

**DIRECTORATE FOR FINANCIAL AND ENTERPRISE AFFAIRS
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Non-price Effects of Mergers - Note by BIAC

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More documents related to this discussion can be found at www.oecd.org/daf/competition/non-price-effects-of-mergers.htm.

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1. Introduction and Summary

1. The notion of “non-price effects” (NPEs) is generally used to characterize the outcomes of competition that manifest themselves in ways other than price. Non-price effects in merger analysis include those related to product quality, product choice or variety, service or innovation.

2. Non-price competition is ubiquitous; in many sectors firms compete on quality, innovation, method of distribution, services and the like. Accordingly, it is not surprising that in a number of jurisdictions the analytical framework applicable to merger review specifically contemplate that enhanced market power may not only give rise to elevated prices, but may also manifest themselves in non-price terms and conditions that adversely affect customers, including reduced product quality, reduced product variety, reduced service, or diminished innovation.¹ On the other hand, the evaluation of NPEs might also highlight positive outcomes in terms of increased incentives to invest and therefore better quality and a higher rate of innovation.

3. While BIAC does not dispute competition enforcement authorities’ competence to review NPE factors, the question arises whether the analytical framework currently available to competition authorities to assess non-price effects is sufficiently developed to identify and predict, with a sufficient degree of certainty (and at reasonable enforcement costs), anticompetitive NPEs arising from mergers. This is particularly true as relates to innovation, as discussed below.

4. BIAC takes the view that merger review should first and foremost focus on the plausible price effects of mergers. The nature of this type of investigation should allow for a proper evaluation of both static and dynamic efficiencies, preferably as part of a comprehensive analysis of the transaction at issue.

5. In contrast, BIAC believes that the analytical framework in relation to quality, choice and diversity is insufficiently developed and does not yet allow competition enforcement authorities to identify with sufficient accuracy those mergers with the potential to lead to these types of NPEs. This does not mean that competition authorities should never have an interest in quality-related effects as a result of business transactions; however, BIAC offers the following observations and comments for competition authorities to consider when they are reflecting on their merger policies related to NPEs and in reviewing such transactions.

6. With regard to NPEs in the form of innovation, a new controversial economic theory has been developed, which posits that a specific category of mergers may, under well-defined circumstances, give rise to reduced innovation post-merger. However, BIAC notes that there is still significant debate surrounding the precise necessary conditions that must be met for these effects to occur, as well as the associated evidentiary burden, to establish these effects and, notably, what a pragmatic pro-competitive remedy could be.

¹ U.S. DEP’T OF JUSTICE & FED. TRADE COMM’N, HORIZONTAL MERGER GUIDELINES (2010), available at www.justice.gov/atr/file/810276/download [hereinafter U.S. MERGER GUIDELINES].

7. Recent academic research has concentrated on highly stylized models of mergers in industries where innovation plays a key role.² This line of research purports to show that—under the conditions of the model used—the merging parties would decrease their innovation efforts post-merger, while the outsiders to the merger respond by increasing their efforts and that a merger tends to reduce overall competition. The authors conclude that loss of innovation competition is expected to be significant if the merger bring together two of a limited number of innovators.³

8. Another line of research questions the economic underpinnings of the innovation theory of harm.⁴ It suggests that this theory of harm may misdiagnose the supposed innovation-dampening effects of a merger. To the contrary, the merger may serve the streamline R&D functions and so encourage innovation. Well-known features of innovation (such as the demand-expansion effect of innovation and the appropriability of R&D spillovers) should be considered in the impact assessment of mergers on innovation.

9. The state of the academic research into innovation-limiting mergers does not, in BIAC's view, justify any structural presumption that mergers harm innovative industries. Policy makers adopting an overly speculative theory of harm may in fact threaten the innovative outcomes they seek to promote. The European Court of Justice, for example, has warned of the evidential burden facing novel theories of harm, where cause and effect is "dimly discernible." The Court has ruled against prior innovation-harm claims of the Commission precisely for this lack of empirical evidence.⁵

10. As further discussed below, BIAC is of the opinion that competition enforcement authorities should take a neutral position which fully integrates potential benefits of a transaction as part of the competitive assessment, rather than merely as a countervailing "defence." Assuming that a merger may give rise to negative effects on competition without taking full account of positive knowledge spillover and other (static and dynamic) efficiencies from the start of the analysis gives rise to a high risk of over-enforcement which BIAC submits is highly undesirable.

11. BIAC supports further work, including empirical studies, into the question under which circumstances mergers in sectors where innovation is a key driver, significantly limit innovation to the detriment of consumers. Any theory of harm must be based on rigorous economic analysis, respecting the need for legal certainty, fair appraisal of evidence and justiciable outcomes. All the effects of a merger on the incentives to innovate including spillover effects, should be part of the main competitive assessment carried out by competition authorities. The theory of harm's presumption against mergers

² Giulio Federico, Gregor Langus & Tommaso M. Valletti, *A Simple Model of Mergers and Innovation* (CESINFO Working Paper No. 6539, 2017), available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3005163.

³ And if, absent the merger, the merging firms would have been likely to divert significant future sales from each other when introducing innovative products.

⁴ Bruno Jullien & Yassine Lefouili, *Horizontal Mergers and Innovation* (Mar. 24, 2018), available at <https://ssrn.com/abstract=3135177>; Marc Bourreau, Bruno Jullien & Yassine Lefouili, *Mergers and Demand-Enhancing Innovation* (Toulouse Sch. of Econ., Working Paper No. 18-907, 2018), available at www.tse-fr.eu/sites/default/files/TSE/documents/doc/wp/2018/wp_tse_907.pdf.

⁵ Case C-12/03P, *Tetra Laval BV v Comm'n*, ¶ 44, available at <http://eur-lex.europa.eu/legal-content/EN/TEXT/?uri=CELEX:62003CO0012>.

in innovation-intensive sectors, does not meet this standard. In addition, BIAC is in favour of two specific work streams.

12. First, it is important to seek a minimum degree of consensus on the necessary conditions for potential significant negative effects on innovation to occur and to go through the exercise of laying those findings down in guidance documents, comparable to, for instance, the EU Guidelines on Horizontal Mergers. This would allow the business community and their advisors to engage with authorities in a necessary and meaningful policy discussion; and then to be able to engage in the assessment of proposed mergers that may potentially affect—either positively or negatively—innovation with the benefit of greater legal and commercial certainty.

13. Second, while predictability in competition enforcement intervention by means of guidelines or similar guidance documents is crucial, competition enforcement authorities should also be bound by best practices regarding the collection of data and materials that may be relevant to document and substantiate a potential lessening of innovation as a result of the merger. In particular, competition authorities should first and foremost concentrate on a number of key indicators and identify *ex ante* specific types of internal documents that parties should expect to provide, before authorities should be allowed to force the merging parties to generate large volumes of new data and analyses. This should, in particular, be the case in relation to past innovations or where economic analysis in future innovation markets veers to the academic. Although innovation markets may be inherently difficult to assess, it would seem perverse if mergers in the innovation space should be disproportionately handicapped by the cost, delay and uncertainty in extensive information request and merger review.

2. A Robust Economic and Legal Framework for the Assessment of Innovation and Mergers

14. According to the academic literature, mergers may influence innovation in many and complex ways, requiring a balanced assessment of positive and negative effects. Below, potential key variables and their effect on innovation are described.

2.1. Innovation Diversion:

- Positive Effect: Merged entity increases innovative efforts by repositioning itself to new markets to obtain higher profits from differentiated products.
- Negative Effect: Merged entity reduces innovative efforts, as it internalizes the negative innovation externalities.

2.2. Innovation Optimization:

- Positive Effect: Merged entity refocuses/streamlines merging firms' R&D activities to increase likelihood of winning R&D race.

2.3. Demand Expansion v. Margin Expansion:

- Positive Effect: Merged entity has increases innovation incentives to secure extra profits from demand expanding innovation. For instance, next generation technology or lower cost technology.
- Negative Effect: Merged entity reduces output to lower volume available over which to earn expanded margin, which in turn weakens innovation incentives.

2.4. Common Technology Inputs v. Product Specific Inputs:

- Positive Effect: Merged entity's common proprietary knowledge or input accelerate and/or improve the R&D efforts of the merging entities.
- Negative Effect: Merged entity's common knowledge is tied to only one of the two companies and thus the merger does not offer any benefits to the R&D efforts of the merging entities.

2.5. Appropriability:

- Positive Effect: Merger allows utilizing expanded base of merged entity to appropriate returns from R&D innovation which would not otherwise be internalized (*e.g.*, immediately copied by third parties), enhancing post-merger innovation incentives.

3. Non-Price Effects: The Impact on Quality, Variety and Choice

15. While quality may be an important competitive parameter, with firms competing on product and service attributes that reflect different price/value propositions, quality considerations, as well as likely changes to quality are difficult (if not impossible), to factor directly into the competitive assessment of business transactions. This is despite the fact that, through the creation of market power, business transactions may give rise to increased prices, as well as reduced quality levels.

16. The 2013 OECD Competition Committee Secretariat Background Paper on the role of quality in competition analysis and policy includes a valuable discussion of the complexities involved in the measuring and quantification of quality in various settings and its conclusions remain highly relevant.⁶

17. In particular, the 2013 Quality Background Paper observed that quality “is a multi-dimensional, subjective factor. Consumers may disagree on what better quality means with respect to a certain product at any price.”⁷ As a result, “[i]t is not obvious how to incorporate quality considerations into actual competition analysis.”⁸ And in

⁶ OECD, ROLE AND MEASUREMENT OF QUALITY IN COMPETITION ANALYSIS—BACKGROUND NOTE BY THE SECRETARIAT 11-41 (Oct. 28, 2013), *available at* www.oecd.org/daf/competition/Quality-in-competition-analysis-2013.pdf [hereinafter OECD 2013 QUALITY NOTE].

⁷ *Id.* at 11.

⁸ *Id.*

relation to empirical insights, the Paper observed that “[i]t was no easy to find decisions by competition authorities and courts in which quality considerations played an important role. This is probably a reflection of how difficult it is to define and measure a multidimensional and subjective variable like quality.”⁹

18. Good competition policy requires a thorough analysis of companies’ conduct. Except in cases of blatantly anticompetitive conduct, this requires a quantification of economic effects.

19. This does not mean that a consideration of quality is always irrelevant for competition policy or that competition authorities should never intervene in the event of clear quality-related concerns. For example, there may be a legitimate concern—and reason for intervention—in the event a dominant firm disadvantages its downstream rivals by reducing the quality of its services to those rivals.¹⁰

20. However, competition authorities are charged with the enforcement of competition law in cases of mergers, anticompetitive conduct and collusive conduct. There is no basis for intervention in mergers on the basis of competition law in the absence of evidence of these merger-specific quality-related effects.

21. Accordingly, competition authorities may have a legitimate concern that a particular market does not function well, that prices are too high, or that quality levels and diversity are suboptimal.¹¹ The 2013 Background Paper provides a number of instructive illustrations in this respect. If there are good arguments that consumer welfare in those markets can and should be enhanced, then this is principally a task for the legislator. For example, the legislator may decide to set minimum quality norms—for example in healthcare markets—or zoning restrictions to stimulate a more varied product or service offering in a particular area.

22. In these cases, legislators may benefit from the insights of competition authorities (in the form of market analyses and surveys and the like—to make better informed regulatory decisions). There may also be valid reasons for competition authorities to intervene on the basis of consumer protection law where they have such competence. This may for instance be the case in the event that unfair terms of sale are widespread in a market and prevent consumers from reacting rationally to suppliers’ offerings. In those cases, behavioural economics may provide valuable insights.¹² However, BIAC cautions

⁹ *Id.* at 41.

¹⁰ *See, e.g.*, Case C-280/08, Deutsche Telekom AG v. Comm’n, 2010 E.C.R. I-9555 (judgment involving Deutsche Telekom’s fine by the European Commission for abusing its dominant position by imposing a margin squeeze—a form of pricing abuse that can be undertaken by vertically-integrated dominant companies and often involves a degree of cross-subsidisation between the upstream and downstream markets); or Case COMP/M.5984—Intel/McAfee, Comm’n Decision (Jan. 26, 2011), available at http://ec.europa.eu/competition/mergers/cases/decisions/m5984_1922_2.pdf (where the Commission had concerns about the bundling of Intel’s central processing units and chipsets with McAfee’s security solutions).

¹¹ BIAC agrees with the observation of 2013 Background Paper that “society is almost always better off when consumers enjoy a wide range of choices between high-quality, high-priced and low-quality, low-priced opportunities than when they face a severely restricted choice set.” OECD 2013 QUALITY NOTE, *supra* note 6, at 21.

¹² *See, e.g.*, the analysis carried out by J. Thomas Rosch, *Economics in Merger Analysis*, THE ANTITRUST BULL., Vol. 59(1), 111-128, 2014.

against a too liberal or ill-informed use of measures intended to influence consumers' conduct that may, in reality, misdirect consumer demand.

4. Non-Price Effects: The Impact on Innovation

23. The interest among competition authorities in assessing the impact of mergers and other business transaction on innovation is not new and merger regimes in many jurisdictions provide authorities with the power to intervene against mergers that hinder innovation.¹³

24. However, despite the fact that merger review legislation and guidance do not generally provide guidance on the specific theories of harm that may apply in relation to mergers that may limit innovation—and the associated evidentiary requirements associated with those theories of harm—many competition authorities have considered how mergers may affect innovation. In particular, over time, the European Commission (EC) has increasingly considered the impact of transactions on “R&D markets, in particular in pharmaceutical markets.”¹⁴

25. Not surprisingly, concerns over reduced competition have most frequently arisen in relation to horizontal mergers. For example, in *Pfizer/Pharmacia*, the EC's review concentrated on products that were not yet on the market but were at an advanced stage of development and the EC raised serious objections against the combination of Pharmacia's leading product for urinary incontinence, while Pfizer was at an advanced stage of development and was about to launch its own product, which, the EC found, made it unlikely that competitors would be able to challenge the market position of the new entity in the near future.¹⁵ Similarly, in *AstraZeneca/Novartis*, the EC assessed the risk of reduced innovation in relation to a particular class of fungicides in light of the recent introduction of a new generation product by one of the merging parties and the fact that the other party was in the final phase of developing a competing product.¹⁶ The EC concluded that this would result in the creation of a dominant position on a series of

¹³ Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings, 2004 O.J. (C 31) 5, ¶¶ 8, 24 and 38 [hereinafter EC Merger Guidelines]; and U.S. MERGER GUIDELINES, *supra* note 1; Case M.7932—Dow/DuPont, Comm'n Decision, ¶ 279 (Mar. 27, 2017), *available at* http://ec.europa.eu/competition/mergers/cases/decisions/m7932_13668_3.pdf (“Paragraph 8 also suggests that the parts of the Horizontal Merger Guidelines dealing at first sight only with price competition can be applied *mutatis mutandis* to innovation competition: “[i]n this notice, the expression 'increased prices' is often used as shorthand for these various ways [including diminished innovation and reduced choice] in which a merger may result in competitive harm.”).

¹⁴ Case COMP/M.1846—Glaxo Wellcome/Smithkline Beecham, Comm'n Decision (May 8, 2000), *available at* http://ec.europa.eu/competition/mergers/cases/decisions/m1846_en.pdf.

¹⁵ Case COMP/M.2922—Pfizer/Pharmacia, Comm'n Decision, ¶ 22 (Feb. 27, 2003), *available at* http://ec.europa.eu/competition/mergers/cases/decisions/m2922_en.pdf

¹⁶ Case COMP/M.1806—AstraZeneca/Novartis, Comm'n Decision (July 26, 2000), *available at* http://ec.europa.eu/competition/mergers/cases/decisions/m1806_en.pdf.

markets, including fungicides for the protection of cereal crops and sugar beets and herbicides for the protection of maize.¹⁷

26. By and large, the EC’s investigation of the potential of mergers to reduce innovation has until relatively recently been confined to an assessment on future competition in clearly defined product markets, including both current and future product markets.¹⁸ Typically, this approach involves an analysis of the merging parties’ existing and pipeline products in the properly defined—existing or future—relevant market at hand, as well as those of their competitors. In the pharmaceutical sector, one main scenario that may give rise to concerns about reduced future innovation is where one of the merging parties is the leading provider of a drug for a particular disease, while the other party has a late-stage pipeline product for that same disease, which is “reasonable certain” to reach the market in the “near future.”¹⁹ Similar concerns may occur if both parties have advanced pipeline products.

27. In the context of its assessment of competitive effects in future or existing markets, the EC has sometimes referred to a conventional unilateral effects analysis applied to innovation.²⁰ The EC also frequently relies on internal documents supporting a possible lessening of innovation competition, for example business plans to discontinue the parties’ overlapping product portfolios and associated R&D.²¹

28. Significantly, commentators have observed that, when dealing with pharmaceutical mergers, the EC has recently abandoned its traditional approach to limit its investigation to “Phase III” pipeline products, and has now included much less advanced Phase I and II pipeline products—a large majority of which fail to be approved and commercialized—in its competitive assessment of whether the merger reduces innovation.²² In that context, it has also been noted that this approach creates a divergence between the EU and U.S.

¹⁷ *Id.* ¶ 221 (competitors’ products that were under development were either found to be inferior, or their anticipated launch too distant to be factored into the competitive assessment).

¹⁸ *See, e.g.*, Case COMP/M.2547—Bayer/Aventis Crop Science, Comm’n Decision (Apr. 17, 2002), available at http://ec.europa.eu/competition/mergers/cases/decisions/m2547_en.pdf.

¹⁹ Case M.7326—Medtronic/ Covidien, Comm’n Decision, ¶ 179 (Nov. 28, 2014), available at http://ec.europa.eu/competition/mergers/cases/decisions/m7326_20141128_20212_4138173_EN.pdf.

²⁰ *See, e.g.*, Case COMP/M.7275—Novartis/GlaxoSmithKline Oncology Business, Comm’n Decision (Jan. 28, 2015), available at http://ec.europa.eu/competition/mergers/cases/decisions/m7275_20150128_20212_4158734_EN.pdf (the Commission noted that the transaction would have reduced the parties’ competition on investments into competing clinical research programs, with the result that future sales of its other research program would be “cannibalized”). The Commission drew a parallel with the analysis of post-merger unilateral effects on prices. *See* Nicolas Petit, *Innovation Competition, Unilateral Effects and Merger Control Policy* 11 (Feb. 7, 2018), available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3113077.

²¹ Case M.7559—Pfizer/Hospira, Comm’n Decision, ¶¶ 57-58 (Aug. 4, 2015), available at http://ec.europa.eu/competition/mergers/cases/decisions/m7559_20150804_20212_4504355_EN.pdf; Case M.7278—General Electric/Alstom (Thermal Power—Renewable Power & Grid Business), Comm’n Decision (Sept. 8, 2015), available at http://ec.europa.eu/competition/mergers/cases/decisions/m7278_6808_3.pdf.

²² *See, e.g.*, Raphaël De Coninck, *Innovation in EU Merger Control: In Need of a Consistent Framework*, in *Competition Law and Policy Debate*, Vol. 2, Issue 3 (Sept. 2016), available at

29. Competition authorities' concerns that mergers may harm future industry innovation, particularly in industries where a small number of competitors with large R&D capabilities are viewed as driving innovation, without precisely delineating the (future) markets on which negative effects may occur, are not unprecedented. For example, in 2015 the U.S. DOJ expressed concerns that the proposed acquisition of Tokyo Electron by Applied Materials, combining the number one and three global suppliers of semiconductor manufacturing equipment, would negatively affect the development of equipment for next-generation semiconductors.²³ Other U.S. examples include the abandoned merger of Comcast Corp. and Time Warner Cable Inc.,²⁴ the U.S. DOJ opposition against Bazaarvoice's acquisition of PowerReviews,²⁵ and the FTC consent decree relating to the Nielsen/Arbitron combination.²⁶

30. BIAC agrees with the position that, while the identification of actual and potential competition on already existing markets is often challenging, accurately assessing future products and competition on future, currently non-existent markets may present significant additional difficulties that increase the likelihood of Type I errors. In particular, it may be complex to identify the strength of competitors and alternatives on future markets in relation to products that are far away from market introduction and their market success. Indeed, for drugs in early stages of their development, information on

www.crai.com/sites/default/files/publications/Innovation-in-EU-merger-control-in-a-need-of-a-consistent-framework.pdf; Case M.7872—Novartis/GSK, Comm'n Decision (Dec. 18, 2015), available at http://ec.europa.eu/competition/mergers/cases/decisions/m7872_329_3.pdf (the Commission requested the parties to provide information on Phase I and Phase II pipeline projects as the Commission was concerned that Novartis would discontinue clinical trials for a particular drug combination (for oncological products related to skin cancer) as a result of the merger); Case M.7559—Pfizer/Hospira, Comm'n Decision, ¶¶ 57-58 (Aug. 4, 2015), available at http://ec.europa.eu/competition/mergers/cases/decisions/m7559_20150804_20212_4504355_EN.pdf (where the Commission requested a remedy involving a biosimilar pipeline over the Commission's concerns that Pfizer would, post-merger, discontinue or delay the development of its biosimilar *Infliximab*, aimed at treating autoimmune diseases such as rheumatoid arthritis).

²³ Press Release, U.S. Dep't of Justice, Antitrust Div., Applied Materials Inc. and Tokyo Electron Abandon Merger Plans After Justice Department Rejected Their Proposed Remedy (Apr. 27, 2015), available at www.justice.gov/opa/pr/applied-materials-inc-and-tokyo-electron-ltd-abandon-merger-plans-after-justice-department. Note that DOJ expressed concerns in the context of remedies discussion—rather than on the basis of a court judgment or formal decision, as was the case *Dow/Dupont*.

²⁴ Press Release, U.S. Dep't of Justice, Antitrust Div., Comcast Corporation Abandons Proposed Acquisition of Time Warner Cable After Justice Department and the Federal Communications Commission Informed Parties of Concerns (Apr. 24, 2015), available at www.justice.gov/opa/pr/comcast-corporation-abandons-proposed-acquisition-time-warner-cable-after-justice-department (negative impact on innovation by content and streaming services).

²⁵ Press Release, U.S. Dep't of Justice, Antitrust Div., Department of Justice Proposes Remedy to Address Bazaarvoice's Unlawful Acquisition of PowerReviews (Feb. 12, 2014), available at www.justice.gov/opa/pr/department-justice-proposes-remedy-address-bazaarvoice-s-unlawful-acquisition-powerreviews.

²⁶ Press Release, Fed. Trade Comm'n, FTC Approves Nielsen Holdings N.V. and Nielsen Audio, Inc.'s Application to Sell its LinkMeter Technology and Related Assets to comScore, Inc. (April 2, 2014), available at www.ftc.gov/news-events/press-releases/2014/04/ftc-approves-nielsen-holdings-nv-nielsen-audio-incs-application.

their likely effectiveness may not be sufficiently clear to determine whether they will effectively constrain the merging parties' (pipeline) products and what the level of probability of success is (almost certainly below 50% for pre-Phase III programs).

31. Recently, the EC has introduced yet another important novel feature in its assessment of how innovation may be impacted by a merger.²⁷

32. In *Dow/Dupont*, a horizontal combination of two larger suppliers of crop protection chemicals, the EC considered that the merger threatened innovation competition due to the loss of rivalry between the two parties. Consequently, the EC ordered the divestment of Dupont's global pesticides R&D division.²⁸

33. The EC's decision in *Dow/Dupont* presents a number of novel features. First, the EC explicitly applied a unilateral effects analysis to ascertain whether the merger would lead to "discontinuation, deferment or redirection" of competing lines of research and early pipeline products.²⁹ This is despite criticism that a conventional unilateral effects analysis may not be appropriate to apply to innovation.³⁰

34. Second, in contrast to earlier decisions, the EC goes beyond the assessment of existing and pipeline products, each of which has or could have specific pricing and non-pricing supply and demand attributes, but instead concentrates on "innovation spaces," a notion that is broader than downstream product markets and which may include "lines of research" and early pipeline products.³¹ The EC concluded that the transaction "would be likely to significantly impede effective competition as regards innovation both in innovation spaces where the Parties' lines of research and early pipeline products overlap and overall in innovation in the crop protection industry."³²

35. In essence, the methodology applied in *Dow/Dupont* is predicated on the assumption that the negative impact of a merger on price competition undermines innovation incentives.³³ The decision states, "the economic literature on competition and innovation supports a theory of harm based on the fact that a merger between competing innovators by reducing rivalry in the industry and increasing cannibalisation of existing

²⁷ This submission concentrates on *Dow/Dupont*. It appears that the EC may have applied a similar type of analysis in Case COMP/M.8084—Bayer/Monsanto, Comm'n Decision (Mar. 28, 2018) (public version of EC decision not yet available).

²⁸ Case M.7932—Dow/DuPont, Comm'n Decision, (Mar. 27, 2017), available at http://ec.europa.eu/competition/mergers/cases/decisions/m7932_13668_3.pdf.

²⁹ *Id.*, Annex 4, ¶ 145.

³⁰ Petit, *supra* note 20, at 27-31. He and others have argued that it would be incorrect to apply the standard unilateral price effects analysis to innovation competition to predict merger innovation effects, in particular because the merged entity may not be readily able to discontinue planned or existing R&D programs and because the approach would not take account of potential positive welfare effects, for instance due to coordination of R&D projects, and intrafirm competition.

³¹ Case M.7932—Dow/DuPont, Comm'n Decision, ¶ 2168 (Mar. 27, 2017), available at http://ec.europa.eu/competition/mergers/cases/decisions/m7932_13668_3.pdf.

³² *Id.* ¶ 3297.

³³ *Id.* ¶¶ 1999 *et seq.*

and future sales is likely to result in a decrease in the incentive to innovate by the merging parties.”³⁴

36. Along with the assessment of potential negative effects on innovation coming from a merger, many jurisdictions recognize the possibility that a concentration generates, on the contrary, a positive impact on innovation through efficiencies. The EC states, “It is possible that efficiencies brought about by a merger counteract the effects on competition and in particular the potential harm to consumers that it might otherwise have”.³⁵ The provision implies that the evaluation of the impact of a merger on a market can’t be limited to the evaluation of prices and volumes.

37. However, even though the EU horizontal merger guidelines explicitly acknowledge the potential pro-competitive effect of efficiencies, so far the role of dynamic efficiencies within analysis of prospective mergers has been very limited. One reason for this is complexity in the analysis: dynamic efficiencies poses an important measurement problem because dynamic effects will occur over several time periods and the quantitative tools to assess them are less developed. Therefore, EU competition law enforcement currently appears not to support an adequate evaluation of the role played by efficiencies, while static competition considerations, focused on prices, are given much higher analytical weight.

38. BIAC believes that competition policy and enforcement requires modifications: authorities should adopt a dynamic vision, replacing the current static one. This would contribute to the achievement of key policy goals, in particular the maintenance of competitive markets that are favourable to the development of innovation, with a view to maximising social welfare as a whole.

5. The Ensuing Academic Debate

39. In tandem with its review of the *Dow/Dupont* merger, members of the Chief Economist’s Team of the EC have developed an economic model to assess how innovation may be affected by a horizontal merger.³⁶ The papers examine the impact of a merger on innovation and find that a merger between competitors affects the incentives through two mechanisms. On the one hand, the elimination of price competition that the merging parties exert on each other pre-merger may potentially harm consumers via higher prices for current and future products, but the reduction of price competition post-merger also tends to favour innovation (because it increases the incremental profits of innovating and thus the incentive to innovate).³⁷ The second mechanism concerns the impact that innovation by one of the merging parties has on the profits of the other party; innovation by one of the merging parties reduces the profits of the other party, either by diverting post-innovation profits of the other party, or by cannibalizing pre-innovation

³⁴ *Id.* ¶ 2002.

³⁵ EC Merger Guidelines, *supra* note 13, ¶ 76.

³⁶ *See*, Federico, Langus & Valletti, *A Simple Model*, *supra* note 2; Giulio Federico, Gregor Langus & Tommaso M. Valletti, *Horizontal Mergers and Product Innovation* (Feb. 26, 2018), available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2999178.

³⁷ The authors refer to this effect as potentially “ambiguous.”

sales of that party. By internalizing this negative externality, a merger tends to reduce the incentives of the combined entity to innovate.

40. The model finds that the latter effects tend to dominate and that a horizontal merger leads to a reduction in the merging parties' incentives to innovate. The papers conclude that this effect is stronger if the merging parties are close competitors. In addition, they observe that—under the assumptions of the model—a merger leads to higher innovation by non-merging parties, but that the negative effects on innovation by the merging parties tends to dominate, resulting in lower overall innovation in a concentrated market. Overall, the papers purport to demonstrate the antitrust concern that “a merger between two out of a limited number of innovators may lead to a reduction of competition in a market characterized by limited spillovers and in the absence of countervailing efficiencies.”³⁸

41. The publication of the research by the CET economists has given rise to a heated debate and criticism. In this respect, Denicolo and Polo take the view that the CET publications apply restrictive assumptions and fail to take account of important countervailing effects.³⁹ In particular, they claim that the outcomes of the CET model are dependent on a particular, potentially suboptimal, R&D investment strategy; however, the coordination of R&D projects, the sharing of new technological knowledge and other positive mechanisms may give rise to a positive impact on innovation. Denicolo and Polo highlight these two important channels through which mergers may spur innovation in the absence of synergies: duplicative innovations (i.e., where merging firms that were competing for the same (or very similar) innovation coordinate R&D efforts, reducing risk of duplication) and increasing the probability of innovation success) and non-rival innovations (i.e. where innovative technology developed by one firm can be used also in other processes or products which could increase the incentive to innovate by expanding the output base) Both channels are likely to lead to the overall increase of innovation efforts.

42. Accordingly, the merged entity may increase R&D investments in the research units that remain active to such an extent that the overall probability of invention increases. As such, horizontal mergers may spur innovation.⁴⁰

43. Denicolo and Polo conclude that economic analysis does not support the claim that horizontal mergers always reduce innovation, or that they increase innovation only in exceptional circumstances. As a result, they observe that “[a] presumption that horizontal mergers always hamper innovation risks blocking many procompetitive mergers.”⁴¹

44. Similarly, Julien and Lefouili criticize the CET model for failing to appreciate the potential for merged firms to increase its margins, generating greater returns for

³⁸ See, Federico, Langus & Valletti, *Horizontal Mergers*, *supra* note 36, at 14.

³⁹ Vincenzo Denicolo & Michele Polo, *The Innovation Theory of Harm: An Appraisal* (Mar. 22, 2018), available at <https://ssrn.com/abstract=3146731>.

⁴⁰ In particular, Denicolo and Polo argue that this has the effect of expanding the scope of application of new technologies, increasing their value and hence the merged entity's incentive to innovate; they argue that this effect may be so strong that a merger may increase total output and reduce prices, thereby benefiting consumers even in the absence of static production synergies. *Id.* at 4.

⁴¹ *Id.* at 27.

innovative products.⁴² The authors study three important channels through which mergers may promote innovation in the absence of spillovers/synergies: (i) innovation diversion effect; (ii) demand expansion effect; and (iii) scale effect. The combination of these effects can result in either a positive or negative impact of a merger on innovation, although the positive effects were at times ignored by previous studies.

6. BIAC's Views on the Economic Debate and Policy Implications

45. Over the years, BIAC has stressed the importance for the business community and economic welfare at large, of competition and merger control policy based on solid, well-established economic insights. These observations remain valid. In the same vein, BIAC submits that economic evidence relied upon by competition enforcement authorities, both in merger review and conduct investigations, should be accurate, reliable, consistent and complete. These tenets apply in particular in relation to the identification of NPEs. In addition, given the inherently uncertain nature of innovation efforts and their effect on the market, ex ante regulation should be cautiously undertaken.

46. BIAC agrees that innovation is a major source of economic growth and that intervention by competition authorities against business transactions that threaten innovation may be justified—if there is persuasive evidence that innovation in the specific markets identified is or will be threatened. Authorities' intervention should however be consistent with the principles mentioned in the previous paragraph.

47. BIAC is not convinced that price competition is under all circumstances the key driver for innovation, but believes instead that, depending on the specific market at issue, different factors may be critical for innovation. In addition, it is important to appreciate that innovation is a multi-faceted phenomenon and may have various origins. This implies that each matter merits a detailed analysis of the origins, nature, drivers and importance of innovation in a particular market, coupled with a solid analysis how, if at all, the incentives to innovate, will be negatively affected post-merger.

48. BIAC believes that there is no consensus among academics that a merger between two out of a limited number of competitors by definition leads to a reduction in specific relevant markets. Moreover, BIAC is not convinced that this conclusion is necessarily correct and sufficiently robust for the purpose of antitrust enforcement, even if one would assume that the market at issue is characterized by limited knowledge spillover effects and no countervailing R&D efficiencies exists.

49. BIAC takes the view that competition authorities are ill-advised to rely on economic models that are based on non-realistic or overly restrictive assumptions and are subject to significant academic debate. In addition, these economic insights should not constitute a basis for any assumption that such mergers reduce innovation.

50. BIAC is of the firm view that competition authorities should engage in a comprehensive analysis whether mergers or other business transactions are on balance likely to reduce competition; any analyses which are artificially split between the identification of negative effects on the one hand, and the analysis of potentially off-setting efficiencies on the other hand, risks resulting in significant over-enforcement and

⁴² Bruno Jullien & Yassine Lefouili, *Horizontal Mergers and Innovation* (Mar. 24, 2018), available at <https://ssrn.com/abstract=3135177>.

welfare losses. This is particularly so in light of the fact that the evidentiary burden for establishing (both static and dynamic) efficiencies are very high and are in practice seldom met.⁴³

51. BIAC supports authorities' well-informed investigations into negative effects on innovation on existing and future product markets but is of the view that—except perhaps in exceptional cases—the notion of “innovation spaces” is ill-suited to be used as a reference point for a decision that the transaction at hand will reduce innovation and should, as a consequence, be prohibited. The notion of “innovation spaces” should not serve as an analytical shortcut justifying authorities' intervention in matters where no existing or future relevant markets can be identified on which innovation may be reduced: in case no such markets can be readily identified (both as to its likelihood to exist and the contours of such a market), authorities should explicitly consider whether the market developments and effects of the transaction at hand are not simply too speculative to confidently condemn a transaction as a result of its innovation-reducing effects.

52. In light of the above, BIAC advises against the use of economic theories that establish a *de facto* presumption of the presence of negative effects in a loosely defined category of cases; only when there is broad consensus among academics and empirical research confirming those findings may there be room for the application of such theories.

53. If competition authorities decide to investigate whether mergers may limit innovation, BIAC believes that it would be both necessary and useful that their investigations are well-structured on the basis of a clear analytical framework which also provides guidance to the notifying parties, as well as third parties. For instance, in light of the loosely defined category of cases that might give rise to innovation concerns (“a merger between two out of a limited number of innovators”), the indicators warranting an investigation should be made clear: on which basis will the agency decide that innovation is important in a particular market; which types of innovation are important; when is the number of market players sufficiently low to raise concerns; how are future effects quantified and which evidentiary standards apply; which necessary conditions apply for significant negative effects to occur; how are countervailing effects factored into the analysis? The EC's Guidelines on non-horizontal mergers and similar guidance documents provide good examples of how such guidance could be structured. Such guidance should include clear rules that enable authorities and the parties to quickly conclude when the transaction at hand does not merit a detailed investigation.

54. In addition, it is important that competition authorities are bound by rules on how to structure and conduct their analyses to establish whether a notified transaction may give rise to negative effects on innovation (or, on the contrary, generates pro-competitive effects). BIAC is aware of investigations whereby authorities requested vast amounts of (“bottom-up”) information that was not readily available with the parties in an attempt to

⁴³ See, e.g., Case T-175/12, *Deutsche Börse v. Comm'n*, Mar. 9, 2015, available at <http://curia.europa.eu/juris/document/document.jsf?text=&docid=164036&pageIndex=0&doclang=en&mode=lst&dir=&occ=first&part=1&cid=172549>; Case T-194/13, *United Parcel Service, Inc. v. Comm'n*, Mar. 7, 2017, available at <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:62013TJ0194>; see also David Cardwell, *The Role of the Efficiency Defence in EU Merger Control Proceedings Following UPS/TNT, FedEx/TNT and UPS v Commission*, 8(9) J. OF EUR. COMPETITION L. & PRAC. 551 (2017).

establish whether the merging parties were important innovators in the market. Reconstructing the history of innovation in an industry sector outside well-documented sectors such as pharmaceutical markets, and without clear limiting principles may be a virtually impossible task within the limited period available during merger reviews. BIAC submits that these types of investigation should be well-structured and that information requests should be necessary and proportionate.

55. Once it is reasonably certain that the basic conditions for an innovation-related theory of harm are met, authorities would be well-advised to prioritize certain types of business information, starting with industry reports, R&D roadmaps and business plans and the like. To structure the inquire effectively, competition authorities should engage with the parties at an early stage to discuss the potential theories of harm, the information that is required to substantiate or dispel the concerns, as well as the information that is readily available or that can be generated at reasonable cost in a limited period of time. Also, pro-competitive efficiencies and their effect on innovation should always be assessed as countervailing factors. BIAC supports the publication of Best Practices in this respect.

56. BIAC believes that a more detailed discussion—within the OECD Competition Committee—on the topics of a common understanding of NPEs and of Best Practices in relation to assessing them would be very welcome.