Efficiencies in Merger Control: All you Always Wanted to Know and Were Afraid to Ask

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I. Background

The idea of including efficiency perspectives in merger analysis originates with the assumption that while mergers can impede competition, they may also have economic advantages. The goal of efficiency analysis is to facilitate the definition and evaluation of specific advantages and disadvantages of a particular merger. The question of why and whether efficiencies should be included in the analysis of mergers remains controversial and demands clarification. But this is not the only relevant aspect. In terms of specific structural questions, there exists a series of alternatives which, depending on the approaches used, will affect application and economic impact.

There are three main aspects to every efficiency analysis. First, there is the question as to which specific efficiency categories within the merger-control process should be taken into account. Secondly, who is meant to benefit when weighing the relative advantages and disadvantages of a merger. Which translates, in economic terms into the question, which "welfare standard" is valid. For both legal and economic reasons, as well as practicality, the third relevant question is whether efficiencies within merger control are sought through an explicit "efficiency defence" or are, alternately, integrated into the competition analysis. With this in mind, it should be possible to situate the efficiency factor within the guidelines for appraising horizontal mergers according to EC Merger Regulation (ECMR). Since the guidelines stipulated in Article 2 (3) ECMR have already been commented on in detail, this article will focus on those aspects most relevant to the role of efficiencies.

The integration of business efficiency in merger control was not an imperative effect of ECMR reform. While it is true that in states in which the "Substantive Lessening of Competition Test" (SLC Test) is used efficiencies are part of merger evaluation, the new SIEC Test is not identical with the American SIC Test and, furthermore, is not the result of a concept adopted by the Council of Ministers in a moment of particular enlightenment about positive economic effects of mergers. The new test is a political compromise, whose primary point of contention was the identification of so-called unilateral effects. Efficiencies played a secondary role here, if any at all.

The key factor in the role of efficiencies as an instrument of evaluation for merger regulation is the basic economic foundation underlying the material application of the legality test. In this area, the Commission has, in its guidelines for evaluating horizontal mergers, introduced certain revisions to its previous practices. These revisions, it should be pointed out, had already been broadly sketched out in Committee discussions as a scenario under another legality standard: the monopoly test. One change particularly relevant to the subject of efficiency is the adoption of consumer-welfare objectives. These goals are closely related to the idea of measuring mergers against efficiency criteria. Some preliminary background regarding relevant welfare theory will provide a useful basis for subsequent elaboration and analysis.

II. Efficiency Criteria as a Standard for Merger Control

1. Efficiency Analysis and Welfare Economics

The welfare-theory approach basically starts with the assumption that competition is not an end in itself, but an instrument for increasing welfare. It follows that mergers should be judged individually and to a greater degree on the basis of their actual economic effects, which is why merger-control reform is often said to be striving for a "more economic approach."

There is a fundamental difference between this focus on actual effects and the structural approach currently underlying German competition law - which formed a kind of blueprint for the EU Merger Regulation at the time when it was created. In the classical structural approach, no explicit prognoses are laid out regarding the changes in price or quantities resulting from a merger. The sole test is whether the merger allows the new company maneuverability to raise prices.

In hindsight, these differences harbour a key consequence for efficiencies as evaluation criteria: within the structural approach, there is no possibility for efficiencies to play a role, since the structural criteria sets an upper limit, above which efficiencies cannot be taken into account. If however, the analysis is based on actual welfare effects, possible efficiency gains must always be a part of any analysis, since they may always have the effect of increasing welfare.

Another difference to the structural approach is the relevant timeframe. Proponents of the structural approach start with the assumption that due to the loss of competition a company that comes to dominate the market as a result of a merger will gradually lose in the medium term the impetus to strive for efficiency gains and pass the benefit on to the consumer.[1] Structural market changes should therefore not be judged according to short-term profit. They should be evaluated with a view toward whether competition maintains its long-term function as a welfare-boosting impetus for rivalry in the marketplace following the merger or whether there will emerge a serious and lasting impediment to this process as a result of market dominance. Welfare analysis, on the other hand, is based on projected short-term welfare effects. To the extent that there exists a valid consumer standard, the theoretical studies on this subject centres around projected prices. The logical result of this, would be that a merger can only be approved if it does not result in higher prices (within an as yet undetermined timeframe) independent from the change of the market structure.[2] This is based on price-theory models remaining comparatively static, meaning that all conditions remain constant, therefore reflecting a timeframe of zero.

[1] Boege, "Effizienz und Wettbewerb aus Sicht des Bundeskartellamtes" ("Efficiency and Competition from the Viewpoint of the German Cartel Office"), *Schriften des Vereins für Sozialpolitik* (2004), 129, 139

[2] Roeller, Stennek, Verboven, *European Economy* (2001), 31, 95

2. The Welfare Standard

The question of whether efficiencies shall be a valid standard for merger control hinges to a large extent on whether there is adequate knowledge about whether it is actually possible to precisely gauge the effects of the merger and whether, in the context of the specific welfare standard, they can be comparatively evaluated. A comparative evaluation is thesis necessary if the goal is to facilitate the approval of mergers that may have a negative effect on competition, which may however be offset by positive welfare effects. This poses specific conditions regarding the content of the evaluation in question. The Williamson Trade-Off, which forms the theoretical basis for efficiency analysis within economic theory, provides a good illustration of the idea that a decision based on the proposed criteria can only be reached when the opposing effects, namely allocative inefficiencies (welfare losses through monopolization) and productive efficiency (welfare gains through cost savings) of the merger in question can be precisely determined. We will come back to this point later.

Economists usually suggest to base competition policy generally on the effects a decision may have on the welfare as a whole ("total welfare").[3] In relationship to merger control, as illustrated in the Williamson model,[4] this means that a merger could be approved according to the welfare standard if the sum of producer and consumer benefit is positive. In a simplified form, the "total welfare standard" includes cases in which the price rises after the merger (the consequent lowering of consumer benefit being compensated by the efficiency gain of the producer in the form of an increase in producer benefit).

The decision which welfare standard shall apply can not be reached through welfare theory itself, but must be decided normatively. Practically, this means that the decision is a political one. From this point of view, the consumer-surplus standard has certain advantages. Among other things, the position being forwarded here is that a competition agency should not allow the welfare gain of one group (such as the producer) to be compensated with the welfare loss of another (the consumer). The consumer-surplus standard allows, in contrast to the total welfare standard, no disadvantages to the consumer. According to this approach, a merger that leads to increased consolidation and negative effects for competition can only be approved if the consumer benefit increases. The achievable efficiency gain of a merger must be at least partly passed on to the consumer. As stated above, this "consumer pass on" of efficiency gain is mainly measured in prices.[5] Accordingly, a merger that entails projected resultant price increases would not be approved, independent of whatever advantages it may have for the total welfare.

De lege lata, it is not possible to choose a welfare standard entirely on a theoretical model. In the literature on this subject, the core assumption is that European merger-control law is "based on the narrower welfare standard that conforms to the consumer interest."[6] The use of the term "welfare standard" in this context can easily lead to misunderstandings, since, as stated in Article 2 ECMR on the bases for appraisal being "the consumer interest," it

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[3] Schmidtchen, *Schriften des Vereins für Sozialpolitik* (2004), 9, 26
[4] Schwalbe, *Schriften des Vereins für Sozialpolitik* (2004), 63
[5] Ibid., 65
[6] Montag, *Schriften des Vereins für Sozialpolitik* (2004), 95

equates the proper standard with a familiar term from welfare economy. However, some commentators have reached the conclusion that the analysis of mergers may rest solely on the quantitative analysis of prices.

3. Integrated Approach vs. Efficiency Defence and Cognisable Efficiencies

Theoretically, efficiency standards can be integrated into merger regulation in various ways, including as "efficiency defence" and, alternately, as an integrated part of the competition analysis itself ("integrated approach").

An efficiency defence entails a "trade-off, " meaning the appraisers have the option of approving a merger even if it has been determined that doing so will impede competition. In contrast to the integrated approach, the procedure is twofold: the appraisers will weigh any advantages of the efficiency gain against the previously determined disadvantages to competition. In the Williamson Trade-Off, the comparison is between the projected efficiency gains (cost cuts) and the merger–related anti-competitive effects (allocated inefficiencies). The main principle of an efficiency defence is a "rule of reason," which may entail entirely different standards[7] – one reason this concept has been accused of resulting from corporate lobbying.[8] From the viewpoint of welfare theory however, it is necessary (and possible) to tie the decision to welfare criteria (such as that total welfare must increase from the achievable efficiencies).[9]

Within the integrated approach, efficiencies are a factor of competition analysis itself. In other words, efficiencies are an additional element influencing the appraisal of a merger. In this alternate approach, achievable efficiencies of a merger cannot be weighed against its impediments to competition, efficiencies are seen as a factor which might help to solve the competition problem itself. In most of the theoretical studies as well as in suggested merger simulation models this is nothing other than a price reduction (achieved by a gain in efficiency).[10]

The decision to use an integrated approach, provided it is carried through, results in the efficiency analysis providing the blueprint for a partial price-theory analysis. This is evident primarily in the question of which efficiency categories are admissible as cognisable efficiencies and which are not:

- Efficiency advantages enjoyed by consumers in other markets (such as in the form of new products), cannot be taken into account, since they do not contribute to the solution of the competition problem within the relevant

[7] This problem plays a particular role in the application of Article 81, according to Odudu, "Article 81 (3) and Direct Effect," *ECLRev.* (2002), 17
[8] Schuergas, *INFER Research Edition* (2002), 25
[9] Schmidtchen, 30
[10] See also: De la Mano, "For the Customer's Sake"

market. This condition is based on cost-benefit analysis, which examines solely the relationship between <u>prices, costs and quantities</u>. The admissable efficiency gains, therefore, are only those having to do with cost savings.[11]

- Efficiencies must be defined to take into account only the reduction of <u>variable costs</u>.[12] This is based on a theoretical scenario in which the variable costs from an increase in output alone exercise an influence on prices. Fixed costs are, in this model, not part of the price calculation of a profit-based company, since cost limitation is the key factor.

- Product analysis must be limited to "<u>homogenous</u>" goods. Factors unrelated to products in the market determining cost-cutting goals are irrelevant. The implication here is that we are dealing with efficiency gains and cost savings related to the manufacture of existing products.

- Efficiencies must be exactly <u>quantifiable</u>. Price theory evaluates the most profitable price/quantity combination, that is, whether cost cuts lead to <u>optimum profit at reduced prices</u>.

- Projected price cuts resulting from efficiency gains must be achievable in the <u>short term</u>. The price-theory reference model is comparative-static, meaning the situation before and after the merger will be compared against an identical demand curve. A change in demand would change the profit-maximization relationship of price and output. Failure to realize efficiency gains in a timely manner makes drawing up a realistic scenario on which to base decisions significantly more difficult.

This price-theory foundation has been examined in various economic studies[13] that focus specifically on likely efficiency gains in the context projected price reduction. One of these is Farell and Sharpio's "<u>no synergies</u>" theorem, which states that efficiency gains in the form of production shifts alone, without evidence of synergies, do not result in lower market prices.[14] Other studies address the question as to which categories of efficiency gains are specific to mergers or can be achieved by alternate means. Neven and Seabright[15] cite the finding that efficiencies such as increased economies of scale are usually achievable through <u>internal growth</u> as well.

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[11] Strohm, *Schriften des Vereins für Sozialpolitik* (2004), 120

[12] Stennek and Verboven, "Merger control and enterprise competitiveness," *European Economy, Vol. 5*

[13] For an overview, see: Schwalbe, 71

[14] Farell and Shapiro, "Scale Economies and Synergies in Horizontal Merger Analysis," *Antitrust Law Journal, Vol. 80* (2001)

[15] See also: Neven and Seabright, *Synergies and Dynamic Efficiencies in Merger Analysis, Interim Report to DG ECFIN* (2003)

4. Integrated Approach, Efficiency Analysis and Structural Criteria

As shown above, these findings are the result of a consistent application of the integrated approach.. The link to a consumer standard seems at first glance obvious because an <u>independent welfare standard</u> for <u>the evaluation of efficiency gains</u> does only make sense within an explicit "efficiency defence," since only the "defence" creates an appraisal situation that includes a "trade-off" between opposing effects. If, on the other hand, the efficiency analysis is "integrated" into the competition analysis, such a comparative analysis is excluded, since a merger can only be approved if it does not result in any competition problems. Therefore, if we take this argument to its logical conclusion, an <u>integrated efficiency analysis</u> can only be the <u>decisive factor</u> in favour of a merger if the relevant partial price-theory analysis provides not only the criteria for the efficiency analysis itself, but also forms the <u>entire appraisal standard</u>. In other words, reduced prices must, independent of market-related structural criteria, be the decisive factor in approving a merger.

In a theoretical context, this may at first seem trivial. But the question arises how such an efficiency analysis can be <u>integrated into merger control</u> if the law already stipulates <u>market-structural criteria</u> for case-by-case appraisal. It is not immediately apparent which individual combination of factors that do not take efficiencies into account are likely to be rejected, but which could be approved under an "integrated" model.

In this context, it was recommended to apply efficiency analyses <u>only</u> in specific <u>marginal cases</u>.[16] Below a defined particular market concentration, such as that determined by the Herfindahl-Hirschmann Index, it is safe to assume that no competition concerns exist, thereby making a closer analysis of efficiency gains superfluous. At the other end of the scale, approvals are not permitted above a certain higher threshold value. In the range between the upper and lower values therefore, efficiency gains should be the determining factor. Due to the difficulty of precisely gauging the effects of efficiencies, the suggestion is to apply this criteria if the efficiency advantages of a merger are great and the possible <u>impediments to competition</u> are <u>minor</u>.[17] In other words, efficiencies can only then make a difference if the anti- competitive effects of a merger are limited, but nevertheless significant enough as to require that the merger be rejected if no efficiencies were to result.

However, the opinion has been forwarded in economic literature that the "<u>consumer pass on</u>" of efficiency gains is only <u>probable</u> if the companies in question already hold a <u>relatively large market share</u> prior to the merger. Yde and Vita refer to the significance of the elasticity of the demand curve. In price theory, a falling price-turnover curve is a sign of market power. The more the turnover curve approaches the conditions of full competition, the more limited the likelihood that efficiency gains will be passed on to the consumer: "For a significant passing on to occur, the merger entity must face a firm-specific demand curve with considerable downward slope. An inelastic firm-specific demand curve is the essence of an imperfectly competitive market : the greater the competitive imperfection in the market, the

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[16] Roeller, Stennek and Verboven, 100

[17] Verouden, Bengsston and Albaek, "The Draft EU Notice on Horizontal Mergers," *Antitrust Bulletin* (2004), 243, 279

less elastic (all other things equal) will be the firm-specific demand curves."[18] It therefore follows that limiting cases to structural criteria, according to price-theory argumentation, can result in a distorted basis for analysis: Where efficiencies might lead to a fall in prices, efficiency analysis (based on structural criteria) would not be allowed, and where it would be allowed (in cases with limited anti-competitive effects) "pass on" is unlikely.

5. Efficiency, Competition and Knowledge

Welfare-economic theory claims, among other things, that it offers a rational and self-contained system, resulting in standards on which important decisions may be based. Regarding its feasibility in practice, a point for discussion would be under which conditions the concept can actually be applied. An important question is whether there is actually adequate necessary information available for such steps as forecasting the precise effects of a merger on consumer welfare (prices).

In theory, the specific problems of investigating relevant data are ignored, by virtue of the assumption that necessary information on the parameters relevant to the appraisal process will be available at the time a decision is made. But does that reflect reality? Achieving exactitude in such things as specific relevant market data actually poses a significant challenge for a theoretically based efficiency analysis, since an error in the overall result could eventually lead to a reversal. If, as is the case with a valid consumer standard, prices shall not rise, it is necessary to investigate case-by-case whether the new post-merger entity can maximize profit by applying cost savings (efficiency) toward increased output and price reductions. As illustrated by charts based on the Williamson model, the result depends not only on the range of the cost cuts but also very decisively on the development of the demand curve for the respective product.[19]

It may already be difficult for an agency to gauge the likelihood of achieving cost-saving targets. The practical difficulties of determining a demand curve are especially significant since, precisely applied, the investigation of optimum benefit (i.e. the probability of efficiency gains being "passed on" to the consumer) depends on the point in time when mergers and cost savings have been entirely implemented (the usual stipulated timeframe being one to two years). Can we, for example, assume that the demand for the products in question can be precisely forecast and that the data that is provided remains constant throughout the completion of the integration process?

As we can see, there is a fundamental problem in the application of welfare analysis due to the fact that such analysis is static, while the market process being examined is

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[18] Yde and Vita, "Merger Efficiencies: Reconsidering the 'Pass On' Requirement," *Antitrust Law Journal* (1996), 735, 743
[19] Stennek and Verboven, 46

<u>dynamic</u>.[20] As a result, we may pose the question of whether basing merger control on static efficiency criteria is at all practical.

The evaluation of real-world welfare effects necessitates knowledge of the precise structure and exact development of competition processes. But market processes, including among other things the demand for a specific product, are evolving dynamic processes whose exact developments are unknowable. Theoretically based <u>projections of optimization</u> are founded on a <u>myth</u> regarding the availability and attainability of data. In a system that due to the participation of numerous participants remains in constant flux, no maximum gain can be precisely determined.

A balanced view regarding the integration of efficiency criteria in merger control requires not only an understanding of the relative forecasting powers of economics, but also an awareness of the politically adopted competition model. If one sees the primary function of competition not as price reduction under the precondition of meeting costs according to given cost functions, but rather the creation of <u>incentives</u> to improve production functions themselves, toward bringing new products to market or, in evolutionary terms, to find <u>new solutions</u> to unforeseen problems, then efficiency needs to be defined differently. In terms of the efficiency of a company, cost efficiency can therefore be seen as just one part of the capacity of company to compete effectively in the market.

Furthermore, may we say that static efficiency is key to longer term success of a firm in the market? Adapting to new developments means finding solutions for previously unknown products, a process in which pure cost efficiency is not the sole factor. It is equally important for the competitiveness of a firm to accurately anticipate demand trends and to boost productivity. This can be done through genuine technical and organizational progress or, and this is key, through the eradication of <u>X-Inefficiency</u>. X-Inefficiency occurs, according to the Leibenstein definition,[21] when actual production cost exceeds minimal cost. The cause lies in a reduced effort level by company employees who are, within a certain range, able to determine the quality of their work themselves within being bound by the pressures of cost reduction. With the easing of surrounding pressure, individual effort level sinks, resulting in X-Inefficiency. <u>Productivity</u> is therefore not a constant that the welfare economy can ascribe to a given production function, but is subject to <u>constant flux</u>, due to the sustained effort by a company to increase X-Efficiency.

What does this mean for the appraisal of efficiencies within the framework of merger analysis? In economic-theory terms, there exists a measure of internal "corporate control" exercised by the constant threat of <u>hostile takeovers</u> that forces companies to adopts measures aimed at removing X-Inefficiency. A company showing a comparatively high level of X-Inefficiency will achieve low profits, which result in lower market capitalization. Under these conditions, the probability is high that the company in question will be taken over, which will lead to a reorganization of X-Inefficiency and the capacity for greater profit.

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[20] Strohm, "Efficiency Defence for Merger on the Back of Welfare Economics?" *INFER Research Edition, Vol. 8* (2002).

[21] Leibenstein, "Aspects of X-Efficiency Theory of the Firm," *Bell Journal of Economics* (1975), 392.

This point is key. A merger can result in a situation in which stimulation to reduce X-Inefficiencies is lost over the long term. If outside pressure is reduced over the long term due to a merger, the danger increases that the employees and executives of a company will adopt a lower level of effort. The result is a lack of innovation and higher costs.[22] From this viewpoint, it is vital that merger control seek to guard efficiency of <u>competition as a dynamic process</u> in the constant search for new and more efficient solutions and to continue to stimulate the reduction of X-Inefficiency.

III. Efficiency Criteria in the Application of ECMR

1. Market-Dominance Test and Reform

A look at the real-world practice of ECMR reveals that efficiency criteria under the old Market-Dominance Test have not played a role. Furthermore, there was no <u>legal security</u> as to whether and in which form real-world efficiencies would be taken into account at all by the Commission. The cases of Aerospatiale-Alenia/de Havilland[23] and MSG Media Service[24] in particular caused some confusion. In the first case, the Commission clearly included the parties' claims regarding efficiency gains in its appraisal of the case, whereas the efficiency claims of the parties in the MSG Media case were rejected without additional examination due to the foreseeable consequence that the merger would have resulted in clear market dominance. On the other hand, in the case of BASF/Eurodiol, the emergence of market dominance was examined in the context of a restructuring model according to Article 2 ECMR, which reflects in its <u>two-stage approach</u> an "<u>efficiency defence</u>." Economic literature on this matter remains divided on the question of whether the negative consequences of market dominance can be adequately offset by achievable efficiency gains.[25]

The change in ECMR's dominance tests under its "Significant Impediment to Effective Competition" (SIEC) was not aimed at giving more <u>consideration to economic efficiencies of mergers</u>. Greater integration of efficiency questions within the legal parameters played <u>no role whatsoever</u> in the Council's compromise process. However, the efficiency chapter of the guidelines for horizontal mergers, which had been drafted parallel to the reform debate, was provided to the Commission in rough-draft form at a time when it was assumed the agency would maintain its dominance test in unchanged form. In other words, in the view of the Commission it would have been legally possible to integrate efficiency criteria into the unchanged market-dominance test.

The introduction of the new primary criterion <u>SIEC</u> contains no <u>self-contained economic concept</u>. A political compromise reached by the EU Council of Ministers, it is chiefly a reflection of political compromise and aims to ensure that certain oligopolies remain accessible to regulation. The revision of the legal parameters do not therefore represent any

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[22] Weizsaecker, *Verein für Sozialpolitik*, 41, 55.

[23] European Commission Official Journal (1991) L 334/42—Aerospatiale Alenia/de Havilland.

[24] European Commission Official Journal (1194 L 364/1—MSG Media Service.

[25] Berg, *Die Neue Fusionskontrollverordnung (The New Merger Control Regulation)* (2004), 561, 563

obligatory duty on the part of the Commission to take into account efficiency gains as possibly critical criteria.

On the other hand, the SIEC test does not explicit disallow it either.[26] Recital 29 of ECMR states that it is possible "that the efficiency advantages of a merger could counterbalance the effects of the merger on competition, especially the possible drawbacks for the consumer, so that effective competition in the common market or a major part of it will not be significantly impeded through, in particular, the creation or strengthening of a dominant position." In the guidlines for judging horizontal mergers, the Commission makes clear that for the analysis of merger effects it is advisable to take into account well-founded and relevant efficiency advantages.

2. Guidelines for Horizontal Mergers

In its Guidelines for appraising horizontal mergers, the Commission's basic criteria for including efficiencies are summed up in a single chapter. Efficiencies are systematically treated as dampening factors. While Section III describes the analytical parameters for the evaluation of possible impediments to competition resulting from a merger, the following chapters deal with special factors that might contribute toward dampening these effects. Specifically, these factors are: countervailling power (Section IV), the probability of market entry (Section V), efficiencies (Section VI), and failing firms (Section VII). Alone from the systematic approach – not to be confused with the use of this term to refer to, among other things, both forms of efficiency analysis[27]—it is clear that we are dealing not with an "efficiency defence," but with an <u>integrated approach</u>.

This means that efficiency gains <u>cannot counterbalance a definite anti-competition effect</u>. They can only come into play in a marketplace in which there already exists a competition problem (in the relevant market)—and not in tertiary markets. This precludes the possibility of negative effects of a merger for a specific group of consumers being measured against advantages for another group.

While this principle is clear with respect to geographical markets (competition problems of a merger in country A cannot be outweighed by advantages in country B), such a restriction on efficiency gains affecting other product markets in addition to the relevant one do not, according to Verouden, Bengtsson and Albaek,[28] need to be as strict. In cases that include products complementary to the relevant market, achievable efficiency gains can in principle benefit <u>essentially the same consumer group</u> and therefore all consumers. The condition stated in Article 2 (1) (b) ECMR that the Commission must regard the consumer interest in its decisions should, according to Verouden, Bengtsson and Albaek, be interpreted according to <u>welfare theory</u>. This would lead to a <u>higher verifiability</u> of decisions: "(…) the focus on consumer welfare is to enhance the accountability and verifiability of EU merger control. Secondly, the focus on consumer welfare can be said to reflect a Pareto welfare improvement criterion in that it asks whether the benefits for producers will not come at the expense of

[26] Ibid.
[27] Verouden, Bengsston and Albaek, 283.
[28] Ibid., 282.

consumers."[29] This implies a price standard. In other words, the primary concern in the evaluation of efficiency gains is that they lead, following the merger, to reductions in prices.

Two further criteria of the Guidelines can be situated within this price-theory context. According to the guidelines, efficiencies should, if possible, be "quantifiable"[30] and the primary concern regarding an admissible efficiency is the reduction of variable[31] costs. This conforms to the price-theory model by which only a reduction in variable costs (but not fixed costs) combined with a boost in output can lower prices. To be able to calculate on a case-by-case basis whether the merged company has the incentive to pass the merger-related efficiency gains on in the form of lower prices, cost cuts must be measured as precisely as possible. Only if one can assume that cost cuts are so significant that they can boost profit as prices fall, can efficiency gains actually be a key factor.[32] If we abandon this defined framework – such as through a broader definition of admissible efficiency categories – the immediate result is that the basic method of quantitative effects can no longer be used: "(…) mergers leading to technological change and improvement in the quality of the product can improve consumer welfare even with price increases. But these aspects are not measurable and cannot be taken into account with the usual methods."[33]

However, according to the legal text of the ECMR, a case under appraisal can hardly be decided on the basis of a quantitative price analysis.

The guidelines themselves stipulate other factors that must be tested by competition analysis and become part of the overall appraisal. Since these factors, such as the difficulty of securing market access, have to be evaluated qualitatively, the overall assessment must therefore be a qualitative one too. Article 2 ECMR is aimed neither at a single competition parameter (price) nor does it indicate that consumer interest should be interpreted as a short-term welfare effect. If that were the imperative, this interpretation would have to have been imposed much earlier, since this provision was not altered in the reform process and has remained valid in its unrevised reform since ECMR went into effect. Article 2 (1) (a) ECMR does not require a short-term welfare analysis, but does call for an appraisal of the effects of the merger on the structure of all relevant markets.

On the other hand, the Commission clearly states in the Guidelines that it is improbable that efficiency gains could be a decisive factor if certain structural criteria are present. It is "highly unlikely that a merger that leads to a market-dominant position approaching a monopoly or a similar level of market power could be considered compatible with the interests of the common market with the argument that it may produce adequate efficiency

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[29] Ibid., 281.

[30] European Commission, *Guidelines for the Appraisal of Horizontal Mergers*, Recital 86.

[31] Ibid., Recital 80

[32] Drauz, *ZWeR* (2003), 254, 266: "Price is one of the main and most visible parameters of competition. It is also in this dimension in which the neo-classical economic benchmark of consumer welfare has been developed and most studied. Following the theory, there are situations in which cost reductions attributable to a merger are passed on to consumers in the form of lower prices, namely, where this is profit maximising for the merged unit. For example this would hold where the merged entity would achieve reductions in marginal costs. Consequently, a merger should be cleared if such a situation is present."

[33] Ilzkovitz and Meiklejohn, "European Merger Control: Do we need an efficiency defence?" *European Economy, Vol. 5* (2001), 4, 20.

advantages to counterbalance the possible anticompetitive effects."[34] This means that the significance of efficiency advantages is limited to cases in which the likely anticompetitive effects from a merger are relatively minor.

As a further important condition, the guidelines also stipulate — as do the U.S. guidelines — the need for "merger specificity." According to this provision, efficiency advantages must be the direct result of the merger and not be achievable to a similar degree through other, less anti-competitive alternatives.[35] This condition is based on Article 2 ECMR, which emphasizes the causal relationship between a merger and its respective effects, whether positive or negative.[36] For the evaluation of alternate means toward achieving projected efficiency gains, purely theoretical alternatives are not valid options. Only realistic and achievable alternatives can be considered.

IV. Outlook

The efficiency chapter in the Guidelines for evaluating horizontal mergers is directly related to the stated goal of the Commission to appraise mergers in the merger-control process primarily on the basis of their economic effects. The evaluation of effects requires however the prior clarification of this concept. The declared merger-control goal of "consumer welfare" provides, according to its proponents, not only a clear reference point within price theory, but a concept that, assuming these theories can be reliably applied, leads to greater objectivity and justifiability of decisions by virtue of its focus on quantitative analysis.

Taken to its logical conclusion, such an approach to merger control would greatly marginalize the significance of market-structural criteria, since the primary concern would be the price which may be expected following the merger. It follows that mergers with significant efficiency advantages would theoretically lead to a break with the traditional structural approach, since sufficient efficiency gains take the form of reduced prices if the merger parties already hold a powerful market position prior to the merger. The criteria stated in the Commissions' Guidelines follow directly from price theory since they base the admissibility of efficiency claims on a blueprint of relevant parameters (reduction in variable costs, efficiencies shall be quantifiable and have an effect on the relevant market). The analysis focuses therefore on the post-merger price.

But on the other hand, the possibility for efficiency gains becoming the key factor in the approval of a merger is itself limited by structural criteria. According to the guidelines, the inclusion of efficiency advantages can become a decisive factor in an approval only if the anti-competitive effects of a merger are limited. If we also consider that the guidelines themselves stipulate criteria to be qualitatively tested, which, in accordance with Article 2 (1) ECMR, are to be valuated with a view to the structural evaluation of the market affected by the merger, the question arises which sort of practical significance a quantitative efficiency analysis can possibly have for the overall result. Conceptually, the integration of a price-theory welfare analysis into a structural approach results in a sort of hybrid, the two aspects of

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[34] Guidelines, Recital 84.
[35] Guidelines, Recital 85.
[36] Verouden, Bengtsson and Albaek, *Antitrust Bulletin* (2004), 282.

which are based on fundamentally different principles. Therefore, it remains difficult to combine into a consistent whole.

The fact that the guidelines' intended "step toward greater convergence"[37] with American merger control law is not yet within reach can be most clearly seen in the case of efficiency analysis. It may be true that there exists broad agreement with U.S. guidelines in terms of form and content, but that doesn't necessarily mean a greater convergence of decisions.

Unlike the Commission, U.S. agencies are not obligated to justify merger approvals or defend them in court, which implies that the criteria stipulated in the guidelines would be legally relevant only if the agencies planned to deny approval (and bring it to court themselves). Previous experience shows us–there being not a single case so far that was decided in favour of the parties on the basis of efficiency gains–that the demand for "consumer pass on" in particular does indeed pose a serious hurdle.[38] Therefore, the application of these criteria under EU law – accountability for approval decisions as well with the possibility of a lawsuit brought by a competitor—poses a significant legal risk for the Commission should it opt to approve a merger on the basis of efficiency gains. This is especially critical considering the fact that an exact quantification of future events is very difficult to verify.[39]

What alternatives exist?

With welfare theory as the basis, competition decisions are being considered on a model of "second best," the basis being not the narrow consumer standard but the welfare as a whole.[40] Whether such an approach can be achieved, de lege lata, under ECMR is another thing. But from an economic viewpoint, an "efficiency defence" would be, according to these guidelines, the logical approach. Anti-competition effects (such as price increases) could be weighed against efficiency gains resulting from the merger (increase in producer benefit). This leads to an expansion of the cost categories (to include, for example, fixed costs), but does not solve the problems resulting from the static nature of the analysis and which, in this context as well, regularly occur during the investigation into the necessarily precise quantification of effects.

If such a "defence" shall not be restricted to increase in welfare through improved production of an existing product but also through the inclusion of achievable efficiency gains that might lead to new products or improved quality, then it is unavoidable that a case-by-case evaluation encompass a qualitative appraisal. Certainly there are welfare-based appraisals that claim that, with the help of inter-personnel utility comparisons, precise statements as to welfare effects are possible. However, these models, when applied to an actual case, are saddled with significant speculative elements: if a merger can only take place provided that a new product will be brought to market in the future, then it can be assumed that the product

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[37] Ibid., 285
[38] Drauz, 264.
[39] Montag, *Schriften des Vereins für Sozialpolitik* (2004), 95, 107.
[40] Schmidtchen, 22.

does not yet exist. But how can we then we exactly calculate the benefit that it represents (for the consumer)?

Upon closer examination, the Guidelines, although largely conforming to the pattern of an "integrated approach," do not entirely rule out economic efficiencies which are only be admissible in the context of an "efficiency defence." Recital 79 of the Guidelines, for instance, states that efficiency advantages must affect the relevant market, but only "in principle." Recital 81 goes on to say that consumers may benefit also from the products or services that result from efficiency gains in research and development or innovation. Assuming the welfare-theory foundation of the guidelines is to be adhered to, applying this rather carefully worded criterion demands however a rather broad interpretation of the term consumer welfare, such as the definition suggested by Drauz: "Consumer welfare can be conceived as the difference between consumers' willingness to pay for consumption and the price paid. It is a multidimensional concept, incorporating all aspects that have an impact on consumers."[41]

However, it is important to emphasize that the legislator has not equated the "interests of the consumer" as referred to in Article 2 (1) ECMR, with the term "consumer welfare," which is borrowed from the vocabulary of welfare economics. As indicated above, a qualitative comparison of various factors is ultimately always necessary in individual decisions, even if the quantitative factors alone are recognized as cognisable efficiencies in the narrow concept of partial market analysis. When it comes to promoting efficiency as a factor of key practical significance, the most useful method would certainly not be to saddle it with the burden of proof regarding quantitatively examined welfare effects.

The more practical alternative of openly adopting such an "efficiency defence" by measuring welfare effects for the consumer without requiring proof would be accused of opening the door to anti-competitive and politically motivated decisions the end result of which would be essentially arbitrary. There is clearly no obvious right path. This is one reason why the Chicago School, although the efficiency question within competition law originates there, rejected efficiency analysis in merger control for case-by-case appraisal.[42] The case of BASF/Eurodiol[43] shows, that an efficiency "defence" is at least not prohibited by law.[44]

Accurately evaluating the options requires observing them in practice. This will only happen in a meaningful way once companies realize that the inclusion of efficiency arguments in merger control can usefully influence the final result. If they do not notify efficiencies, quantitative analysis will – for once without restrictions - allow direct conclusions.

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[41] Drauz, *ZWeR* (2004), 266.
[42] Schwalbe, 89.
[43] European Commission Official Journal (2002), L 132/45—BASF/Eurodiol/Pantochim.
[44] Strohm, *WuW* (2001), 1203; Drauz, *ZWeR*, 258: "From a methodological point of view, the approach taken in this case bears similarities to an efficiency defence."

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