevant markets where it is otherwise likely that competition concerns would occur'.[182] At the same time '[c]onsumers may also benefit from new or improved products or services, for instance resulting from efficiency gains in the sphere of R&D and innovation'.[183]

Room for cross-market analysis in EU merger control?

Mainly based on the first reference, one could argue that efficiencies resulting from new or improved products can only be considered if realized in the market where the anti-competitive effects arise.[184] This would effectively bar a considerable share of dynamic efficiencies from consideration. A general disregard of cross-market effects, however, would quite openly contradict Article 2(1)(a) ECMR ('all markets concerned').[185] The abovementioned contradiction within the Guidelines further argues against such a construction. It is therefore preferable to understand the words 'in principle' to allow for cross-market consideration *only in exceptional cases*. This also resolves the apparent conflict between the two passages.[186]

Which *types* of efficiencies occurring in other markets should then be considered? Article 2(1)(a) ECMR refers to the *structure* of 'all markets concerned'. Following a narrow construction of the term 'structure', efficiencies could only be taken into account if they at least *indirectly* resulted in structural effects, e.g. where economies strengthened the parties' position against a more powerful competitor, thereby leading to more intensive competition.

[179] *Skanska/Scancem* (Case IV/M1157) Commission Decision 1999/458/EC [1999] OJ L 183/1 [210].

[180] *Aerospatiale Alenia/de Havilland* (n81) [71] .

[181] Heineke (n104) 92; JJ Dreyer, *Abwägungsmöglichkeiten in Art. 2 VO (EG) 4064/98 - Fusionskontrollverordnung* (Peter Lang, Frankfurt a.M. 2001) 260.

[182] Guidelines (n105) [79].

[183] ibid [81].

[184] D Nave and J Enser, 'Efficiencies and Remedies in EU Merger Control' (2004) Global Competition Review <http://www.globalcompetitionreview.com/ear/merg_rem.cfm> (12 January 2006).

[185] Camesasca (n77) 323 f; Bechtold (n176) 389ff.

[186] Guidelines (n105) [81].

German competition law has adopted this position:[187] albeit section 36 (1) of the Act against Constraints of Competition (GWB)[188] allows for multi-market consideration,[189] merger-related 'improvements' on other markets can only be considered if they take the form of *structural* effects.[190] With dynamic efficiencies, such a restriction would effectively result in their non-consideration: it is hard to imagine how a dynamic efficiency could lead – even indirectly – to a cognizable (and timely) change in the *structure* of a market.

Unfortunately, the US experience does not provide further guidance. Section 7 of the Clayton Act appears to preclude cross-market consideration in that an acquisition can be declared to be unlawful if the required anticompetitive effects occur 'in any line of commerce in any section of the country'.[191] The US Horizontal Merger Guidelines, however, indicate that the competition authorities might 'consider efficiencies not strictly in the relevant market, but (…) inextricably linked with it', yet such 'efficiencies rarely are a significant factor'. And, further clarifying: '[t]hey are most likely to make a difference when they are great and the likely anticompetitive effect in the relevant market(s) is small'.[192]

Particularly the last sentence illustrates the very limited part cross-market efficiencies play in merger control. The reluctance or even hostility of US courts towards cross-market consideration[193] was illustrated in *FTC v. Tenet Healthcare Corp.* and *Mississipi River Corp. v. FTC*: both courts emphasised that 'anticompetitive effects of an acquisition in one market cannot be justified by procompetitive effects in another market'.[194]

International / multi-jurisdictional review?

Cross-market analysis also bears highly political issues: (i) within the EU, should consumers in one member state suffer anticompetitive effects to enable consumers in another member state to profit from efficiency gains? Would this be in line with the idea of a member state delegating sovereignty in the expectation that the EU will duly protect its in-

[187] HJ Bunte, *Kommentar zum deutschen und europäischen Kartellrecht* (9th edn Wolters Kluwer, Neuwied 2001) § 36 Rn 49/50; Bundeskartellamt (n149) 12.

[188] Gesetz gegen Wettbewerbsbeschränkungen.

[189] cf. *Thüringer Gas/Westerland* KG, 18 February 1985, WuW/E OLG 3469.

[190] U Immenga, EJ Mestmäcker and V Emmerich, *Gesetz gegen Wettbewerbsbeschränkungen: Kommentar* (3rd edn, C.H. Beck, Munich 1997), § 24 Rn 177.

[191] Areeda, Hovenkamp and Solow (n110) ¶972a.

[192] US Merger Guidelines (n153) Section 4 Fn 36.

[193] Gotts and Goldman (n80) 257; Camesasca (n77) 288ff/322ff.

[194] *FTC v. Tenet Healthcare Corp.* 17 F Supp 2d 937 (ED Mo 1998), 947; R Pitofsky, 'Efficiencies in Defense of Mergers: Two Years After' (1999) 7 Geo Mason L Rev 485, 489; Muris (n120) 748; *Mississipi River Corp. v. FTC* 454 F3d 1083 (8th Cir 1972), 1089.

terest?[195] And (ii), should efficiency considerations be limited to those attained within the EU?[196] And (iii), *vice versa*, should mergers be allowed for their *EU-internal* net-beneficial effects while in another jurisdiction, anticompetitive effects exceed expected efficiencies?[197] Whereas in a common market the first question must be answered in the affirmative, the last two questions are more difficult. In Canada, for example, there has been comment that there should not be multi-jurisdictional review of efficiencies.[198] The Commission has not yet had an opportunity to comment on this issue.

Implementation in practice

Difficulties with practical implementation of multi-market consideration are apparent: (i) the abovementioned measurement problems detected in relation to dynamic efficiencies on *one* market multiply, and (ii) problems of distributive justice arise.

(i) Measurement issues

On a quantitative level, Ullrich Schwalbe suggests the application of general equilibrium analysis.[199] In *partial* equilibrium analysis, the determination of the price of a good is simplified by just looking at the price of *one* good, and assuming that the prices of all other goods remain constant. *General* equilibrium analysis, in contrast, focuses on the economy as a whole and aims to provide more coherent explanations of the continuous nature of economic change by studying *all* the markets of an economy. Supplies, prices and outputs of goods and services are thus determined *simultaneously*. In some areas of economics, general equilibrium analysis is regularly applied. In tax effects analysis, for example, so-called CGE models[200] are used to predict the effects of tax adjustments on prices, quantities and welfare. The problem is, however, that general equilibrium analysis assumes perfect competition, all firms on a market being price takers.[201] Operable CGE models based on *imperfect* competition have, to my knowledge, not yet been developed.[202] At present, CGE

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[195] C Bürger, *Die erhebliche Behinderung wirksamen Wettbewerbs in Art. 2 der Verordnung Nr. 4064/89 und in Art. 2 der Verordnung Nr. 139/2004* (Tenea, Berlin 2005) 109; conversely: V Verouden, C Bengtsson and S Albaek, 'The Draft EU Notice on Horizontal Mergers: A Further Step Toward Convergence' (2004) 49 Antitrust Bull 243, 282.

[196] Gotts and Goldman (n80) 259; Ilzkovitz and Meiklejohn (n130) 18.

[197] Gotts and Goldman (n80) 259; regarding economic effects of multi-jurisdictional review: K Head and J Ries, 'International Merger and Welfare under Decentralized Competition Policy' (1997) 30 Canadian J Econ 1104; AT Guzman, 'Is International Antitrust Possible?' (1998) 73 NYU L Rev 1501.

[198] *The Commissioner of Competition v Superior Propane and ICG Propane* CT-98/2, Memorandum of the Commissioner of Competition on the redetermination of proceedings, 25/06/01, [196]; SF Ross, 'Afterword - Did the Canadian Parliament Really Permit Mergers That Exploit Canadian Consumers So the World Can Be More Efficient?' (1997) 65 Antitrust LJ 641, 643; conversely: Gotts and Goldman (n80) 262.

[199] Schwalbe (n172) 68.

[200] Computed General Equilibrium.

[201] Schwalbe (n172) 68.

[202] ibid 69.

models can therefore only be used as an aid to a better understanding of cross-market effects of a merger. Anything beyond that would arguably exceed its powers.

All in all, it is unlikely that the Commission takes a *quantitative* approach towards cross-market analysis. There is arguably no practical formula available that would allow that kind of trade-off to be made. If, for instance, a merger causes high concentration rates on a small, insignificant regional market and significant efficiencies on a greater regional market – should the former be disregarded or should the anticompetitive effects be adequately discounted in order to draw an appropriate balance? The situation may be somehow relaxed in cases where multiple product or regional markets involve the same consumers, e.g. consumers of pens and ink or of milk and butter in a supermarket – the trade-off problem discussed previously could be avoided.[203]

While *qualitative* analysis, in contrast, appears theoretically possible, is remains to be seen what happens if situations different from the one referred to in Section 4 of the US Guidelines arise ('when [efficiencies] are great and the likely anticompetitive effect in the relevant market(s) is small').[204] If more complex comparisons and differently sized markets are to be considered, qualitative analysis might become a rather thankless and imprecise task.

(ii) A matter of distributive justice?

Irrespective of quantitative or qualitative methods of analysis, the problem of value judgements remains. From a policy perspective, it is a fairness question whether it is 'appropriate to deny to one group the guarantees of a competitive market in order to provide the benefits of efficiency to a separate group'[205]. From the perspective of competition law, the answer is a clear 'yes', provided that there is a reasonable factual basis on which such a decision can be made. Considering the abovementioned imperfections, the more practical concern will be the decision's subjectivity. Cases where efficiencies on the separate market 'are great and the likely anticompetitive effect in the relevant market(s) is small'[206] will be rare. In reality, product or service markets are difficult to compare, both in kind and in size. If sales on one market are much smaller than on the other, can we simply proportionally discount effects on the latter to adjust for the different sizes? Similar problems occur where regional markets are of significantly different size.[207] Although some research has been

[203] Gotts and Goldman (n80) 257 f.

[204] US Merger Guidelines (n153) Section 4 Fn 36.

[205] Pitofsky (n194) 490; cf. Areeda, Hovenkamp and Solow (n110) ¶972a; Gotts and Goldman (n80) 258; Camesasca (n77) 324.

[206] US Merger Guidelines (n153) Section 4 Fn 36.

[207] Areeda, Hovenkamp and Solow (n110) ¶972c.

conducted on trading-off benefits between societal groups,[208] this type of analysis would render the Commission's 'decision making procedure into more of a policy think-tank'[209] – in complex cases, the Commission's decisions would take the form of value judgements beyond the control of the Courts.[210]

Comment

In the light of numerous practical implementation problems and a rather reluctant wording of the Guidelines, it cannot be expected that cross-market consideration will play an important part. This is regrettable since new products will in many cases not be taken into account as a counteracting efficiency. At the same time, it is a plausible reaction to an accumulation of uncertainties and imponderabilities.

3.4.4 Merger specificity of dynamic efficiencies

As a further requirement, an efficiency has to be merger-specific,[211] i.e. it must be effectively caused by the merger, be unlikely to be realised to a similar extent absent the transaction and cannot be achieved through less anticompetitive alternatives. Article 2(1) ECMR is, again, silent on the issue. According to the Guidelines, only 'realistic and attainable alternatives', 'reasonably practical in the respective business situation faced by the merging parties having regard to established business practices in the industry concerned' will be considered.[212] In the Commission's case practice, the requirement was invoked relatively frequently.[213] In *de Havilland*, for example, the Commission saw claimed cost reductions to be also achievable through better management.[214] Since the Commission never went beyond brief statements declaring the claimed efficiencies not to be merger-specific, the cases do, however, not provide much guidance.

[208] FM Scherer, 'Complex Trade-Offs in Patent Antitrust Laws: A Comment on Millstein' (1988) 9 Cardozo L Rev 1209; RC Levin and others, 'Appropriating the Returns from Industrial R&D' (Cowles Foundation Discussion Papers, Yale University, No 862/1988).

[209] Camesasca (n77) 325.

[210] Areeda, Hovenkamp and Solow (n110) ¶972c.

[211] Guidelines (n105) [85].

[212] ibid.

[213] *Aerospatiale Alenia/de Havilland* (n81) [65] ; *ACCOR/Wagons-Lits* (n83) [25] ; *Nordic Satellite Distribution* (n91) [146]; *RTL/Veronica/Endemol* (Case IV/M553) Commission Decision of 20 September 1995 [1996] OJ L 134/32 [110].

[214] *Aerospatiale Alenia/de Havilland* (n81) [65] .

Background

The requirement stems from proportionality, a fundamental principle of EC law. In the Commission's merger control practice, the principle has mainly been applied in the context of the failing firm defence.[215] It closely resembles the requirement of indispensability in Article 81(3)(a) ECT. Essentially, proportionality subjects the need for a specific (legal) instrument to a thorough assessment to see whether there is a less constraining means of achieving the same result. Transferred to the context of merger control, anticompetitive effects resulting from a transaction can only be offset with efficiency gains that could not be achieved through other, less anticompetitive means[216] such as internal growth, joint ventures, specialisation agreements, licensing, leases, other contractual agreements or other, less anticompetitive mergers.[217]

Practical implications

The first element of merger specificity, a direct causal link between the transaction and the claimed economies, is unlikely to create difficulties. The second element, according to which an efficiency must not be achievable to a similar extent by less anticompetitive, albeit realistic and attainable alternatives, is more complex. It largely adopts the approach underlying Article 81(3) ECT, where unrealistic measures are also not considered.[218] According to Lars-Hendrik Röller and others,[219] the analysis of potential alternatives has to address (i) the identification of alternatives to the transaction (in the respective industry and under the prevailing economic circumstances), (ii) the relative costs of the merger and its alternatives (e.g. restructuring costs and contractual transaction costs) and (iii) calculation of potential anticompetitive effects of the alternatives so identified and comparison to those of the intended transaction.

In case of dynamic efficiencies, all abovementioned alternatives can become relevant. The financial capital needed for a particular R&D project, for example, can either be collected through a merger or on the capital markets. If the parties could under reasonable conditions acquire the funds necessary for such a project, it will be difficult to satisfy the merger specificity requirement. The parties would have to prove imperfections on the capital

[215] Heineke (n104) 218.

[216] J Farrell and C Shapiro, 'Scale Economies and Synergies in Horizontal Merger Analysis' (2001) 68 Antitrust LJ 685, 690ff. distinguish between *efficiencies* and (merger-specific) *synergies*.

[217] Leary (n148) 4; Areeda, Hovenkamp and Solow (n110) ¶973a; Röller, Stennek and Verboven (n108) 118.

[218] Heineke (n104) 218.

[219] Röller, Stennek and Verboven (n108) 118; Bishop (n139) 78.

markets – arguably be a hopeless venture.[220] Besides internal growth and contractual relations (licensing etc.), JVs can be a particularly relevant alternative. A research JV, for example, may not *a priori* be less anticompetitive than a merger, yet it will be so in the majority of cases.[221]

Timing

Timing is another relevant aspect in determining alternatives to the merger under scrutiny. Irrespective of which time frame should be allowed for,[222] applying a time frame in the context of merger specificity different from that applied in the context of general timing of efficiencies would be incoherent. Dynamic efficiencies resulting from a merger only find consideration under the Guidelines if they realise within a relatively short term. Nothing else can be valid for effects resulting from *alternatives* to the merger, i.e. the same restrictive time frame should be applied. Consequently, only those alternatives whose (positive and negative) effects are expected to realise within a rather short time frame should be considered.

Information problems

Another fundamental question raised by the requirement relates to an information problem:[223] where do the merging firms or the Commission generate the information necessary for the assessment (and if the information cannot be generated, how are the information gaps treated when it comes to a decision)? The Commission will in most cases not have access to the necessary information, but will rely on the parties themselves, its competitors or other third party testimony. Again,[224] the comparison that has to be drawn is not one between the *status quo ante* and a hypothetical *status quo post*, but rather between two or more hypothetical results (the merger on one side, the expected outcomes of the less restrictive alternatives on the other). In general, information problems simply multiply here: ‘while it is difficult enough to prove that an efficiency exists, it is even more difficult to show that no other reasonable means of achieving the efficiency (with less anticompetitive poten-

[220] HW Friederiszick and L-H Röller, 'Ökonomische Analyse in der EU-Wettbewerbspolitik' (EU Commission, Brussels 2005) http://europa.eu.int/comm /competition/speeches/text/sp2005_012_de.pdf (12 January 2006) 18.

[221] Schwalbe (n172) 80; K Kugler and R Siebert, 'Market Power versus Efficiency Effects of Mergers and Research Joint Ventures: Evidence from the Semiconductor Industry' (NBER Working Paper Series, No 10323 2004) 16; W Nye, 'Can a Joint Venture Lessen Competition More than a Merger?' (1992) 40 Econ L 487, 489 for cases with a different outcome.

[222] section 3.4.2.

[223] For a more general discussion on information problems see section 4.3.

[224] section 3.4.1.

tial) exists'.[225] The more complex the area in which such assessments have to be made, the more difficult (and, arguably, subjective) the assessment itself will be. Certain alternatives will be theoretically possible, but not operable in practice. Especially in the field of R&D and innovation, experts will frequently differ as to what works and what does not. Different paths of R&D, for example, all have their own uncertainties, advantages and disadvantages. Again, the margin of discretion remaining for the Commission is considerable. The burden of proving the absence of realistic alternatives – at least from the Commission's point of view – rests on the merging parties.[226] The *absence* of available alternatives might, however, be even more difficult to prove than their existence.

Comment

The wording of the Guidelines implies an objective nature of the merger specificity test while the information problems indicated above render this largely impossible. Still, the Commission should avoid making normative judgements by 'second-guessing' business decisions to merge or not to merge. Where the comparison between two alternatives does not result in a clear and unequivocal disadvantage of the merger, the merger specificity requirement should not lead to a prohibition of the transaction.[227] On the face of it, however, it will be difficult for dynamic efficiencies to overcome the hurdle of merger specificity.

3.4.5 Pass-on to consumers

Merger-related efficiency gains can either be pocketed by the parties (e.g. cost savings), be passed on to shareholders (e.g. in the form of higher dividends) or consumers, or these alternatives can be combined.[228] According to the wording of both the ECMR ('technical and economic progress' has to be 'to the consumers' advantage')[229] and the Guidelines ('efficiencies have to benefit consumers')[230], EC merger control appears to favour the third option.

[225] DA Yao and TN Dahdouh, 'Information Problems in Merger Decision Making and Their Impact on Development of an Efficiencies Defense' (1993) 62 Antitrust LJ 23, 40.

[226] Guidelines (n105) [85]; sections 3.4.1/3.4.6.

[227] cf. International Competition Network, *Project on Merger Guidelines, Report for the Third Annual Conference in Seoul* (2004), 13.

[228] Areeda, Hovenkamp and Solow (n110) ¶974a ff.

[229] Article 2(1)(b) ECMR.

[230] Guidelines (n105) [78]-[84].

Background

The main legal purpose of the pass-on requirement is to ensure consumers' share of merger-related benefits.[231] According to the consumer welfare standard (CWS) at the Guidelines' baseline, wealth transfers from consumers to producers are not considered beneficial. This is a welcome clarification since the Commission's case practice is not entirely clear in this regard: in *GE/Honeywell*[232] and *Metso/Svedala*[233], for example, the Commission raised objections not least because the merged entity would possess cost advantages over its rivals – although this would in turn have enabled it to price more competitively and thus to pass on efficiencies to the consumer.

The focus on price effects

To assess the pass-on of efficiencies under a CWS is, after all, to assess the price effects of efficiencies.[234] The Guidelines do not give indications as to how new or better products or greater innovation efforts are to be considered – such non-price related benefits usually result in unchanged or increased prices.[235] According to Georg Drauz, however, consumer welfare 'is a multidimensional concept', going down when 'prices go up, when consumption levels go down, when the quality of products deteriorates'.[236] It remains open how such a broad notion of consumer welfare is to be accommodated in practice.[237] If consumer welfare is enhanced through better quality of a product, the previous discussion[238] has revealed considerable difficulties both with quantitative and qualitative analysis. Another aspect relates to the difficulties with cross-market analysis:[239] if efficiencies do not occur 'in those relevant markets where it is otherwise likely that competition concerns would occur'[240], they are by definition not passed on to the *relevant* consumers (consumers of 'new' products are often different from those consuming the 'old' products).[241] The Commission

[231] RM Vernail, 'One Step Forward, One Step Back: How the Pass-On Requirement for Efficiencies Benefits in FTC v. Staples Undermines the Revisions to the Horizontal Merger Guidelines Efficiencies Section' (1998) 7 Geo Mason L Rev 133, 152. Regarding its *political* purpose, Leary (n148) Fn 93: 'The assumption that sellers are already much richer than buyers is just too deeply entrenched'.

[232] *General Electric/Honeywell* (n98); *Boeing/McDonnell-Douglas* (Case IV/M877) Commission Decision 97/816/EC (1997) OJ L 336/16 [353]/[378].)

[233] *Metso/Svedala* (Case COMP/M2033) Commission Decision 2004/254/EC [2001] OJ L 88/1[137]/[201].

[234] section 3.4.1; de la Mano (n144) 52.

[235] K Kiljański, '"Pass-on" in Merger Efficiency' (2003) 26 World Comp L&Econ Rev 651ff.

[236] G Drauz and M Reynolds, *EC Merger Control: A Major Reform in Progress* (Richmond Law & Tax, Richmond 2003) 266.

[237] K Kinne, 'The "Efficiency Defence" in the US-American Merger Policy' (HWWA-Diskussionspapier 67/1998), 26.

[238] section 3.4.1.

[239] section 3.4.3; Guidelines (n105) [81].

[240] ibid.

[241] Strohm (n107) 122ff.

has chosen a similar approach in their Guidelines to Article 81(3) ECT: 'the net effect of the agreement must at least be neutral from the point of view of those consumers directly or likely affected by the agreement'.[242]

For these reasons alone, the pass-on requirement will be difficult to overcome for dynamic efficiencies *not* resulting in lower prices.[243]

Variable and fixed costs

Recital 80 of the Guidelines refers to the difference between variable and fixed costs: the time frame within which economies have to realise to be cognizable focuses on short term effects.[244] If efficiencies translate to savings in variable costs, a pass-on to consumers can usually be expected within a reasonably short time limit. At least in the short term, the relationship between variable costs and consumer prices is usually more direct than that of fixed costs and consumer prices. Where claimed efficiencies translate into fixed costs savings, it will usually take longer until these are reflected in lower consumer prices.

What does this mean for dynamic efficiencies? Even if they result in quantifiable cost reductions within the short term, they will often relate to fixed rather than to variable costs.[245] Whereas process innovations may often result in savings in variable costs, virtually all other dynamic efficiencies such as economies through horizontal integration of complementary R&D resources, avoidance of parallel R&D, faster product innovation, etc. translate into savings in *fixed* costs. If savings in fixed costs are practically not taken into account or heavily discounted, the prospects for dynamic efficiencies further deteriorate.[246]

Clearly, the question whether certain costs are variable or fixed depends on the time horizon applied. Efficiencies can, for instance, be fixed on a time line of two years, but variable in the longer run. Determinants constraining a hypothetical price reduction are therefore – even in the short run – not only variable costs, but also costs *fixed in the short run.* In many innovative industries, pricing mechanisms do not draw a strict distinction, but take 'overhead' into account, effectively including the amortisation of fixed costs.[247] Economic studies have shown that up to 70 percent of the companies in an industry set prices by

[242] Guidelines on the Application of Article 81 (3) [2004] OJ C101/97 [85].

[243] Heineke (n104) 215; *BASF/Eurodiol/Pantochim* (Case IV/M2314) Commission Decision 2002/365/EC [2002] OJ L 132/45 [162]; *Nestlé/Perrier* (Case IV/M190) Commission Decision 92/553/EEC [1992] OJ L 356/1 [133].

[244] Guidelines (n105) [80]; section 3.4.2.

[245] Schwalbe (n172) 79.

[246] cf. Canadian Competition Bureau (n167).

[247] Areeda, Hovenkamp and Solow (n110) ¶974d.

marking up some version of full costs.[248] One could thus argue that the Guidelines draw conclusions based on a somewhat artificial distinction.[249] According to William Kolasky,[250] 'the paradigm on which these statements are based is plainly a smokestack industry in which prices are driven by marginal costs'. This has little to do 'with competition in many sectors (…) where price and competitive behaviour is driven far more by innovation and by recurring R&D costs than by production costs'.

If the Commission takes the focus on variable cost savings serious, it will become difficult for most dynamic efficiency claims to overcome the pass-on requirement. Statements by Commission officials point in this direction.[251]

How much has to be passed on?

Efficiencies have to be passed on 'to a sufficient degree'.[252] But what is 'sufficient'? In the context of Article 81(3) ECT, the Commission explains the concept of the 'fair share' of benefits for the consumer:

> (…) the pass-on of benefits must at least compensate consumers for any actual or likely negative impact caused to them by the restriction of competition (…), the net effect of the agreement must at least be neutral from the point of view of those consumers directly or likely affected by the agreement.[253]

Article 81(3) does thus not require *all* efficiencies to be passed on to consumers, but only so much as is needed to offset expected anticompetitive effects. Analogies in the merger context, however, appear to be difficult: efficiencies are not considered within a true 'efficiency defence', but as a factor within the overall analysis. Since there is no plain trade-off between anticompetitive effects and expected pass-on, it is difficult to predict the extent to which the Commission will expect efficiencies to be passed on to the consumer.[254] Moreover, the notion of a 'limited pass-on' can by definition only apply to *quantifiable* efficiencies. A non-quantifiable dynamic efficiency, such as a new product, is by definition passed on to the consumer in full. In any case, as has been seen above, efficiencies realised in a market separate from that on which the anticompetitive effects of the merger in question occur may not be taken into account at all.

[248] DT Painter, 'How and in What Context Do Cost Savings of Various Kinds Affect Business Decision Making?' (Roundtable: Understanding Mergers, Washington DC, 2002) 236; cf. V Govindarajan and RN Anthony, 'How to Use Cost Data in Pricing Decisions' (1983) 65 Management Accounting 30; E Shim and E Sudit, 'How Manufacturers Price Products' (1995) 76 Management Accounting 37.

[249] Leary (n148) Fn 94.

[250] Kolasky (n121) 4.

[251] Bishop (n139) 78.

[252] Guidelines (n105) [84].

[253] Guidelines on Article 81 (3) (n242) [85].

[254] Ilzkovitz and Meiklejohn (n130) 12.

Measuring efficiencies is already a difficult task.[255] To go one step further by making estimations as to *how much* of the efficiency gains so quantified will be passed on and how much will be not is even more difficult. Considering these imperfections, parties will arguably claim *full* pass-on of efficiencies. Equally likely, this will be unrealistic and overstated.[256] A firm with market power usually pockets some of the gains and passes some on. Complete pass-on arguably occurs in two cases: either the merged entity faces a perfectly vertical demand curve – something which virtually never occurs – or price regulation forces complete pass-on.[257] Exaggerated claims would most likely not be noted in favour of the parties' credibility: in *FTC v. Staples Inc.*, for example, a 66 percent pass-on of the cost savings was alleged, while the FTC – based on their own studies – calculated a mere 15-17 percent. The court accepted the FTC's finding and rejected the claims as exaggerated.[258]

Requiring merging firms to prove (complete) passing on as a distinct requirement would amount to a 'killer qualification', since '[t]he only sure way of making such a showing would be to prove that the merger is taking place in a near perfectly competitive market'. If that were the case, however, 'the merger would not have been a matter of concern in the first place'.[259]

To the extent that a merger results in considerably reduced competition post-merger, there is less likelihood that efficiencies are passed on since the question whether or not to do so may now be within the internal decisional discretion of the merged entity.[260] In those cases where it would make a difference, a strict pass-on requirement will likely prevent consideration of efficiency claims.[261]

The situation may be different if the market is already prone to collusion *before* the merger takes place. The more collusion there is in a *post*-merger market, the smaller the pass-on of cost reductions to consumers. Cost efficiencies may, however, contribute to an increased likelihood of pass-on post-merger since a merger can have external effects on collusive markets by destroying the symmetry in cost structures between the market partici-

[255] section 3.4.1.

[256] Ilzkovitz and Meiklejohn (n130) 12.

[257] Areeda, Hovenkamp and Solow (n110) ¶971b.

[258] *FTC v. Staples* 970 F Supp 1066, (DDC 1997) 1066; DT Scheffman, M Coate and L Silvia, 'Twenty Years of Merger Guidelines Enforcement at the FTC: An Economic Perspective' (2004) 71 Antitrust LJ 277, 315-316.

[259] R Pitofsky, 'Proposals for Revised United States Merger Enforcement in a Global Economy' (1993) 81 Geo Mason L Rev 195, 208.

[260] O Budzinski and A Christiansen, 'Aktuelle Reformen in der Europäischen Wettbewerbspolitik' (Philipps-Universität Marburg, Volkswirtschaftliche Beiträge 06/ 2004) 5; Bundeskartellamt (n149) 9; Schmidt (n77) 359.

[261] Pitofsky (n259) 490. Similar: Federal Trade Commission (n109) ch. 2; Brodley (n145) 584; PL Yde and MG Vita, 'Merger Efficiencies: Reconsidering the "Passing-On" Requirement' (1996) 64 Antitrust LJ 735, 739; Yao and Dahdouh (n225) 41ff.

pants.[262] This can lead to a decreased likelihood that collusion is successful and, in turn, to an increased likelihood that cost efficiencies are actually passed on.[263]

Comment

The pass-on requirement may foreclose efficiency considerations ‘because it is so difficult to establish and because it prevents consideration of large efficiencies if there is only some probability that such efficiencies will be passed on to consumers’.[264] As shown above, this becomes particularly manifest in case of dynamic efficiencies. As a result, the pass-on requirement is one more reason why respective claims are likely to face considerable difficulties before the Commission.

3.4.6 Verification

The task to provide substantial evidence for a sufficiently strong degree of direct proof of efficiencies is demanding, as has been illustrated so far. It is thus decisive (i) who bears the *burden of proof* and (ii) which *standard of proof* is underlying Article 2(1)(b) ECMR and the Guidelines.

Burden of proof

The only reference to the burden of proof in the ECMR is contained in Recital 29, stating that any efficiencies ‘put forward by the undertakings concerned’ will be considered.[265] One interpretation would be that the parties have to at least advance efficiency claims, i.e. the Commission would not have to consider *unclaimed* merger-related benefits. As regards the standard of proof, the Guidelines point out that ‘[e]fficiencies have to be verifiable such that the Commission can be reasonably certain that the efficiencies are likely to materialise’, since ‘[m]ost of the [relevant] information (…) is solely in the possession of the merging parties’. It is therefore ‘incumbent upon the notifying parties to provide in due time all the relevant information’.[266] In other words, the burden of proof appears to rest entirely on the parties’ shoulders. They have to assert a claim, have to substantiate it accordingly *and* provide ‘all the relevant information’. Arguing with information asymmetries, most academic commentators support this view.[267] This would – as under US merger control –

[262] section 2.4.2.
[263] Röller, Stennek and Verboven (n108) 88.
[264] Yao and Dahdouh (n225) 42.
[265] Recital 29 ECMR.
[266] Guidelines (n105) [86]- [87].
[267] e.g. FM Fisher, 'Horizontal Mergers: Triage and Treatment' (1987) 1 J Econ Persp 23, 36.

amount to a burden of proof to rebut a *prima facie* evidence that the merger will be anti-competitive.[268] But is this actually in line with the ECMR and general principles of procedure?

The onus of proving the incompatibility of a merger with the common market as set out in Article 2(3) ECMR rests on the Commission.[269] Efficiency claims are assessed as an integral part of the SIEC test.[270] It is not a separate defence the parties would have to prove independently of compatibility or incompatibility of the merger with the Common Market. Consequently, the burden of proof cannot rest solely with the merging firms – if there is no significant impediment to effective competition, there is no room for the Commission to prohibit the merger. Otherwise, the general principle of judicial investigation underlying the ECMR would have to be left unapplied.[271] Interestingly, according to Section 9.3 of Form CO, submitting information is voluntary and '[f]ailure to provide information on efficiencies will not be taken to imply that the proposed concentration does not create efficiencies'.[272] Quite contrary to the Guidelines' wording, this implies that it is the Commission which bears the burden of proof: even if the parties do not claim efficiencies *at all*, this cannot be interpreted to their disadvantage, let alone if they fail to provide the necessary information to assess a claim.

To shift the burden of proof in relation to efficiencies would require a legal basis in the ECMR. It is questionable, however, whether the rather vague reference in Recital 29 of the ECMR can be sufficient.[273] Notwithstanding this, in the light of indeed obvious information asymmetries between the parties and the Commission,[274] it will be advisable for the parties to submit relevant information as early as possible in the course of the procedure, so that the Commission is in a position to undertake a thorough analysis of the transaction.[275] Moreover, the parties in any case have other, more general information obligations, e.g. Article 11 ECMR.[276] In case of failure to comply with this obligation, Article 14 ECMR even stipulates that fines may be imposed on the parties.

[268] Heineke (n104) 220.

[269] R Whish, *Competition Law* (5th edn LexisNexis UK, London 2003) 836.

[270] section 3.3.2.

[271] C Luescher, 'Efficiency Considerations in European Merger Control - Just Another Battle Ground for the European Commission, Economists and Competition Lawyers?' (2004) 25 ECLR 72, 85; R Bechtold, *EG-Kartellrecht* (C. H. Beck, Munich 2005) FKVO Art. 2 Rn 25; cf. *Germany v Council* Case C-280/93 Germany v Council [1994] ECR I-4973 [78]; A Baumhof, *Die Beweislast im Verfahren vor dem Europäischen Gerichtshof* (Nomos Verlagsgesellschaft, Baden-Baden 1996) 212; Heineke (n104) 80.

[272] Regulation 802/2004 (n113) Annex I Section 9.3 Fn 1.

[273] Bürger (n195) 108.

[274] cf. section 4.3.2.

[275] Luescher (n271) 85.

[276] ibid 84.

Vice versa, the Commission has a duty under Article 190 ECT to provide reasoned arguments and robust evidence for its decisions. When the Commission issues a clearance decision on the basis of efficiencies, it takes 'ownership' of the claim – if its decision is challenged in court, the Commission will have to prove that 'the efficiencies are sufficient to prevent negative competition effects of the merger'.[277]

In conclusion, the Commission cannot *generally* impose the burden of proof on the merging parties. In some cases, especially where the efficiencies claimed are not *prima facie* speculative, it may be forced to undertake inquisitorial steps itself.

Standard of proof – what kind of information should be supplied?

The Guidelines contain a list of potentially useful sources such as 'internal documents that were used by the management to decide on the merger', other examples could be planning documents estimating post-merger price reductions or, in relation to dynamic efficiencies, a R&D 'road map' for the time after the merger could be provided.[278] Generally, the evidence provided must enable the Commission 'to foresee a clearly identifiable positive impact on consumers'.[279]

Particularly with regard to dynamic efficiencies, the perception of the merging firms themselves will often be overly optimistic, even as regards internal and confidential assessments.[280] A healthy bias towards the neutrality of the facts presented therefore seems to be appropriate – particularly, synergies predicted by the firms themselves occur in less than 40 percent of transactions.[281] All in all, internal documents will often be of limited value. Firms know that the Commission attaches more credibility to pre-notification evidence,[282] and 'producing' such documents as soon as a merger is even remotely considered should not be too difficult.

In any case, the Commission will have to test the facts and forecasts stemming from information provided by the parties – unfortunately without reliable adversarial processes. Efficiencies – especially dynamic efficiencies – are rarely verifiable on an objective basis, but rather depend on the evaluation of information largely internal to the merging firms. Even the parties themselves may sometimes not be in the possession of all relevant infor-

[277] G Drauz, 'An Efficiency Defence for Mergers: Putting an Intricate Puzzle Together' (2004) 1 ZWR 254, 265; to the same effect: Strohm (n107) 120.

[278] Guidelines (n105) [88]; International Competition Network (n227) 31 and Yao and Dahdouh (n225) 42.

[279] Guidelines (n105) [86].

[280] M Motta, *Competition Policy: Theory and Practice* (CUP, Cambridge 2004), 242; Camesasca (n77) 276.

[281] Leary (n148) Fn 82-85 with references; KPMG International, *The Morning After. Driving for Post Deal Success* (2006) 2ff.

[282] Schwalbe (n172) 89.

mation to appraise fully the prospects of the claimed efficiencies, *inter alia* due to confidentiality restrictions before a merger is executed.[283]

Promising evidence for efficiencies will have to indicate a 'clearly identifiable positive impact [of the merger] on consumers'. One might argue that this high standard[284] effectively results in a probability threshold to be imposed on efficiency claims which has to be exceeded before the Commission takes efficiencies into consideration at all:[285] if the evidence provided falls short of proving the stipulated level of likelihood, the claimed efficiencies will be rejected. A number of US judgements address this issue: in *FTC v. Staples*, the old standard of 'clear and convincing evidence' was held to impose on the merging firms 'the nearly impossible task of rebutting a possibility with a certainty'. Instead, a slightly relaxed 'credible evidence' standard was applied, according to which the parties have to demonstrate that 'the evidence [provided by the FTC] gives an inaccurate prediction of the proposed acquisition's probable effect'.[286] Yet, lower probability standards do not necessarily improve the prospects of efficiency claims.[287] In *FTC v. Heinz Co.*, for example, the court emphasized that efficiencies have to 'represent more than mere speculation and promises about post-merger behaviour' and demanded efficiencies of 'extraordinary' extent.[288] If, however, one *decreases* the probability threshold, but at the same time *increases* the minimum extent of efficiency gains, this is no more than transferring the 'uncertainty discount' from the level of *probability* to that of *extent*. In the light of the strict requirements and the special uncertainties inherent to this type of efficiency, the hurdle of sufficient verifiability is likely to be too high in all close or even moderately close cases.[289]

3.5 Conclusion

The new legal framework for merger-related efficiencies improves clarity and represents a 'more economic approach': the Commission will take into account economic efficiencies in its substantial appraisal of a transaction. At the same time, this is unlikely to change markedly its enforcement practice. It appears as if the Guidelines express the Commission's grown willingness regarding competition *policy* to consider efficiency claims,

[283] Böge and Jacobi, 'Effizienzen' (n108) 118.

[284] section 3.4.1.

[285] HA Shelanski and ML Katz, 'Merger Analysis and the Treatment of Uncertainty: Should We Expect Better?' (Berkeley Program in Law & Economics, Working Paper Series, No 178/2005) 5.

[286] *FTC v. Staples* (n258) 1089; Muris (n120) 749.

[287] J Kattan, 'The Role of Efficiency Considerations in the Federal Trade Commissions Antitrust Analysis' (FTC Hearings, November 14, 1995) 3.

[288] *FTC v. H.J. Heinz Co.* 246 F3d 708 (DC Cir 2001) 720.

[289] Areeda, Hovenkamp and Solow (n110) ¶971d.

yet the position of competition *law* (as interpreted by the Commission) stays precautious. The Commission's general statements on the importance of dynamic efficiencies are significantly undermined by the high thresholds applied in practice. It is admittedly inherent to the consumer-centric focus at the bottom line of the EC merger control regime that potential anticompetitive effects of a merger face very low tolerance, and it is logically consistent that potentially offsetting benefits from the transaction are approached with scepticism. The Guidelines, however, express a 'very conservative' attitude, as the Commission's Chief Economist Lars-Hendrik Röller has put it.[290]

Dynamic efficiencies are particularly complex and thus difficult to forecast, measure, analyse and verify. Some of the requirements in the Guidelines can not or only most difficultly be applied to dynamic efficiencies, and the uncertainty inherent to innovation adds to the scepticism towards this type of efficiency claims. Do firms have to establish certainties or at least high probabilities where neither certainties nor high probabilities exist?[291] Any firm seeking to advance such claims should recognize that it will carry a heavy burden as to all the elements of the claims.[292] In the light of their limited prospects of success, costs connected to the provision of substantial evidence could be prohibitively high.[293]

All in all, the new EC merger regime leaves very little room for dynamic efficiencies. The first question raised at the outside of this paper thus has to be answered in the negative. The analytical framework of the new merger regime can only to a very limited extent accommodate dynamic efficiency considerations. This leads to the second question: should such efficiencies instead be given more room in the Commission's substantial appraisal of a transaction? Are there no better ways to deal with efficiency claims than what the Guidelines suggest, i.e. do we by definition *over-regulate*, or are there alternative solutions which manage to take a more receptive approach, possibly even giving more weight to dynamic efficiency considerations?

Before we discuss various alternative approaches to dynamic efficiency consideration in chapter 5, the following chapter 4 will focus on the basic problems behind the difficulties with dynamic efficiency analysis identified above. In doing so, I will attempt to carve out a set of critical aspects that have to be taken into account when testing and evaluating proposals to refine the present analytical framework.

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290 Bishop (n139) 79.

291 section 4.3 with more details.

292 The International Competition Network (n227) 34 notes that '[i]n the U.S., adverse court decisions have led some antitrust lawyers to advise their clients not to make the effort necessary to put forward their best efficiencies case'; TJ Muris, 'Opening Remarks' (FTC Roundtable, Understanding Mergers, Washington DC, 2002) 2.

293 cf. section 4.5.

4 Benchmarks for dynamic efficiency analysis

4.1 Introduction

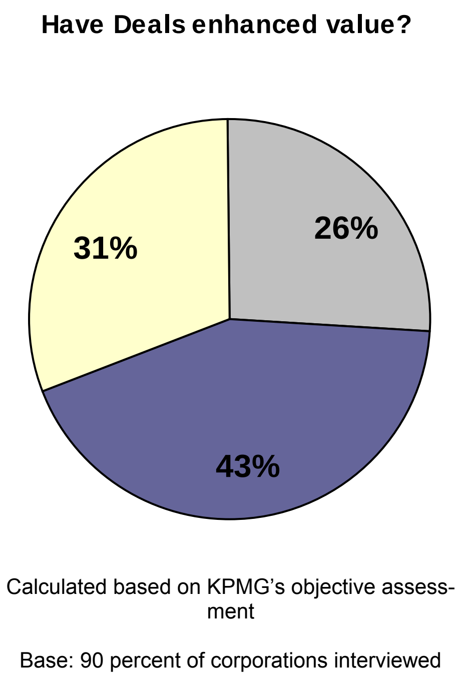
We have seen in the previous chapter that dynamic efficiencies are unlikely to play an important part in the current merger control regime. We now turn to the second question raised at the outset of this paper: what are the main problems of dynamic efficiency analysis in practice, and what would adequately improve the current analytical framework of efficiency analysis?

This chapter is devoted to the first part of this question, i.e. it aims to identify crucial problems and according benchmarks against which proposals to refine dynamic efficiency analysis can be tested and evaluated. Before turning to the substantial discussion, section 4.2 provides a brief insight into the empirical side of merger-related efficiencies. Section 4.3 then focuses on information problems in dynamic efficiency analysis. It briefly introduces the different types of information problems and analyses how they affect dynamic efficiency analysis in practice. Following this, section 4.4 deals with decisional processes and connected lacks of legal certainty, business predictability and decisional transparency for the merging parties. Closely connected with this, section 4.5 discusses financial risks and detrimental cost effects resulting from certain weaknesses in the current decisional framework as regards dynamic efficiencies. At the end of this discussion, we will then be ready to go on to discuss several possible modifications to the structure of efficiency analysis in chapter 5.

4.2 Are mergers efficiency-enhancing at all?

In the light of daily news on transactions failing their performance and synergy targets, one could indeed ask whether mergers yield efficiencies at all, or whether the idea of merger-related benefits is more theory than practice. As a study published by the accountancy firm KPMG in January 2006 shows, two out of three transactions turn out not to be value enhancing (Figure 4.1). Considering that there appears to be a strong correlation between the enhancement of shareholder value and the meeting of merger-related efficiency targets (Figure 4.2),[294] this could be seen as a worrying result for the proponents of claimed efficiencies as a factor in the substantial appraisal of a merger.

[294] KPMG International *The Morning After. Driving for Post Deal Success* (2006) 2; cf. A Jacquemin, 'Theories of Industrial Organisation and Competition Policy - What are the Links?' (European Commission, Forward Studies Unit 2000) 28ff.



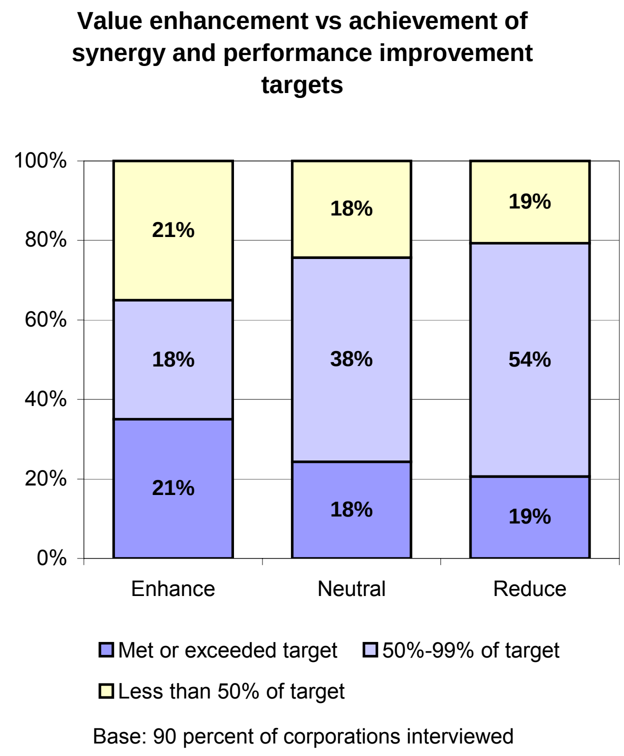


Figure 4.1[295] ***(Value-enhancing effects)***

Figure 4.2[295] ***(Achievement of targets)***

On average, the distribution of efficiencies across mergers appears to have a mean of zero, or might even be negative.[296] Does this mean that the Commission is right not to give much weight to efficiency considerations, especially to the highly speculative type of dynamic efficiencies? Not necessarily. Even though mergers do on average not yield large efficiencies, a particular merger can still do so, be it through more economic production processes, new or improved products, or other economies. We should thus not be misled by statistics – an effective merger control regime should be able to filter out and to identify efficiency-creating, net beneficial transactions, i.e. it should aim at reducing type II without increasing type I errors. In-depth assessment should thus not generally dismiss (dynamic) efficiencies purely on the face value of them rarely occurring.

4.3 The problem of insufficient and asymmetric information

The previous chapter demonstrated that information problems severely affect the Commission's decision making process in relation to virtually all requirements applied to

[295] KPMG International (n294) 2.

[296] S Bishop, 'The Role of Economics in EC Antitrust, Interview with Lars-Hendrik Röller' (2004) 18 ABA Antitrust Mag 75, 79.

(dynamic) efficiency claims.[297] Either the Commission is provided with incomplete or (intentionally or unintentionally) false firm-internal information, or the information needed for assessing certain aspects of a claim is simply not existent. Consider, for instance, two merging parties arguing that an intended transaction will bring about significant innovative gains in the form of a new technology. The typical problems the Commission will face are (i) claims being overstated or at least difficult to verify and/or (ii) highly uncertain predictions of future developments of innovative activity, market success or new products, etc. In other words, the Commission has to take account of both information asymmetry (see section 4.3.2) and information insufficiency (see section 4.3.1):

4.3.1 Information insufficiency

Post-merger developments are naturally uncertain. It is difficult to assert, for instance, whether a product yet undeveloped will be a market success, whether claimed gains in innovative activity are specific to the transaction and actually suffice to offset expected anticompetitive effects. Different expert opinions will most likely come to different results, and other sources of information may show significant inconsistencies.[298] These imperfections are commonly referred to as ‘information insufficiency’, i.e. the required information is simply not existent. In consequence, predictions of certain facts can neither be rebutted nor verified, but only tested for their logical consistency.[299] The discussion in section 3.4 showed that this is of special relevance to practically all requirements that claimed dynamic efficiencies have to satisfy in order to be considered relevant by the Commission.

4.3.2 Information asymmetry

There are often wide information gaps between the actors in the process of merger control. *Hayek* describes this phenomenon as ‘a body of very important but unorganized knowledge’ since it cannot be aggregated in statistical form.[300] The utilisation of such private knowledge in a decision making process thus necessarily requires the integration and participation of the information source. What is commonly termed ‘information asymmetry’ or

[297] On economic implications of information problems: J Lagerlöf and P Heidhues, 'On the Desirability of an Efficiency Defense in Merger Control' (CEPR Discussion Paper Series No 3841/2003).

[298] A Christiansen, 'Die "Ökonomisierung" der EU-Fusionskontrolle: Mehr Kosten als Nutzen?' (2005) 56 WuW 285, 288ff.

[299] A Christiansen, 'Anmerkungen zum Wissensproblem in der Wettbewerbspolitik' (19th Hohenheimer Oberseminar, Hohenheim 2002) 4; FA Hayek, *Individualism and Economic Order: Essays* (Routledge & K. Paul, London 1949) 71 f.

[300] FA Hayek, 'The Use of Knowledge in Society' (1945) 35 Am Econ Rev 519, 521.

‘information disparity’ provides the information source with the possibility to be selective and strategic about the transfer of information.[301]

Firms are naturally the best source of information on merger-related efficiencies.[302] Regarding dynamic efficiency claims, the fact that firms usually do not disclose their full R&D secrets prior to their merger further aggravates the problems of unpredictability and ‘unobservability’[303] resulting from information asymmetry.[304] At the same time, there is a clear incentive to submit facts in favour of the transaction, while firms will usually show little willingness to communicate potential detrimental effects.[305] This often leads to overstated, sometimes fabricated claims. External repercussions are not to be feared: regulation through securities laws will regularly not apply to internal statements towards the Commission, and consumers usually lack the economic power to punish firms for unsubstantiated assertions.

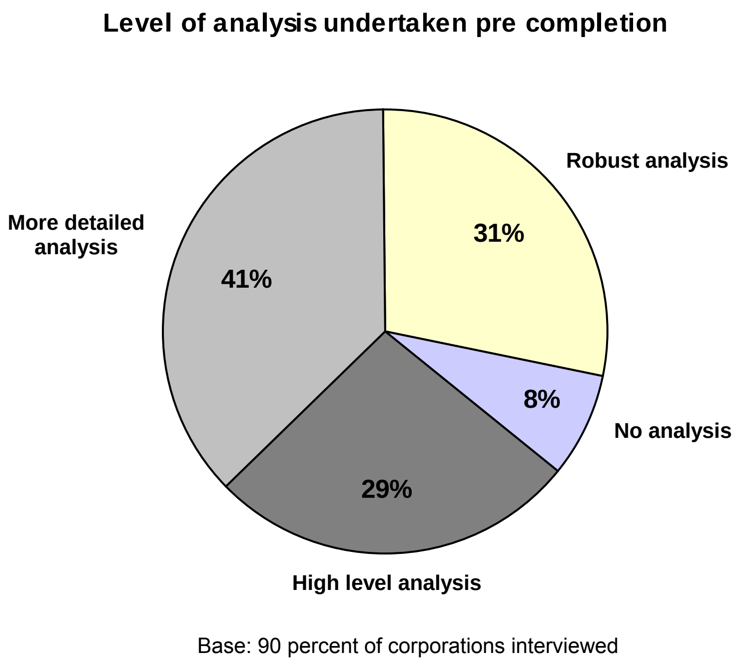


Figure 4.3*[306] *(Level of Pre-completion Analysis)

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[301] DA Yao and TN Dahdouh, 'Information Problems in Merger Decision Making and Their Impact on Development of an Efficiencies Defense' (1993) 62 Antitrust LJ 23 26.

[302] Lagerlöf and Heidhues (n297) 3, 22; C Luescher, 'Efficiency Considerations in European Merger Control - Just Another Battle Ground for the European Commission, Economics and Competition Lawyers?' (2004) 25 ECLR 72, 84.

[303] DA Yao and SS DeSanti, 'Innovation Issues under the 1992 Merger Guidelines' (1993) 61 Antitrust LJ 505 520.

[304] ibid 508.

[305] U Schwalbe, 'Die Berücksichtigung von Effizienzgewinnen in der Fusionskontrolle - Ökonomische Aspekte' in P Oberender (ed) *Effizienz und Wettbewerb* (Duncker&Humblot, Berlin 2005) 63, 89.

[306] KPMG International (n294) 3.

But even *bona fide* claims may be too euphoric[307] – according to the abovementioned KPMG study, 'companies may not yet be prepared to make an honest assessment of the success or otherwise of their deals'.[308] Two thirds of merger transactions do not create economic value, while 93 percent of the firms themselves claimed the opposite – the perception gap appears to be wide. Interestingly, only about half of the companies perform robust or high level synergy analysis prior to completion (Figure 6). All in all, one might argue that the Commission will hardly ever be provided with a full picture of the firms' own expectations and intent behind the transaction, let alone of the actual efficiencies resulting from it.

4.3.3 Problems specific to dynamic efficiency analysis?

The problems discussed above are not specific to dynamic efficiencies or efficiencies in general, but ubiquitous to *ex ante* analysis in competition law. Any decision maker in a non-static economy faces problems resulting from 'constitutional uncertainty'.[309] Type I and type II errors are unavoidable. At the same time, it is especially challenging to predict future economic developments when it comes to efficiency analysis, and even more so in case of dynamic efficiencies, as was demonstrated in the previous chapter.[310] Moreover, the usual characteristic of merger control – that every case has relatively unique characteristics so that new cases usually lack close analogues – is aggravated: dynamic efficiencies occur on firm level, not on market level,[311] i.e. (i) an individual firm's characteristics are naturally even more diverse and thus more difficult to compare, and (ii) the possibility for strategic provision of information is exacerbated since the firm level is necessarily outside the realm of the Commission as a competition authority.

4.3.4 Consequences for the following analysis

We have identified information insufficiency and information asymmetry as crucial problems of efficiency analysis. Especially in relation to dynamic efficiency claims, it is crucial to distinguish carefully between the problems of *insufficient* and of *asymmetric* information: while high evidentiary standards are appropriate where information necessary for the analysis is in the possession of the merging parties, it may be inappropriate and outcome-

[307] CW Conrath and NA Widnell, 'Efficiency Claims in Merger analysis - Hostility or Humility?' (1999) 7 Geo Mason L Rev 685, 697ff (regarding US cases).

[308] P Hosking 'Bosses 'Are Deluded' over Success of Deals' *The Times* (London January 24 2006) 40.

[309] D Schmidtchen, 'Schlussvortrag' in P Oberender (ed) *Effizienz und Wettbewerb* (Duncker&Humblot, Berlin 2005) 177 with reference to Hayek.

[310] section 3.4.1.

[311] Yao and Dahdouh (n301) 24.

determinant to apply an overly strict standard where the requisite information is simply not existent, since it 'places the risk of error in decision making with one particular side'.[312] One should not demand certainties where only probabilities can be delivered.

The problems of information insufficiency and information asymmetry cannot be entirely avoided, yet it might be possible to alleviate them. Accordingly, an alternative approach should comprise a strategy going beyond simply leaving the problem to the parties alone.

4.4 Lack of legal certainty, business predictability and decisional transparency

Before the 2004 reform of merger control, firms neither had clear guidance as to whether efficiencies would be taken into account at all, nor of what would be required to make a *cognizable* efficiency. All this 'led to a vicious circle of excessive caution, limited use of efficiency arguments and a consequent lack of case law and legal certainty'.[313] Legal certainty, however, is a fundamental principle of EC law (derived by the ECJ from Article 6(1) EC),[314] and it does not come as a surprise that an increase in legal certainty was one of the driving forces behind the 2004 reform. Especially the introduction of the Merger Guidelines,[315] which seek to provide 'transparency and predictability regarding the Commission's merger analysis, and consequently greater legal certainty for all concerned', were an important step in this direction.[316] The Guidelines 'should provide a sound economic framework for the assessment of concentrations with a view to determining whether or not they may be declared compatible with the common market'.[317] But has this end been achieved?

Efficiency analysis in the light of legal certainty and business predictability

Under a formal understanding, legal certainty allows individuals to assess reliably the legal consequences of their actions. Reactions by public authorities can be predicted with a certain degree of precision,[318] their margin of discretion being limited by accountable legal

[312] ibid 28.

[313] L Colley, 'From "Defence" to "Attack"? Quantifying Efficiency Arguments in Mergers' (2004) 25 ECLR 342, 344.

[314] J Raitio, *The Principle of Legal Certainty in EC Law* (Springer, New York 2003) 125ff; T Schilling, 'Bestand und allgemeine Lehren der bürgerschützenden allgemeinen Rechtsgrundsätze des Gemeinschaftsrechts' (2000) 27 EGZ 3, 17; A Christiansen, *"Ökonomisierung" der EU-Fusionskontrolle - Steigt damit die Rechtssicherheit?* (2004) 6 f.

[315] Guidelines on the Assessment of Horizontal Mergers under the Council Regulation on the Control of Concentrations between Undertakings (EC) OJ C31/03 (Guidelines).

[316] EU Commission (DG Comp), 'Press Release IP/02/1856 of 1 December 2002' (2002).

[317] Council Regulation (EC) 139/2004 of 20 January 2004 on the Control of Concentrations between Undertakings (the ECMR) [2004] OJ L24/1[28].

[318] F Rittner, 'Die Rechtssicherheit im Kartellrecht' (1969) 19 WuW 65, 76.

rules.[319] Translated to the area of efficiency analysis, the law should allow firms to assess reliably *ex ante* the prospects of an efficiency claim.[320] Firms have to be clear on their competitive strategy and make their business decisions accordingly, taking into account their respective legal surroundings. According to Walter Eucken, 'economic policy should set up an expedient framework for the economic process. This process should be held up consistently, only to be changed with caution',[321] which implies business predictability as the pragmatic aspect of legal certainty.[322] In its 2001 governance white paper, the Commission itself stressed accountability, coherence, and predictability as 'principles of good government'.[323]

Has the new framework achieved the intended increase in legal certainty? As explained in the previous chapter, the Commission's margin of discretion is considerable, and it is unclear which efficiencies are cognizable, let alone whether an individual claim will decisively influence the Commission's decision making process. One might argue that, unfortunately, the Guidelines only provide very limited guidance. Case law also does not provide guidance on the matter, since the Commission is still waiting for appropriate cases to clarify its position.[324]

At the same time, it should not be forgotten that under the old regime it was even doubtful whether efficiencies could play the role of a counterweight to anticompetitive effects *at all*, let alone which criteria had to be met. At least the former question is now clarified. As regards precise criteria, however, improvement of practical predictability is limited.[325] Firms would arguably prefer to know *ex ante* that an intended merger will not be allowed rather than undertaking extensive efforts to prove efficiencies which are then not deemed merger-specific or substantial enough.[326] An alternative to the current approach should – while staying economically sound – provide the parties with increased legal certainty and decisional transparency.

[319] Christiansen (n314) 6.

[320] J Swift, 'Certainty or Lottery?' in J Fairburn and JA Kay (eds), *Mergers and Merger Policy* (OUP, Oxford 1989) 264ff.

[321] W Eucken, *The Foundations of Economics: History and Theory in the Analysis of Economic Reality* (William Hodge, London 1950) 289.

[322] Christiansen (n314) 7; Rittner (n318) 77.

[323] EU Commission, 'White Paper on European Governance' (COM(2001) 428 final, Brussels 2001).

[324] M Kocmut, 'Efficiency Considerations and Merger Control - Quo Vadis, Commission' (2006) 27 ECLR 19, 21.

[325] S Voigt and A Schmidt, 'Mehr Rechtssicherheit in der Europäischen Fusionskontrolle?' (2003) 53 WuW 897, 905.

[326] AA Fisher and RH Lande, 'Efficiency Considerations in Merger Enforcement' (1983) 71 Calif L Rev 1582, 1655.

4.5 Detrimental cost effects

Currently, the prospects of most dynamic efficiency claims appear to be rather limited – only in a very small number of cases will they be the decisive counterweight.[327] In comparison to the *status quo ante*, the situation has thus not changed dramatically. Arguably, the same applies to amount and extent of type I and type II errors.[328]

Enforcement & litigation costs

Claiming dynamic efficiencies in a merger case is a very uncertain venture whose prospects are difficult to predict. Besides error costs, this uncertainty entails several other detrimental cost effects:[329] it can increase firms' costs of finding desirable merger targets and may even hold them back from pursuing a potentially desirable transaction.[330] If a merger is notified to the Commission, significant costs are likely to accrue for both sides: the parties incur significant transaction and litigation costs prior to the Commission's decision (let alone potential litigation costs if the decision is challenged in court), while the Commission itself faces considerable enforcement costs.[331] If after a costly and time consuming procedure the Commission does not allow an intended merger, seriously detrimental effects on financial resources and the reputation of a firm may be the consequence.

A case-by-case approach, as opposed to a general presumptions approach,[332] inevitably requires firms to undergo a full-grown economic and legal analysis for each efficiency claim. Judging from the Guidelines,[333] the burden of proof rests with the parties, and it will usually be a costly venture for firms to generate the required evidence. Quantitative analysis especially entails the 'heavy and time-consuming task of gathering the relevant data',[334] which has to be undertaken not only by the parties to the merger, but also by the Commission itself.

While from the parties' perspective, such costs are only a fragment of the overall costs of the transaction, a consequence of the relatively vague language of the Guidelines

[327] Schwalbe (n305) 87; K Kinne, *Effizienzvorteile in der Zusammenschlusskontrolle* (Nomos, Baden-Baden 2000) 178.

[328] cf. K Heyer, 'A World of Uncertainty: Economics and the Globalisation of Antitrust' (2004) 72 Antitrust LJ 375, 385ff; HW Friederiszick and L-H Röller, 'Ökonomische Analyse in der EU-Wettbewerbspolitik' (EU Commission, Brussels 2005) http://europa.eu.int/comm /competition/speeches/text/sp2005_012_de.pdf (12 January 2006) 18.

[329] Heyer (n328) 376.

[330] Fisher and Lande (n326) 1655.

[331] U Böge and W Jacobi, 'Die Berücksichtigung von Effizienzen in der Fusionskontrolle' (2005) 60 BB 113, 119.

[332] Described in section 5.2.1 below.

[333] section 3.4.6.

[334] G Loriot, F-X Rouxel and B Durand, 'GE/Instrumentarium: A Practical Example of the Use of Quantitative Analysis in Merger Control' (2004) (1) ECCPN 58, 62.

and the lack of guiding case law should not be underestimated: since efficiencies are practically the only possible 'counterweight' to expected anticompetitive effects, there is a tendency to bring claims in even the most remote cases. Connected costs will thus not only be incurred in 'close cases', and their aggregate amount will thus be substantial in relation to the average outcome of merger cases.[335] All in all, it might appear that – under the current approach – it does not make economic sense to bring dynamic efficiency claims. An alternative to the current approach would therefore have to economise significantly on information costs while at the same time keeping litigation and enforcement costs low.

4.6 Summary

This chapter analysed crucial problems and according benchmarks against which proposals to refine dynamic efficiency analysis can be tested and evaluated. It identifies four crucial problems: (i) the problem of insufficient information about potential efficiencies, (ii) the problem of existent information asymmetrically distributed between the Commission and the merging parties, (iii) the lack of legal certainty and business predictability for the firms and (iv) potential detrimental cost effects of the respective approach for both the Commission and the merging parties. In the light of these findings, the next chapter will discuss possible modifications to the current approach to efficiency analysis.

[335] Fisher and Lande (n326) 1695: 'type III error".

5 New recipes for the future?

5.1 Introduction

At the beginning of the previous chapter, we asked what the main problems of dynamic efficiency analysis in practice were, and what the adequate improvements to the current analytical framework of efficiency analysis would be. Answering the first part of the question, the analysis highlighted crucial issues to be considered when discussing proposals for refinement of the current approach to (dynamic) efficiency analysis. Armed with these results, we are now ready to go on to the second part of the question and discuss alternatives to the current approach and to what extent they might relax the difficulties pointed out above. Section 5.2 will therefore look at alternative procedural structures suggested by various scholars (general presumptions approach, remedies approach, and conditional clearance of transactions connected with an *ex post* review). We will see that, although each of these proposals could alleviate one or two of the problems identified above, they do not offer thorough solutions and even cause additional difficulties and drawbacks. Section 5.3 therefore attempts to put forward an alternative proposal which relies on a periodic, institutionalized *ex post* audit of the Commission's case practice as regards merger-related efficiencies in order to empirically review the decisions, their soundness, and their practical effects. In the long term, this proposal – if integrated into a four-stage decision-making process – might relax the difficulties discussed in the previous chapter.

5.2 Procedural alternatives?

When discussing alternatives to the current structure of efficiency analysis, we have to keep in mind the four critical issues referred to in the previous chapter: a workable alternative should have a strategy to deal with information insufficiency and asymmetry, it should bring about as much legal certainty and decisional transparency as possible and it should avoid detrimental cost effects both for the merging parties themselves and the Commission as the competition authority.

In light of these aspects, we look at the three arguably most important ideas put forward to refine efficiency analysis as follows: section 5.2.1 briefly discusses the so-called 'general presumptions approach', an *ex ante* procedure that does not assess transactions on a case-by-case basis, but from the perspectives of previously determined, structural indicators such as market shares.

In contrast to taking an *ex ante* perspective, one could also ask what could be done in the aftermath of a transaction if claimed efficiencies fail to occur. There are two possible approaches: on the one hand, the Commission could safeguard the realisation of claimed efficiencies through commitments or remedies, an option examined in section 5.2.2. On the other hand, it could – if claimed efficiencies fail to realise – try to restore the competitive *status quo ante* by intervening *ex post* (see section 5.2.3).

5.2.1 General presumptions approach

Instead of considering a potential trade-off between individual efficiencies and anti-competitive effects, a *general presumptions approach* (GPA) applies general, pre-determined structural indicators such as market shares or the HHI.[336] Below these thresholds, mergers are assumed to be generally efficiency enhancing or at least neutral.[337] Exceeding the indicators is interpreted as showing possible efficiencies as insufficient to offset anticompetitive effects of the transaction. The merger would be prohibited.

Information costs are considerably reduced:[338] the extensive and time-consuming task of preparing economic studies on the effects of the merger can be avoided. Litigation and enforcement costs are also likely to decrease: if rules are clear-cut and do not leave inadequate margins of discretion, it makes little sense to take action against a Commission decision legally applying these rules.

Closely connected to this, the parties themselves enjoy high legal certainty and business predictability – they have a clear (structural) *ex ante* indicator whether or not their transaction has a chance to be cleared.[339] Problems of information asymmetry do not occur, since the decision is purely objective. Legal certainty would increase.[340]

The problem of information insufficiency, however, would not be solved, but merely shifted to another level. The GPA assumes that the chosen structural indicators adequately measure both anticompetitive effects and efficiencies.[341] In any abstract indicator, however,

336 RH Bork, *The Antitrust Paradox: A Policy at War with Itself* (Free Press, New York 1993) 128; RA Posner, *Antitrust Law: An Economic Perspective* (University of Chicago Press, Chicago 1976) 112; AA Fisher and RH Lande, 'Efficiency Considerations in Merger Enforcement' (1983) 71 Calif L Rev 1582, 1670-1677.

337 F Ilzkovitz and R Meiklejohn, 'European Merger Control: Do We Need an Efficiency Defence?' (5th Annual EUNIP Conference, Vienna 2001) 21ff; U Schwalbe, 'Die Berücksichtigung von Effizienzgewinnen in der Fusionskontrolle - Ökonomische Aspekte' in P Oberender (ed) *Effizienz und Wettbewerb* (Duncker&Humblot, Berlin 2005) 63, 91.

338 Ilzkovitz and Meiklejohn (n337) 22.

339 section 4.2.2.

340 A Christiansen, 'Die "Ökonomisierung" der EU-Fusionskontrolle: Mehr Kosten als Nutzen?' (2005) 55 WuW 285, 293.

341 Schwalbe (n337) 91.

there is some arbitrariness and imperfection. Even restricted to smaller firms, it is not clear why mergers should *in general* bring about efficiency gains – quite the contrary.[342] The *legislator* and not the competition authority would have to decide, and it is difficult to see why its expertise should be higher. Dynamic efficiencies would unlikely receive more weight anyways: the enhanced uncertainty of their actual realisation would also have to be 'priced in'.

The GPA would thus not represent an improvement, but clearly a step back in the Commission's effort to apply a 'more economic approach' in its enforcement practice.[343] It must therefore be rejected as an alternative to the current case-by-case approach.

5.2.2 Commitments and remedies

Another option would be to deal with the problem of – especially – uncertainty as to the realisation of efficiencies with the tool of commitments and remedies.

At the end of Phase I or Phase II of its merger investigations, the Commission reaches one of the following decisions: (i) the transaction is compatible with the common market,[344] (ii) it is prohibited,[345] or (iii) it is cleared subject to certain modifications of the original transaction plan.[346] Such modifications, offered as remedies by the parties, have to be 'proportionate to the competition problem and entirely eliminate it'.[347]

A common typology distinguishes between *structural* and *behavioural* remedies.[348] While structural remedies such as the divestiture of a subsidiary can hardly contribute to the realisation to efficiencies,[349] this appears at least theoretically possible through behavioural remedies. Although they cannot safeguard the realisation *as such* (innovation, for example,

[342] section 4.1; KPMG International, 'The Morning After. Driving for Post Deal Success' (2006) <http://www.kpmg.co.uk/pubs/300128_morning_after.pdf> (7 February 2006) 2ff.

[343] Ilzkovitz and Meiklejohn (n337) 22.

[344] Articles 6(1) and 8(1) Council Regulation (EC) 139/2004 of 20 January 2004 on the Control of Concentrations between Undertakings (the ECMR) [2004] OJ L24/1.

[345] Article 8(3) ECMR.

[346] Articles 6(1)(b), 6(2) and 8(2) ECMR; generally see MJ Reynolds and R Burnley, 'Merger Remedies in a New Era of EC Merger Control' in BE Hawk (ed) *31st International Annual Fordham Corporate Law Institute Conference on International Antitrust Law & Policy* (JP, New York 2004) 397, 398-99.

[347] Guidelines on the Assessment of Horizontal Mergers under the Council Regulation on the Control of Concentrations between Undertakings (EC) OJ C31/03 (Guidelines) [30].

[348] A Ezrachi, 'Behavioural Remedies in EC Merger Control - Scope and Limitations' (University of Oxford CCLP Working Paper (L) 13/05 2005) 1.

[349] U Böge and W Jacobi, 'Die Berücksichtigung von Effizienzen in der Fusionskontrolle' (2005) 60 BB 113, 117; cf. A Cosnita and J-P Tropeano, 'Merger Control with Asymmetric Information - What Structural Remedies Can and Cannot Achieve' (EUREQua, Universite de Paris I 2005) 5ff.

cannot be prescribed or promised), the range of conceivable remedies is sufficiently broad[350] so that a number of options is theoretically conceivable:

First, behavioural remedies could address *firm internal* conditions conducive to the realisation of claimed dynamic efficiencies. The parties could, for instance, undertake to develop certain new products (involving specific patents or other key technologies). But how should the conditions of such a remedy be determined *ex ante*? The prescription of a certain behaviour can – if anything – facilitate, but not guarantee, the realisation of efficiencies – not every new product, for instance, represents an innovative gain. In other words, there is insufficient information to draft an appropriate remedy.

Second, 'quasi behavioural' remedies[351] could address positive externalities, aiming at spill-over effects and diffusion of innovation: firms could be obliged to facilitate competitors' access to key infrastructure and technology, e.g. through licensing technology resulting from merger-related dynamic efficiencies.[352] In the light of the highly complex issue of spill-over effects,[353] however, the draft of such a commitment appears problematic,[354] and realisation of dynamic efficiencies as such could be undermined if the incentive to further innovate was reduced by a too restrictive commitment.[355] Furthermore, it can be extraordinarily difficult to ensure *effective* cooperation of the merged entity in order to make the third-party entry successful.[356] In any case, a serious problem is that the application of such a remedy would be dependent on the expected dynamic efficiencies actually materialising – if they do not occur, the remedy would be pointless.[357] As a result, the parties would paradoxically be better off if the merger at issue had *only* anticompetitive effects.

Third, behavioural remedies could aim at the *symptoms* of efficiencies, i.e. the realisation of effects such as lower or stable consumer prices. The problem with this is that innovation and dynamic efficiencies hardly translate into price effects.[358] But even where they theoretically do, but fail to do so in practice, behavioural remedies would still require firms to not raise prices. This would be nothing less than pure price control. Let alone that even in

[350] A Jones and BE Sufrin, *EC Competition Law* (2nd edn, OUP, Oxford 2004) 986.

[351] Ezrachi (n348) 11.

[352] cf. *Glaxo Wellcome/SmithKline Beecham* (Case COMP/M1846) Commission Decision of 8 May 2000 [2000] OJ C 170/6 [188]; cf. *Ciba-Geigy/Sandoz* (Case IV/M737) Commission Decision 97/469/EC [1997] OJ L 201/1[275]-[280] or *Boeing/McDonnell-Douglas* (Case IV/M877) Commission Decision 97/816/EC (1997) OJ L 336/16 [117]ff, albeit not in relation to efficiencies.

[353] section 2.4.3.

[354] EU Commission (DG Comp), 'DG Comp Merger Remedies Study' (2005) <http://europa.eu.int/comm/competition/mergers/others/remedies_study.pdf> (1 February 2006) 120.

[355] Reynolds and Burnley (n346) 402/424 (with reference to a relevant FTC study).

[356] M Motta, M Polo and H Vasconcelos, 'Merger Remedies in the European Union: An Overview' (Symposium on Guidelines for Merger Remedies, 17-18 February 2002) 15.

[357] Conditional remedies were accepted in *Glaxo Wellcome/SmithKline Beecham* (n352) [195]/[222].

[358] section 3.4.1.

the absence of price increases, market power could materialize in some other form, e.g. by lowering the quality of the product (an outcome somewhat counter-productive from the perspective of dynamic efficiency).[359]

Common to all alternatives are the problems of unmanageable complexity and practical difficulties in monitoring and enforcement.[360] To determine restoration of effective competition, remedies should not be overly extensive and complex,[361] especially since the Commission has traditionally been averse towards behavioural remedies.[362] While the CFI emphasized in *Gencor v. Commission* that the important question is not whether a remedy is structural or behavioural, but whether it is sufficient to prevent anticompetitive effects of the merger,[363] it appears from the ECJ judgement in *Tetra Laval* that in cases where the *structure* of a market is directly affected by the transaction (as is usually the case where efficiencies come into play), *behavioural* remedies may be watched with greater scepticism,[364] since they do not solve anticompetitive *structural* problems. Especially in the light of the specific complexity of dynamic efficiencies, the Commission will not risk irreversible damages to competition by agreeing to highly complex and uncertain behavioural remedies.[365] The risk of unpredictable detrimental cost effects in the form of type II errors would be too high.

And even for the parties themselves, such commitments would represent an enormous risk potential and connected economically detrimental effects – due to the uncertainty inherent to any *ex ante* analysis of dynamic efficiencies, considerable fines (up to 10 percent of their aggregate turnover)[366] would have to be 'priced into' the overall transaction costs, let alone the fact that the Commission would, under certain conditions, even be empowered to revoke its decision if the firms commit a breach of an obligation. Legal certainty would therefore suffer rather than profit from this approach.

In the light of the above, behavioural commitments and remedies do not represent intelligent tools in dynamic efficiency analysis and have to be rejected as an alternative or 'add-on' to the current approach.

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[359] K Heyer, 'A World of Uncertainty: Economics and the Globalisation of Antitrust' (2004) 72 Antitrust LJ 375, 394.

[360] On enforcement and monitoring of behavioural remedies: Ezrachi (n348) 16ff.

[361] Reynolds and Burnley (n346) 426ff; Commission Notice on Remedies Acceptable under Council Regulation (EEC) No 4064/89 and under Commission Regulation (EC) No 447/98 [32].

[362] cf. its appeal in *Tetra Laval*, Case T-5/02 *Tetra Laval v Sidel* [2002] ECR II-4381, see EU Commission, 'Press Release IP/02/1952 of 20 December 2002' (2002).

[363] Case T-102/96 *Gencor v Commission* [1999] ECR II-753 [313]-[330].

[364] Case C-12/03 P *Commission v Tetra Laval* [2005] ECR I-987 [83]; Ezrachi (n348) 10.

[365] Böge and Jacobi (n349) 118.

[366] Article 14(2)(d) ECMR.

5.2.3 *Ex post* approach

Yet another option, suggested by several American scholars, would be to make the decision whether or not to allow a transaction on a *temporary* basis only, i.e. pending realisation of the claimed benefits and thus the offset of the expected anticompetitive effects.[367] The Commission would then still perform an *ex ante* assessment and deal with anticompetitive concerns as far as possible *before* the merger is executed.[368] *Ex ante* evidentiary standards would be weaker than those imposed *ex post*.[369] After an agreed period of time has elapsed,[370] the Commission would look at the *post*-merger situation to assess the actual realisation of the claimed efficiencies and, if necessary, impose appropriate remedies reaching from fines to disintegration of the merged entity.

Advantages of an ex post approach

A main advantage would be that the information insufficiency problem and the speculative nature inherent in any *ex ante* analysis would be considerably limited.[371] The same is true of the information asymmetry problem, since the merging firms would have quite a strong incentive to make credible efficiency claims, 'empty promises' bearing the danger of subsequent (economic) punishment.[372] The incentives to keep promises and realise the claimed efficiencies would be stronger. The currently heavy *ex ante* verification burden on the firms' shoulders would be somewhat eased. Finally, an *ex post* approach would not have to be restricted to efficiencies, but could also increase reliability and preciseness of the anticompetitive effects analysis.

Disadvantages

It appears that, however, the disadvantages by far outweigh the benefits: first, if the Commission's power to dissolve were considerably extended, there would be a certain imbalance between Article 82 and the ECMR. At present, the Commission is not empowered to break up a company, even if it is persistently abusing its dominant position.[373] Under the

[367] JF Brodley, 'The Economic Goals of Antitrust: Efficiency, Consumer Welfare, and Technological Progress' (1987) 62 NYU L Rev 1020, 1048ff; R Pitofsky, 'Proposals for Revised United States Merger Enforcement in a Global Economy' (1993) 81 Geo Mason L Rev 195, 218; FM Scherer, 'R&D Cooperation and Competition' (Brookings Papers on Economic Activity (Microeconomics) 1991).

[368] JF Brodley, 'Proof of Efficiencies in Mergers and Joint Ventures' (1996) 64 Antitrust LJ 575, 577.

[369] ibid 592.

[370] ibid 579: 3-5 years.

[371] J Haucap and J Kruse, 'Ex-Ante-Regulierung oder Ex-Post-Aufsicht für netzgebundene Industrien?' (2004) 54 WuW 266, 269; Brodley (n368) 581.

[372] L-H Röller, J Stennek and F Verboven, *Efficiency Gains from Mergers, Report for EC Contract II/98/003* (CEPR, London 2001) 120.

[373] Jones and Sufrin (n350) 257.

ECMR,[374] it can currently order dissolution (in full or in part) of a concentration only if (i) an already executed transaction is declared to be incompatible with the common market or (ii) a merger has been implemented in contravention of a condition imposed by the Commission. Why should it be possible, one could ask, to restore competition *ex post* through structural measures under the ECMR, but not under Article 82 EC?

Secondly, it is not a matter of course that restoration of the firms' *pre*-merger structure would also restore respective *market* structures.[375] The probability of irreparable damages to competition might be high. This bears additional relevance in case of dynamic efficiencies, where an *ex post* approach requires sufficiently extensive time frames to be applied.[376]

Thirdly, the cost and the effects on legal certainty of *ex post* dissolution are potentially catastrophic, both for the Commission and the parties.[377] Considerable costs for executing the merger may well be sunk if the transaction is subsequently challenged, and restoration of the competitive *status quo ante* is an extremely complex and equally costly task. For the firms themselves, legal certainty would rapidly decrease. If efficiencies do not realise for *endogenous reasons* (innovation not marketable etc.), the merged entity would still carry the full economic risk.[378]

Fourthly, an *ex post* approach would run contrary to the achievement of efficiencies as such: the object of a merger is the integration of two previously distinct entities, and synergies will only be achieved if there is certainty that a decision on a transaction is *final*. If the parties cannot be sure whether the merged entity will endure, the efforts to integrate will arguably be limited – especially in such sensible areas as innovation and R&D.

These problems are also not alleviated – as falsely argued by Joseph Brodley – if firms could 'opt into' such an ex post approach:[379] Any *post*-merger dissolution would seriously affect third parties, e.g. employees, suppliers and customers, who were not asked before the transaction was implemented, but may now legitimately demand protection of confidence.

All in all, while this proposal certainly alleviates parts of the information problems, it does so at the cost of huge financial risks for the firms, potentially huge enforcement costs for the Commission and potentially irreversible damages to the competitive structure of a

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[374] Articles 6(3)(a), 8(6), 8(4)(b) ECMR.

[375] Brodley (n368) 589; Pitofsky (n367) 225-226.

[376] Section 3.4.2.

[377] Brodley (n368) 606ff/608-9 with counterarguments.

[378] cf. ibid 594ff.

[379] ibid 577/590.

market (type II errors). Furthermore, it contradicts the system of merger control as an *ex ante* structure. While it is an interesting theoretical idea, it is certainly not practically feasible and has to be rejected.

5.3 *Ex post* audit as an empirical tool?

We have seen so far that the suggested changes in the procedure cannot solve the general problems of (dynamic) efficiency analysis as identified above. Does this mean that we by definition *have* to over-regulate mergers when it comes to dynamic efficiency claims? Or are there other ways to at least modestly improve the Commission's decisional processes in this point? Building on the general rule that making 'sound decisions about future public policy issues requires efforts to assess the wisdom of choices past',[380] I will examine the possibility of introducing a periodic, institutionalized *ex post* audit of the Commission's case practice as regards merger-related efficiencies. The analysis is divided into three parts: section 5.3.1 begins by discussing the value of systematic measures to conduct *ex post* analyses of the Commission's case practice as regards (dynamic) efficiencies. The practical benefits for the Commission and the parties in future merger cases are being briefly discussed. Section 5.3.2 then shows how this methodology could be implemented into the Commission's decision-making structure in merger control. Eventually, section 5.3.3 gives an outlook on long-term fields of application for the data from the suggested *ex post* audits.

5.3.1 The rationale of an *ex post* audit

The Commission dedicates few resources to *ex post* evaluation of its own enforcement practice and lacks a systematic process for monitoring the economic consequences of cleared transactions.[381] Although such an *ex post* assessment – if undertaken by the Commission itself – is a cost- and time-intensive venture withdrawing resources from the enforcement process,[382] the benefits of a systematic and permanent *ex post* review of efficiency claims could be considerable, both from the merging firms' and the Commission's

[380] WE Kovacic, 'Evaluating Antitrust Experiments: Using Ex Post Assessments of Government Enforcement Decisions to Inform Competition Policy' (2001) 9 Geo Mason L Rev 843.

[381] P Camesasca, *European Merger Control: Getting the Efficiencies Right* (Intersentia-Hart, Antwerpen&Oxford 2000) 406.

[382] Kovacic (n380) 852 on the US perspective.

perspectives.[383] Arguably, some of the main advantages of the previously rejected *ex post* approach (see section 5.2.3 above) could be utilised within the current *ex ante* structure:

Learning by doing

Economic reality is not static, and neither is competition law and policy. There are strong links between competition law and industrial organisation economics, giving the former 'a strongly evolutionary character that entails adjustments in policy as the understanding of business practices changes'.[384] Competition law enforcement is something of an experiment, and finding the correct mix of policies can involve enforcement decisions that may be intervening too aggressively ('over-regulation') or not aggressively enough ('under-regulation'). Without *ex post* checks, the Commission will hardly be able to determine whether assumptions and hypotheses underlying past decisions involving claimed efficiencies were actually sound.[385]

The Commission already undertook such a review procedure in relation to merger remedies.[386] In a 2005 in-house study, the design, implementation and overall effectiveness of a representative sample of 96 of the 227 remedies adopted from 1996 to 2000 were analysed.[387] According to Commissioner Neelie Kroes, '[t]he findings of this important study will influence our future action' and 'demonstrate the Commission's commitment to evaluate critically and transparently its past policy and practice in order to draw lessons from it'.[388] More generally, 'learning by doing' is a concept visible in the Commission's decisional practice – as demonstrated, for instance, in *BASF/Pantochim/Eurodiol*[389], where the Commission further developed the failing firm defence,[390] based on a review of its decision in *Kali & Salz*.[391] Ideally, however, an *ex post* audit should focus on a set of related matters (i.e. a collection of decisions dealing with, for instance, merger specificity) rather than on individual cases in isolation. This approach is illustrated, for example, in a 2004 study undertaken by

[383] ibid 852.

[384] ibid 844.

[385] D Balto, 'The Efficiency Defense in Merger Review: Progress or Stagnation?' (2001) 16 Antitrust ABA 74, 80; CW Conrath and NA Widnell, 'Efficiency Claims in Merger analysis - Hostility or Humility?' (1999) 7 Geo Mason L Rev 685; cf. *In re General Motors Corp.* 103 FTC 374 (1984) (consent degree); comment by KM Fenton, 'GM/Toyota: Twenty Years Later' (2004) 72 Antitrust LJ 1013, 1021ff; WJ Kolasky and AR Dick, 'The Merger Guidelines and the Integration of Efficiencies into Antitrust Review of Horizontal Mergers' (2003) 71 Antitrust LJ 207, 223.

[386] In the US context: Staff of the Bureau of Competition of the FTC *A study of the Commission's divestiture process* (1999); WE Kovacic, 'Designing Antitrust Remedies for Dominant Firm Misconduct' (2000) 31 U Conn L Rev 1285, 1314; Kovacic (n380) 853ff.

[387] EU Commission (DG Comp) (n354).

[388] EU Commission (DG Comp), 'Press Release IP/05/1327 of 21 October 2005' (2005).

[389] *BASF/Eurodiol/Pantochim* (Case IV/M2314) Commission Decision 2002/365/EC [2002] OJ L 132/45.

[390] A Strohm, 'BASF/Pantochim/Eurodiol: Change of Direction in European Merger Control?' (2001) ECCPN 22, 23.

[391] Joined Cases C-68/94 and C-30/95 *France et al v Commission* [1998] ECR I-1375.

the US General Accountability Office which sought to measure the effects of eight mergers in the US petroleum industry during the years 1997 to 2000,[392] or periodical audits by the Organisation for Economic Cooperation and Development (OECD) regarding the competition enforcement programs of member countries.[393]

Increased decisional transparency

From the Commission's perspective, *ex post* assessment could help to ensure regularity in the Commission's decision making process:[394] when performing an *ex post* audit, the Commission (or an external body undertaking the study) would be free of the restraints faced when a particular decision has to be justified,[395] this being the usual situation under which a case analysis is undertaken.

From the merging parties' perspective, decisional transparency could be enhanced: the results and findings of the audit should be readily accessible for business operators in order to make the Commission's *ex ante* assessment more accountable and to increase legal certainty – *ex ante* transparency is properly effective only if accompanied by sufficient *ex post* transparency.

Time and cost savings

Empirical review could also facilitate the notification procedure and potentially avoid costly and lengthy debate on certain claims. A clear, plausible and transparent argument on why certain efficiencies are considered while others are not could provide firms with an incentive to concentrate on actually promising efficiency claims.

Disadvantages?

At the same time, an *ex post* audit carries certain risks:

Additional costs resulting from the audit procedure have already been mentioned. At the same time, increased transparency could – in the long run – result in a considerable decrease in the costs of enforcement and type I and type II errors. By integrating firms into the information gathering process, e.g. through report obligations etc., practical difficulties for the body undertaking the *ex post* audit could be reduced: since dynamic efficiencies materi-

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[392] US General Accounting Office *Energy Markets: Effects of Mergers and Market Concentration in the US Petroleum Industry* (2004).

[393] WE Kovacic, 'Lessons of Competition Policy Reform in Transition Economies for U.S. Antitrust Policy' (2000) 74 St John's Law Review 361, 394-395.

[394] JE Stiglitz, 'Knowledge for Development: Economic Science, Economic Policy, and Economic Advice' (Annual World Bank Conference on Development Economics 1999) 40.

[395] DJ Neven, R Nuttall and P Seabright, *Merger in Daylight: The Economics and Politics of European Merger Control* (Centre for Economic Policy Research, London 1993) 224.

alise on firm-level, it might otherwise be difficult for an external body to monitor *ex post* developments sufficiently and reliably. Similar to the *ex post* approach previously rejected,[396] it is not entirely clear that an *ex post* audit would reveal an *objective* picture about the soundness of the Commission's *ex ante* reasoning. It can be difficult to determine the origin of, for instance, dynamic efficiencies: they can either result from the merger (as expected) or from other changes in the value-creation chain. *Vice versa*, the prediction of an efficiency can be perfectly sound, but yet proven wrong due to pure externalities. *Ex post* reports would therefore have to examine carefully the background of the realisation or non-realisation of an efficiency to avoid false conclusions.

5.3.2 Procedural implementation – a long-term 'information cycle'

The *ex post* audit as previously suggested should then be integrated into the Commission's decision-making structure in merger control. This would amount to a procedure consisting of four stages of investigation (Figure 5.1) which will be explained in the following:

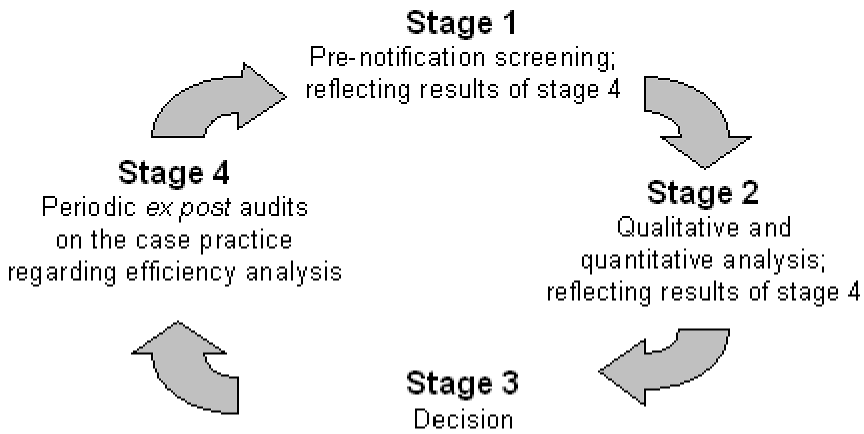

Figure 5.1 (Four-stage approach)

Stage 1: pre-notification screening

Stage 1 aims at minimising errors of claim selection while economising on information costs.[397] Discussions between the Commission and the parties at this stage are already 'an important part of the whole review process'.[398] The results of previous *ex post* audits

[396] Section 4.3.4.

[397] Ilzkovitz and Meiklejohn (n337) 24.

[398] EU Commission, 'DG Competition Best Practices on the Conduct of EC Merger Control Proceedings' (2003) [5(3)].

could be reflected in this stage, providing the pre-notification discussions with a firmer theoretical basis:[399] the parties would be in the position to utilise past audit reports in order to pre-assess their own efficiency claims, while the Commission could be more determined as regards its own assessment, and could accordingly inform the firms. A sound and transparent case practice could also mitigate the consequences of information asymmetry: the firms' own assessment of potential efficiencies would likely become more realistic.

Stage 2: substantial appraisal of the transaction

After notification, the Commission enters into its substantial appraisal of the merger. The Guidelines currently put a stark emphasis on *quantitative* techniques and require efficiencies to be quantified where 'reasonably possible',[400] thereby erecting considerable hurdles especially for dynamic efficiency claims.[401] Due to information insufficiency, the data required for a full-grown quantitative efficiency appraisal will usually not be available, the maximum achievable level thus being a mix of qualitative and quantitative evidence.[402] The Commission could thus first undertake a *qualitative* analysis where it is reasonable to do so, especially in case of dynamic efficiency claims. Form CO could be adjusted accordingly, so that the parties could set out their arguments without extensive and costly quantitative modelling until expressly requested by the Commission. The main purpose of this step would thus not be strict quantification, but rather a more thorough understanding of the transaction's rationale:[403] the focus would be on the benefits expected from the merger, the firm-internal cost-benefit analysis, expected timing of efficiency realisation, etc. In other words: the focus would be on the *soundness* of the claims, less on the overall accuracy of their prospected time scale and extent.[404] Exaggerated and unauthentic claims would likely be filtered out *before* both firms and the Commission incur high costs to prove or contest efficiencies.

Only if a merger 'passes' this first step, and only where quantitative techniques can reasonably be applied, a *quantitative* efficiency investigation would have to be considered.[405]

[399] Section 4.3.5.

[400] Guidelines (n347) [86].

[401] section 3.4.1.

[402] Ilzkovitz and Meiklejohn (n337) 24.

[403] K-U Kühn, 'Reforming European Merger Policy: Targeting Problem Areas in Policy Outcomes' (University of Michigan and CEPR, Paper #02-012 2002) 32ff; C Luescher, 'Efficiency Considerations in European Merger Control - Just Another Battle Ground for the European Commission, Economics and Competition Lawyers?' (2004) 25 ECLR 72, 85; V Verouden, C Bengtsson and S Albaek, 'The Draft EU Notice on Horizontal Mergers: A Further Step Toward Convergence' (2004) 49 Antitrust Bull 243, 279.

[404] Ilzkovitz and Meiklejohn (n337) 25.

[405] ibid 23.

Stage 3: Commission decision on the transaction

After the above analysis, the Commission makes a decision on whether or not to clear the merger. With a view to the intended *ex post* audit, the Commission should (if it clears the transaction) clearly spell out expectations as to merger-related efficiency gains. These expectations could then be specifically addressed and evaluated *ex post*, so that there would be a clear link between *ex ante* assessment and *ex post* audits of the Commission's case practice.

Stage 4: ex post audit

In contrast to the 'provisional clearance and *ex post* review' approach discussed in section 5.2.3, clearance of the transaction would be – as far as efficiencies are concerned – unconditional and final. The Commission would not subsequently challenge the merger for not meeting efficiency targets. At the same time, this is the point where the suggested *ex post* audit would come in (see section 5.3.1). Theoretically, it could be performed by the Commission itself, by external experts, or both. Notably, formal participation of Commission officials could make at least two contributions going beyond what external researchers can achieve. First, Commission officials can provide access to information about the decision making process as such and internal deliberations concerning individual cases. Second, criticism coming from the *inside* of the agency might receive more attention and feedback (i.e. according improvements) than purely passive reception of external studies.[406] On the other hand, the advantages of an *external* audit would be considerable. The costs incurred by the Commission could be kept low by relying on external researchers, e.g. through academic research projects. Moreover, external contributions are likely to make the assessment more objective, bringing in a presumably neutral point of view. All in all, it would appear sensible to have both outsiders and insiders participate in designing and conducting the audits, through cooperation in and mutual contributions to the audit process. Irrespective of who conducts the audits, however, it appears important that *ex post* audits are institutionalised. There should be periodic reporting, e.g. on a yearly basis.[407] If reports or studies were undertaken merely sporadically, the effects on decisional transparency would be rather limited.

Communication of the results of *ex post* audits should not be restricted to Commission officials. Instead, the results should be made public in some form, e.g. through publication on the Commission's website. This would ensure that one of the main objectives, increased decisional transparency, could actually be achieved. Within the 'informational cy-

[406] Kovacic (n380) 853; S Voigt and A Schmidt, *Making European Merger Control More Predictable* (Springer, New York 2005) 156, in contrast, argue for an external review.

[407] Kovacic (n380) 849, 857ff; Balto (n385) 80.

cle' discussed here, the gains in knowledge and experience resulting from the audits could contribute to both stages 1 and 2, thereby completing the cycle (see Figure 7 above).

5.3.3 Long-term end: introduction of non-exhaustive lists of examples

The solution proposed here is, of course, not problem free. It is intended to be a learning cycle that may yield results only in the mid and long term – in the short term, there will be costs for the audits, but no immediate effects on the expertise of the firms and the Commission. In respect thereof, it is important to note that *ex post* audits are meant as a step-by-step approach: in the mid term, they could provide significant gains to the general knowledge about the origin and the particulars of merger-related dynamic efficiencies.

The likelihood of this working will, naturally, depend on funds devoted to the audits, the incentives set for the merging parties themselves and third parties to participate, etc. If, however, the institutionalised learning process as suggested above proves to be instructive, one could – in the long term – argue that it should go one step further: the Guidelines themselves could be adjusted according to the expertise gained from the audits. One way to do so could be to amend the Guidelines with non-exhaustive lists of examples of factual elements and market characteristics which are usually taken into consideration by the Commission when assessing efficiency claims.[408] Such examples could usefully demonstrate the applicability of the theoretical framework to the facts of each individual case and could 'narrow the zone of uncertainty'.[409] In its Guidelines on vertical restraints, for example, the Commission sets out in detail what amounts to a hardcore restriction under the Block Exemption Regulation.[410] In effect, this is the result of a constant evolution of case practice. In relation to cross-market consideration of efficiencies, for example, the Commission could give more guidance on whether or not beneficial effects on other markets will be taken into consideration. Does this depend on specific links between the markets?[411] In which way does the size of relevant markets in relation to the expected extent of efficiencies matter? In case of merger specificity, when is an alternative 'realistic and attainable' from the Commission's point of view?[412] Are there efficiencies that are *by definition* not merger specific? The enumeration could continue.

[408] Cleary Gottlieb, 'Comments on Draft Commission Notice on the Appraisal of Horizontal Mergers' (2003) <http://europa.eu.int/comm/competition/mergers/review/contributions/ref041_cgsh_en.pdf> (12 January) 4.

[409] TB Leary, 'Efficiencies and Antitrust: A Story of Ongoing Evolution' (ABA Section of Antitrust Law, Fall Forum 2002) 12.

[410] Guidelines on Vertical Restraints [2000] OJ C291/1 [46]-[56].

[411] cf. The 1992 Department of Justice and Federal Trade Commission Horizontal Merger Guidelines, 1997 Revision (The US Merger Guidelines) Section 4 Fn 36 (markets have to be 'inextricably linked').

[412] Guidelines (n347) [85].

The Guidelines do, naturally, 'not purport to lay down definitive principles appropriate to every situation'.[413] It is important to note that non-exhaustive lists of examples do not aim at such a structure. Lists of examples could, however, be an opportunity for the Commission to improve accountability of its analysis without mitigating its economic soundness, yet leaving enough flexibility to deal with individual cases appropriately.[414]

5.4 Summary

There are no easy answers to the practical difficulties of dynamic efficiency analysis. We have seen that – in light of the crucial problems of efficiency analysis outlined in chapters 3 and 4 – neither a general presumptions approach, nor remedies, nor an *ex post* approach, can offer a feasible solution.

Naturally, the *post*-merger audit in the sense of an empirical tool and the connected four-stage approach are not silver bullets against information problems, the current lack of legal certainty and transparency, and potential detrimental cost effects of efficiency analysis. They could, however, be a way to deal with the problems in testing over time whether the 'very conservative approach'[415] taken in the Guidelines is actually appropriate. The results of the audits could operate as 'gap fillers' in the Commission's assessment of future cases, providing both the Commission and merging parties with valuable insights into the practical effects of Commission decisions and a better idea of the validity of certain types of efficiency claims in economic reality. It is, of course, not about clearing as many mergers as possible, but rather about filtering out those creating efficiencies and, eventually, benefits for the customer.[416] The suggested four-stage approach could be a step towards a more transparent and constructive approach to efficiencies. In any event, it could provide valuable information and learning effects about an area being – as yet – largely unfamiliar to both competition enforcers and the parties themselves.

[413] C Bellamy, GD Child and V Rose, *Common Market Law of Competition* (4th edn, Sweet&Maxwell, London 1993) § 1-060.

[414] J Kattan, 'The Role of Efficiency Considerations in the Federal Trade Commissions Antitrust Analysis' (FTC Hearings on Global and Innovation-Based Competition, November 14, 1995) 4.

[415] S Bishop, 'The Role of Economics in EC Antitrust, Interview with Lars-Hendrik Röller' (2004) 18 ABA Antitrust Mag 75, 79.

[416] cf. section 4.2.

6 Concluding remarks

This paper explored two questions: (i) how much room is there for dynamic efficiency considerations in EC merger control, and (ii) what are the main problems in practice, and what would adequately improve the current framework of efficiency analysis?

Chapter 2 provided an introduction to the economic implications of the analysis of merger-related efficiencies, highlighting three points:

(1) Mergers can result in anticompetitive effects such as higher market power, inducing further concentration and facilitation of collusion amongst remaining competitors, but at the same time lead to gains in economic efficiency.

(2) There are two types of such gains, static and dynamic. Economists acknowledge that these efficiency gains may offset anti-competitive effects. Dynamic efficiencies, at least theoretically, bear greater potential than static efficiencies.

(3) There are, however, numerous difficulties regarding the practical implementation of dynamic efficiencies, e.g. problems of objective measurement and predictability, information and evidentiary problems, issues of timing and cross-market consideration of efficiencies.

On this theoretical basis, the third chapter analysed the role of dynamic efficiencies under the new merger control regime, focusing on the requirements stipulated in the ECMR and the Commission's Horizontal Merger Guidelines. The most important findings can be summarized as follows:

(1) Efficiencies are required to be quantified where reasonably possible. Quantification of dynamic efficiencies, however, is very difficult, if not impossible. It appears that merger simulation can currently not offer practicable solutions. While the option of qualitative analysis remains, it is yet unclear how strict a standard will be applied.

(2) The Commission appears to take a restrictive approach to the timeliness of efficiencies. Although there is no explicit time limit, the price theory underlying the Guidelines suggests that not more than two years are allowed for efficiencies to realise. This will usually be too short for rather long-term focused dynamic efficiencies.

(3) The Guidelines in principle require efficiencies to occur on those markets where anticompetitive effects are expected. In the light of complex measuring and comparison problems, it is unlikely that the Commission will allow for cross-market analysis. This is problematic for dynamic efficiencies in the form of new products, usually occurring in 'other' markets.

(4) Regarding merger specificity, the Guidelines *prima facie* imply an objective attitude. Information asymmetry and insufficiency, however, render this very difficult, so that it remains to be seen whether the Commission can avoid making normative judgements by 'second-guessing' business decisions to merge or not to merge.

(5) The Guidelines adopt a consumer welfare standard, requiring efficiencies to be passed on to consumers. 'Pass-on' appears to be restricted to price effects. This is particularly troublesome in relation to usually non-price related dynamic efficiencies.

(6) The Guidelines impose the burden of proof for efficiency claims on the parties. This lacks a legal basis in the ECMR.

(7) The Guidelines effectively impose a probability threshold on claimed efficiencies. In the light of their inherently enhanced uncertainty of realisation, the standard of proof is likely to be insurmountable for dynamic efficiency claims.

This paper concludes from its analysis that the new merger control regime is unlikely to change markedly the Commission's enforcement practice. Consequently, dynamic efficiencies do currently not have realistic prospects of success.

Following this, chapter 4 identified crucial problems and according benchmarks against which proposals to refine dynamic efficiency analysis can be tested and evaluated. Four basic problems were identified: (i) the problem of insufficient information about potential efficiencies, (ii) the problem of existent information asymmetrically distributed between the Commission and the merging parties, (iii) the lack of legal certainty and business predictability for the firms and (iv) potential detrimental cost effects of the respective approach to efficiency analysis for both the Commission and the merging parties.

Based on these results, chapter 5 continued with a discussion of suggestions for reform of the procedural approach to efficiency analysis. The most important findings can be summarized as follows:

(1) A 'general presumptions approach' would considerably reduce information costs and increase legal certainty, but would not resolve the information problems.

(2) Behavioural remedies bear the problem of practically unmanageable complexity. For the parties themselves, commitments and undertakings would represent an enormous risk potential. Legal certainty would be reduced.

(3) An *ex post* approach is impracticable *inter alia* for its immense costs and because it causes considerable risks of irreversible damages to competition. It contradicts the *ex ante* approach of merger control.

(4) Based on these results, this paper suggests the introduction of a periodical *ex post* audit regarding merger-related efficiencies. This audit would periodically analyse a selection of cases where efficiencies played a role and evaluate the development of these transactions and the respective Commission decisions in practice.

(5) The paper then constructs a four-stage decision framework within which the *ex post* audit aims – in the long term – to provide both merging parties and the Commission with more solid information about the potential of mergers to create efficiencies and the particulars of such merger-related benefits. *Ex post* transparency could be increased which would, in turn, facilitate *ex ante* transparency and legal certainty.

Clearly, efficiency analysis in general and dynamic efficiency analysis in particular are difficult subjects in practice. But as Williamson stated in his seminal 1968 article on efficiency analysis:

> Once economies are admitted as a defence, the tools for assessing these effects may be expected to be progressively refined. (…) [S]uch refinements will permit both the courts and the enforcement agencies to make more precise evaluations.[417]

[417] OE Williamson, 'Economies as an Antitrust Defence: The Welfare Tradeoffs' (1968) Am Econ Rev 18, 34.

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