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ABSTRACT

Innovation can either be viewed by the competition authorities as a parameter that should be protected from the potential negative effects of a transaction, or it can be utilized by the merging parties as part of a defense argument to set off against or abate the anti-competitive concerns raised by the competition authorities. Whenever the notion of innovation causes competition-related concerns, enforcement authorities recognize and acknowledge the importance of innovation in an effort to protect it; yet, whenever arguments are put forth by the parties to the transaction in order to incorporate innovation as a defense, such arguments are met with resistance or they are overlooked. Although competition authorities have recognized the importance of innovation in many of their decisions, we are at a critical turning point for the future of merger control analysis, as it is time for competition enforcement authorities to make an essential change to the high standards applied to the innovation defenses raised by the merging parties in practice, and adjust their enforcement standards to the requirements of the modern global economy.

L'innovation peut soit être considérée par les autorités de concurrence comme un paramètre à protéger des potentiels effets négatifs d'une transaction, ou être utilisée par les parties à une concentration comme un argument de défense visant à éliminer ou à atténuer les préoccupations liées à la concurrence. Chaque fois que la notion d'innovation suscite des préoccupations liées à la concurrence, les autorités chargées d'appliquer la loi reconnaissent l'importance de l'innovation dans le but d'assurer sa protection. Toutefois, chaque fois que les parties à une transaction présentent des arguments faisant référence à l'innovation comme moyen de défense, de tels arguments se heurtent à une résistance ou bien sont négligés. Même si les autorités de concurrence reconnaissent l'importance de l'innovation dans de nombreuses décisions, nous sommes à un tournant décisif pour l'avenir de l'analyse des concentrations, étant donné que dans la pratique, il est temps que les autorités de concurrence modifient de manière essentielle leurs normes appliquées aux défenses en matière d'innovation soulevées par les parties à une transaction et adoptent leurs normes d'exécution aux exigences de l'économie moderne mondiale.

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Turkey: Innovation-based analysis of mergers*

I. Introduction

1. It is a well-established and widely recognized fact that innovation is the primary driver of economic growth and development in the modern global economy.¹ As the main objective of the competition law regime is to promote economic efficiency and enhance total welfare,² stimulating innovation constitutes an important part and key goal of the competition law regime in many jurisdictions. Accordingly, competition law policies should aim at enhancing economic growth and consumer welfare through increased competition and innovation.³ Furthermore, due to the rapid development of technology in the 21st century, today's economies require firms to compete by undertaking innovative activities, instead of competing solely on prices.⁴

2. The fact that innovation is a significant competition parameter in many markets, especially in markets that are driven by technology, raises the question of how market concentration levels affect innovation. In this regard, there are sound arguments in favor of the idea that a merger can reduce the firms' incentives to innovate; on the other hand, some commentators have reasonably argued that mergers can also positively affect the innovation capabilities of firms—in other words, they may expand the dynamic efficiencies that enhance the ability or incentives of the merged company to innovate.⁵ In this regard, the debate on the exact relationship between competition and innovation (i.e., whether there is a linear and negative effect of competition on innovative activities,⁶ or whether more competition leads to increased innovation⁷) is still ongoing. From a Schumpeterian perspective, large firms and monopolistic firms are better positioned to fund large

1 Organization for Economic Co-Operation and Development (OECD), Innovation and Growth: Rationale for an Innovation Strategy (2007), 5, <http://www.oecd.org/sti/inno/39374789.pdf> (last accessed on October 30, 2018).

2 United Nations, United Nations Conference on Trade and Development, Trade and Development Board Trade and Development Commission, Intergovernmental Group of Experts on Competition Law and Policy, Fifteenth Session, Geneva, 19–21 October 2016, TD/B/C.I/CLP/36, <https://unctad.org/en/pages/MeetingDetails.aspx?meetingid=965> (last accessed on November 4, 2018).

3 Id.

4 L. I. M. Suijkerbuijk, Innovation Competition in EU Merger Control, Master's thesis submitted to Tilburg University (2018), 5, <http://arno.uvt.nl/show.cgi?fid=145944> (last accessed on October 30, 2018).

5 C. E. Mosso, Innovation in EU Merger Control, Remarks prepared for the 66th AB section of the Antitrust Law Spring Meeting (2018), 4.

6 J. Schumpeter, *Capitalism, Socialism and Democracy* (New York: Harper, 1942), as cited in R. Campusano Gárate, Competition and Innovation in Developing Countries, Master's thesis submitted to University of Chile (2018), 3, <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.894.7199&rep=rep1&type=pdf> (last accessed on October 30, 2018).

7 C. Shapiro, Competition and Innovation: Did Arrow Hit the Bull's Eye? in *The Rate and Direction of Inventive Activity Revisited* (University of Chicago Press, 2012), 361–404, 362.

research and development (“R&D”) activities in the market⁸ and will have more incentive to innovate, since they wish to maintain their market power against the potential entrants’ threats.⁹ Moreover, they are better at financing their R&D activities due to (outsized) past monopoly profits compared to the small firms in the competitive markets.¹⁰ In this regard, economists who concur with Schumpeter’s views argue that market concentrations might actually increase R&D activities in the marketplace. In contrast, Arrow contends that “*product market competition spurs innovation.*”¹¹ Accordingly, a dominant or monopolistic firm would have less incentive to innovate compared to the competitive firm since it has already established its dominance in the particular marketplace and instead of developing new technologies, it will wish to protect the existing ones.¹² In this line of reasoning (i.e., according to Arrow’s views), transactions that create high market concentrations may result in reduction of the innovative activities in a particular market in the long term.

3. Beyond the ongoing academic debate, the nature of the relationship between innovation and market concentration appears to be a significant issue in practice as well, especially since numerous mega-mergers have taken place in innovation-driven industries in recent years.¹³ The merger analyses conducted by enforcement authorities regarding the mega-mergers that have occurred in the last few years, particularly in the *Dow/DuPont* and *Bayer/Monsanto* cases, indicate that competition agencies in advanced economies, such as the European Commission (“Commission”), have taken it upon themselves to protect innovation-based competition in those markets and to cultivate the incentives of firms to innovate. Meanwhile, the competition agencies in developing economies (such as Turkey) have chiefly employed more traditional enforcement tools in such cases, which generally address concerns and tackle issues relating to price competition.

4. In light of the foregoing, we will review the recent *Dow/DuPont* and *Bayer/Monsanto* transactions and examine their competitive evaluations from the perspective of innovation, with a particular focus on the attitudes and actions of the competition authorities in the European Union (“EU”) and in Turkey.

II. Competition authorities’ outlook and approach to harm to innovation

5. Merger control rules in many developed jurisdictions explicitly underline the fact that a merger might reduce the amount of innovation in a particular industry, which will lead to the detriment of consumers.¹⁴ For instance, EU Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings (“EHMG”) indicate that “[i]n markets where innovation is an important competitive force, a merger may increase the firms’ ability and incentive to bring new innovations to the market and, thereby, the competitive pressure on rivals to innovate in that market. Alternatively, effective competition may be significantly impeded by a merger between two important innovators, for instance between two companies with ‘pipeline’ products related to a specific product market.”¹⁵ Indeed, innovation constitutes a vital part of the competition that takes place in many industries, and therefore, it is used as an important factor in the assessment of whether a merger would reduce effective competition in the marketplace by the Commission.¹⁶

6. Under the current merger control rules in Turkey, the “*significant impediment to effective competition*” test is not considered to be sufficient to prohibit a merger. Pursuant to Article 7 of the Law No. 4054 on the Protection of Competition (“Law No. 4054”), mergers that do not create or strengthen a dominant position and that do not significantly impede effective competition in the relevant market (within the whole or part of Turkey) must be cleared by the Turkish Competition Board (“TCB”).¹⁷ In other words, the TCB’s merger analysis is focused on

8 J. Baker, Beyond Schumpeter vs. Arrow: How Antitrust Fosters Innovation, *Antitrust Law Journal*, Vol. 74 (2007), 575–602, 578.

9 Id., 363. Carl Shapiro explains the views of Schumpeter as “*the prospect of market power and large scale spurs innovation.*”

10 W. Kerber, Competition, Innovation, and Competition Law: Dissecting the Interplay, *Joint Discussion Paper Series in Economics* (2017), 6, https://www.econstor.eu/bitstream/10419/174338/1/42-2017_kerber.pdf (last accessed on October 30, 2018).

11 Shapiro, *supra* note 7, at 363.

12 Id., 363; Baker *supra* note 8 at 578;

13 See *Dow/DuPont* (Case No. COMP/M.7932) Commission Decision [2017]; *Novartis/GlaxoSmithKline Oncology Business* (Case No. COMP/M.7275) Commission Decision [2015]; *Skype/Microsoft* (Case No. COMP/M.6281) Commission Decision [2011]; *Facebook/WhatsApp* (Case No. COMP/M.7217) Commission Decision [2014].

14 See EU Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings (2004/C 31/03) OJ C 3, February 5, 2004, ¶ 8, [https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52004XC0205\(02\)&from=EN](https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52004XC0205(02)&from=EN) (last accessed on October 30, 2018); see also U.S. Department of Justice & Federal Trade Commission, Horizontal Merger Guidelines (hereinafter referred to as “U.S. Horizontal Merger Guidelines”), August 19, 2018, Section 6.4, <https://www.justice.gov/atr/horizontal-merger-guidelines-08192010> (last accessed on October 30, 2018).

15 To provide another example from a different jurisdiction, it should be noted that the United States Horizontal Merger Guidelines (published by the U.S. Department of Justice and the Federal Trade Commission) specifically refer to the harm caused by mergers to innovation. The U.S. Horizontal Merger Guidelines indicate that U.S. antitrust agencies may consider “*whether a merger is likely to diminish innovation competition by encouraging the merged firm to curtail its innovative efforts below the level that would prevail in the absence of the merger. That curtailment of innovation could take the form of reduced incentive to continue with an existing product-development effort or reduced incentive to initiate development of new products*” (U.S. Horizontal Merger Guidelines, *supra* note 14, Section 6.4).

16 Suijkerbuijk, *supra* note 4, at 5.

17 Article 7 of the Law No. 4054 states that “[m]erger by one or more undertakings, or acquisition by any undertaking or person from another undertaking—except by way of inheritance—of its assets or all or a part of its partnership shares, or of means which confer thereon the power to hold a managerial right, with a view to creating a dominant position or strengthening its/their dominant position, which would result in significant lessening of competition in a market for goods or services within the whole or a part of the country, is illegal and prohibited.”

applying the dominance test in a given market, in order to determine whether there would be a significant impediment to competition as a result of the concentration. With that said, the Turkish Competition Authority's Horizontal Merger Guidelines ("Turkish Horizontal Merger Guidelines"), which are akin to (and generally follow the principles of) the EU merger regulations, include "reduced innovation" among the factors that would be likely to raise competitive concerns.¹⁸

7. While the legal frameworks used by the Commission and the TCB address roughly similar innovation concerns, the practical application of these rules by the competition authorities may differ for each jurisdiction. Last year's *Dow/DuPont*¹⁹ which concerned the merger between The Dow Chemical Company ("Dow") and E. I. du Pont de Nemours and Company ("DuPont"), both of which are active in crop protection industry, can be given as an example.²⁰

8. In terms of the crop protection industry (i.e., the horizontally affected market), the Commission found that innovation and/or R&D activities in the crop protection industry carried significant importance for the farmers (i.e., customers) and underlined the fact that the firms in this industry not only competed for the product market, but also competed in the innovation spaces.²¹ In this regard, the Commission declared that "rivalry (or competition) is an important factor driving innovation and a merger between important rival innovators is likely to lead to a reduction in innovation."²²

9. Furthermore, with regard to the activities of Dow and DuPont, the Commission found that Dow and DuPont were "close and important innovation competitors" in numerous innovation spaces. In light of these findings, the Commission concluded that the transaction would significantly impede effective competition in the EU internal market and in the European Economic Area, by way of reducing innovation "both in innovation spaces where the Parties' lines of research and early pipeline products overlap and overall in innovation in the crop protection in-

dustry."²³ In order to address these concerns, the parties submitted a remedy package involving the divestiture of major parts of DuPont's global pesticide business, including its global R&D organization, which was subsequently approved by the Commission.

10. In its assessment, the Commission identified two kinds of harm to the innovation competition in respect of crop protection industry. On the one hand, the transaction could result in the discontinuation, deferment or redirection of overlapping lines of research and early pipeline products of Dow and DuPont.²⁴ The Commission emphasized that the first form of harm would appear and function as a short-term effect of the transaction. On the other hand, a second form of harm arises from the assumption that the merged entity would have lower incentives to attain the same overall level of innovation as the parties used to achieve prior to the transaction.²⁵ From the perspective of the Commission, this could lead to a significant loss of effective innovation competition in the industry, especially taking into account the fact that Dow and DuPont are two of the five players in the relevant market who are engaged in activities in all stages of the product lifecycle (i.e., research, development, product launch, and distribution). Given that the Commission deemed the second form of harm as "a medium and long-term structural effect of the transaction" as a result of its analysis, the Commission concluded that its harmful effects on competition would be significantly larger than the first form of harm.²⁶ Consequently, the Commission opined that the transaction results in reduction of innovation "at the industry level as a whole."²⁷

11. Although, the approach of the Commission on the "pipeline overlaps" is not so much of a novel theory—it has also been observed in its assessments of past decisions regarding the pharmacy sector²⁸—the Commission introduced the assessment of the innovation at the industry level for the first time in *Dow/DuPont*. It is worth highlighting that the Commission's approach to the theory of harm is not specific to the crop protection industry, and therefore can also be applied in merger control analyses in other sectors. This is due to the fact that the Commission underlined, "a merger between important ri-

18 See ¶ 6 and ¶ 11 of the Turkish Horizontal Merger Guidelines (Turkish Competition Authority, Guidelines on the Assessment of Horizontal Mergers and Acquisitions, <https://www.rekabet.gov.tr/Dosya/guidelines/8-pdf> (last accessed on October 30, 2018)).

19 See generally *Dow/DuPont*, *supra* note 13.

20 It should also be noted here that both firms used to operate and take part in all the stages of the research and development ("R&D") activities with respect to the crop protection industry at the time of the decision (see *id.*, ¶ 1961).

21 *Id.*, ¶ 1975. Nicolas Petit further explains that "[c]ompetition moves from innovation spaces to relevant product and technology markets when the active ingredients evolve into 'formulated products,' and become subject to regulatory approval by agencies in the relevant jurisdiction" (*id.*, p. 4). Accordingly, the Commission noted that the innovation spaces could be divided into two different stages. The first stage is called the "discovery stage," where firms fund early lines of research in order to discover new business areas, novel concepts and product lines. The second stage is known as the "development stage," where companies experiment with different formulations of active ingredients, and safety, efficiency and biology tests are conducted. This stage also concerns the R&D activities that are undertaken in relation to "early pipeline products" (N. Petit, Innovation Competition, Unilateral Effects and Merger Control Policy (January 29, 2018), 5, <https://ssrn.com/abstract=3113077> (last accessed on October 30, 2018)).

22 *Id.*, ¶ 2000. It should also be noted that the Commission determined that the crop protection industry was highly concentrated and characterized by high entry barriers (see *id.*, ¶ 2007).

23 *Id.*, ¶ 3297.

24 In this respect, the Commission considered that "the merged entity would have incentives to reduce innovation efforts on overlapping lines of research and early pipeline products thus leading to a significant impediment to effective innovation competition on the innovation spaces where the Parties currently compete" (*id.*, ¶ 3056).

25 In this context, the Commission noted that "due to lack of rivalry incentives to innovate, the merged entity would pursue less discovery work, less lines of research, less development and registration work and ultimately bring less innovative active ingredients (AI) to the market" (*id.*, ¶ 3057).

26 *Id.*, ¶ 3058.

27 *Id.*, ¶ 2122, 3293.

28 See *Novartis/GlaxoSmithKline Oncology Business*, *supra* note 13. Paragraph 38 of the EHMG also indicates, "effective competition may be significantly impeded by a merger between two important innovators, for instance between two companies with 'pipeline' products related to a specific product market." While assessing the legal basis of the theory of harm in respect of innovation competition, the Commission highlighted that "the assessment of pipelines within a merger between two companies with pipeline products related to a specific product market is only one example of how harm to innovation competition may occur" (see *id.*, ¶ 1997).

val innovators is likely to lead to a reduction in innovation.” Hence, one can reasonably argue and expect that this approach (i.e., assessing the harm to innovation at the whole industry level) can be applied to other horizontal mergers between “*rival innovators*.”²⁹

12. The merger between Dow and DuPont was also subject to a mandatory control filing in Turkey. In its evaluation of the transaction, particularly with respect to product and price competition, the TCB concluded that both horizontal and vertical overlaps existed between the activities of Dow and DuPont in Turkey. In its decision, the TCB ultimately concluded that, in light of (i) the aggregated market shares of Dow and DuPont in the affected markets,³⁰ and (ii) the intensive competition that existed in these markets both globally and within the borders of Turkey, the proposed transaction would not impede competition in the relevant market by way of creating or strengthening a dominant position.³¹ We note that our review of the TCB’s approach to *Dow/DuPont* is constrained by the explanations provided in the reasoned decision of the TCB, which comprises merely five pages. In this regard, we are not in a position to infer or determine whether or not the TCB actually assessed the transaction from an innovation competition perspective.

13. Another recent case that involved the evaluation of innovation competition issues was the acquisition of Monsanto Company (“Monsanto”) by Bayer Aktiengesellschaft (“Bayer”). While the reasoned decision has not yet been published, the Commission has already approved the transaction conditionally, based upon the proposed divestment remedies that addressed the overlaps between Bayer’s and Monsanto’s activities, particularly in the markets for seeds, pesticides and digital agriculture.³²

14. According to the official press release, considering that the acquisition would create the largest integrated seed and pesticide company in the world, the Commission had certain concerns that the transaction would significantly impede both price competition and innovation competition in Europe and globally, on a number of different markets.³³ In order to ensure that effective competition and innovation would be maintained in the seed, pesticide and digital agriculture markets, the Commission accepted and approved a remedy package that involved Bayer divesting its business related to seeds and traits, pesticides and digital agriculture, including its R&D activities that were worth EUR 6 million. According to the

official press release, the Commission evaluated the transaction from the perspective of the “theory of harm” and followed its approach in the *Dow/DuPont* case.³⁴

15. With respect to the merger review of the *Bayer/Monsanto* acquisition in Turkey, the TCB approved the transaction conditionally as well, based upon the commitments submitted to the Commission with regard to the markets for vegetable seeds, cotton seeds, corn seeds and insecticide seed dressings for corn.³⁵ The TCB emphasized the fact that the commitments submitted to the Commission would remove the existing vertical and horizontal overlaps³⁶ in Turkey, and hence, the transaction would not create or strengthen a dominant position. Therefore, the TCB found that the transaction would not significantly impede the competition in any relevant product markets in Turkey. The competitive analysis of the TCB with respect to the *Bayer/Monsanto* transaction chiefly concerned the price and product competition in the affected markets. Nevertheless, the TCB noted that it had considered the dynamic nature of the vegetable seed market in order to reach the conclusion that the transaction would not create dominance in the relevant marketplace.³⁷

16. In the light of the foregoing, it can be concluded that, as the competition enforcement authority of a developed jurisdiction, the Commission has significant concerns regarding the negative effects of a concentration on innovation competition, and thus, adopts policies and enforcement measures that are aimed at ensuring that innovative activities in the marketplace would not be impacted as a result of a proposed transaction. On the other hand, as a competition authority from a developing jurisdiction, the TCB tends to conduct its merger control evaluation on the basis of more traditional competition concerns, such as price competition. In this regard, while the Commission assesses the structure and features of a particular market (i.e., barriers to entry, the importance of innovation, concentration levels, etc.), as well as the innovation related activities of the merging parties (i.e., whether the parties are important innovators in the marketplace and whether they are close innovation competitors) in order to determine the negative effects of a proposed transaction on innovation, we are yet to observe the effects of the Commission’s approach on the competition enforcement policies of developing countries such as Turkey. However, it should also be kept in mind that the *Dow/DuPont* and *Bayer/Monsanto* cases have just recently been decided, and that the Commission’s rulings in these cases

²⁹ Petit, *supra* note 21, at 6.

³⁰ The TCB identified “crop protection products” and “carboxymethylcellulose” (CMC) as horizontally affected markets, and “HiPED” (high pressure ethylene derivatives) as a vertically affected market. See *Dow/DuPont* (June 1, 2016; 16-19/310-139), ¶9 *et seq.*

³¹ *Id.*, ¶13.

³² See *Bayer/Monsanto* (Case No. COMP/M. 8084) Commission Decision [2018] – Reasoned Decision Not Yet Published. See also Press Release, Commission, Mergers: Commission clears Bayer’s acquisition of Monsanto, subject to conditions (Brussels, 21 March 2018), http://europa.eu/rapid/press-release_IP-18-2282_en.htm (last accessed on October 30, 2018).

³³ *Id.*

³⁴ *Id.* See also Shearman & Sterling LLP, *Bayer/Monsanto: European Commission Continues its Trend of More Aggressive Divestments to Address Innovation Concerns*, 2018, <https://www.jdsupra.com/legalnews/bayer-monsanto-european-commission-86411> (last accessed on October 30, 2018).

³⁵ *Bayer/Monsanto* (May 8, 2018; 18-14/261-126), ¶126.

³⁶ The TCB identified three horizontally affected markets with respect to the activities of Bayer and Monsanto in Turkey, comprising the cotton seed market, the vegetable seed market, and the herbicide market. Furthermore, the TCB also found a vertical link between Bayer’s activities in the upstream market for insecticidal seed dressings for corn (upstream market) and Monsanto’s activities in the downstream market for the supply of corn (see *Bayer/Monsanto*, *supra* note 35).

³⁷ *Id.*, ¶60.

may still shape or influence the approach of enforcement authorities in Turkey and other developing countries in future cases.

III. Innovation efficiencies under review

17. Effects-based analysis³⁸ of mergers makes room for and allows the merging parties to raise arguments in favor of the transaction by calling attention to factors that counteract the harmful effects of a proposed merger. These efficiencies can be succinctly defined as “*welfare gains arising from the amalgamation of previously distinct entities*.”³⁹ In this regard, it is generally accepted that there are four types of efficiencies arising a merger: (i) productive efficiency,⁴⁰ (ii) transactional efficiency,⁴¹ (iii) allocative efficiency,⁴² and (iv) dynamic/innovation efficiencies.⁴³ Our discussion below will be focused on the last of these four efficiencies—namely, dynamic/innovation efficiencies.

18. Innovation efficiencies enhance an undertaking’s ability or incentives to innovate,⁴⁴ and can be in the form of an investment in new products or technology, as well as take the form of new business models. Such efficiencies are generally achieved when investment and innovation are combined and blended into invention, development, and new products and production processes, which eventually lead to increases in social welfare.⁴⁵

19. Competition enforcement agencies (from both developed regions and emerging economies) have incorporated innovation as a significant factor in their “theory of harm” evaluations. However, when merging parties wish to use innovation arguments as a defense (i.e., when they

claim innovation efficiencies as a countervailing response to competition law concerns), they are often faced with resistance and their arguments seem to fall on deaf ears. To that end, utilizing innovation as a merger defense proves to be easier said than done in practice, as certain issues that are particular to innovation arise in these cases, along with the familiar concerns raised in the competition law literature.

20. These concerns stem chiefly from the ambiguity of the concept of innovation and the complexity of its measurement. According to the OECD, the main difficulties⁴⁶ in terms of innovation efficiencies (in virtually all OECD jurisdictions) relate to the uncertainty, timing, measurement (i.e., quantification), and the extent of innovation’s impact on social welfare.⁴⁷

21. Competition agencies from different jurisdictions employ various standards and methods for evaluating efficiency claims. For instance, in light of Section VII of the EHMCG, the Commission conducts an assessment of a proposed transaction’s impact on efficiencies (including innovation efficiencies), which are required to be substantiated by the merging parties.⁴⁸ In order for the Commission to consider the merging parties’ innovation efficiency claims in its analysis of the transaction, and to reach the conclusion that a given transaction is compatible “*with the internal market*,”⁴⁹ the merging parties are required to show that the claimed innovation efficiencies relating to the transaction indeed (i) benefit consumers, (ii) are merger specific, and (iii) are verifiable.

22. In the light of these criteria, although it is widely accepted that such efficiencies can actually take the form of increased R&D activities and innovation, which enable consumers to benefit from new or improved products and services, the merging parties are still expected to demonstrate that these efficiency gains are likely to materialize

38 OECD, Roundtable on the Role of the Efficiency Claims in Antitrust Proceedings, Background Note by the Secretariat (Oct. 11, 2012), 3, ¶ 2, [http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=DAF/COMP\(2012\)16&docLanguage=En](http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=DAF/COMP(2012)16&docLanguage=En) (last accessed on October 30, 2018).

39 C. R. Fackelmann, Dynamic Efficiency Considerations in EC Merger Control: An Intricate Subject or a Promising Chance for Innovation? University of Oxford, *Centre for Competition Law and Policy Working Paper No. 09/06* (2006), 3.

40 Productive efficiencies lead to “*saving of costs by a firm that for the same input produces more output or more quality*” (C. Ortiz de Ciolac, Dynamic Efficiencies in Merger Analysis, ASCOLA Stockholm June 15-17, 2017, Draft Conference Paper, 4).

41 These efficiencies enable firms to “*reduce the transaction costs they incur in dealings with their business partners, and therefore facilitate the achievement of other types of efficiencies*” (OECD, The Role of Efficiency Claims in Antitrust Proceedings, 14, Policy Roundtables DAF/COMP(2012)23 (2012), <http://www.oecd.org/competition/EfficiencyClaims2012.pdf> (last accessed on October 30, 2018)).

42 Allocative efficiencies enable “*the allocation of resources according to their highest valued use and to the levels of output depending on the marginal costs*” (Ortiz de Ciolac, *supra* note 40, at 4).

43 *Id.*, at 5; R. S. Schlossberg, *Mergers and Acquisitions: Understanding the Antitrust Issues*, 234 (Chicago: ABA, Section of Antitrust Law, 3rd ed., 2008).

44 M. Trattner, Assessment of Anti-innovative Mergers in High Technology Markets (Spring 2016) (Master’s thesis, Lund University Faculty of Law), 11.

45 *Id.*, at 21.

46 The OECD also recognizes other factors which may be assessed by competition authorities, such as whether there are reasonable alternatives to the merger that would be likely to achieve the same efficiencies while being less anti-competitive, whether the efficiencies would lower fixed or variable costs (with a preference for variable cost reductions), and the merger’s effects on other markets (see OECD, Mergers and Dynamic Efficiencies, *Policy Brief* (Sept. 2008), 5, <http://www.oecd.org/daf/competition/mergers/41359037.pdf> (last accessed on October 30, 2018)).

47 The OECD lists some of the potential complications. According to OECD, for example, “*apples-to-oranges comparison problems*” can arise under a standard that is focused primarily on price effects. The OECD also adds that a merger may cause prices to rise soon after the consummation of a transaction, but it may also bring about dynamic efficiencies that have positive non-price effects, such as benefits from new or improved products in the longer term. According to the OECD, there is also a host of complicating factors related to the issue of innovation. For instance, there may be uncertainty as to how much an innovative activity will cost, how long it will take, and what the likelihood and extent of its commercial success will be. The OECD provides that there are also “*difficulties in measuring innovation itself, the problem of how to conceptually transform innovation into some measure of welfare, and the difficulty that the merging parties may be in possession of more or better information than the enforcement agencies*” (id.).

48 Another example is provided by the U.S. Horizontal Merger Guidelines, whereby innovation efficiencies are required to be: (i) enhancing the ability and incentive to compete, (ii) merger specific, and (iii) verifiable and quantifiable. When evaluating the effects on innovation, the U.S. antitrust agencies will take into account the ability of the merged firm to conduct research or development more effectively, which may ultimately spur innovation, even though it may not affect short-term pricing. The ability to appropriate benefits resulting from innovations, licensing and intellectual property conditions and R&D cost savings can be useful indicators in assessing innovation efficiencies as well. See U.S. Horizontal Merger Guidelines, *supra* note 14, Section 10.

49 See *Dow/DuPont*, *supra* note 13, at 502, ¶ 3265.

in a timely manner and that they would be substantial enough to offset any potential harm to consumers stemming from the transaction. If this is not possible, then the merging parties are required to provide evidence that at least clearly identifies a positive and non-marginal impact on consumers. Moreover, unless such efficiencies are (i) the direct result of the proposed merger, and (ii) cannot be achieved to a similar extent by less anti-competitive, yet realistic and attainable, alternatives (such as licensing agreements, joint ventures, or a merger that is structured differently)—or, in other words, indicate that the efficiencies arise specifically from that merger—it is likely that the Commission would deem the efficiency claims of the merging parties not to be merger specific, and therefore, would not give any weight to them in its competitive analysis.

23. Although the standards applicable to innovation efficiency claims have been set out under the current legal framework, they have not had “*an easy life in merger analysis*,”⁵⁰ as the Commission has not cleared any mergers solely on the basis of such innovation efficiencies.⁵¹ This is due to the fact that the merging parties’ innovation efficiency claims have not been able to satisfy the requirements of the Commission. For instance, in the Commission’s *Dow/DuPont*⁵² decision (which was the most recent case in which the merging parties’ innovation efficiency claims were evaluated within the scope of these standards), the Commission found that the merging parties had not been able to substantiate their innovation efficiency claims.

24. In *Dow/DuPont*, the merging parties argued that the transaction would lead to certain efficiencies and that the merged entity would provide beneficial effects with regard to innovation. First of all, according to the parties’ submission, the transaction would (i) diminish information spillovers to competing firms, and hence reduce imitation, thus increasing the opportunity to capture the returns to innovation, (ii) increase the return to innovation by allowing the merged entity to attain increased sales, and hence seize/realize more of the value of innovation, if this is assumed to be proportional to sales, (iii) allow the merged entity to achieve a higher expected net present value of innovations, and (iv) help the parties to eliminate any redundant duplication of assets and retain the capabilities of whichever party is stronger in each area of R&D.⁵³ Furthermore, with respect to innovation and the merged entity’s innovation capabilities, the merging parties argued that the transaction would allow them “*to advance innovative computational models*” and benefit from “*improved scalability*” to support the merged entity’s innovation activities.⁵⁴

25. In response to these efficiency claims, the Commission observed that they depended on the future strategic decisions of the merging parties and on detailed knowledge of their assets and capabilities, as well as the particular operations, functioning and dynamics of the relevant industry. In this regard, the Commission determined that, in general, these claims were not supported by any internal documents or substantiated by sufficient evidence. According to the Commission’s findings, the parties had failed to submit any concrete proof or evidence on how they were planning to realize these innovation efficiencies or how much they would improve productivity. Moreover, as per the Commission’s review, a number of these efficiencies were found to be achievable through other means (e.g., through R&D agreements), and therefore, they did not require a merger between the parties to be realized. With regards to the substantial analysis of the efficiency claims, the Commission found that the claims that were related to R&D cost savings would actually reduce the ability of the merged entity to compete in innovation, and thus, would not lead to efficiency-enhancing synergies, contrary to the parties’ arguments.⁵⁵ In short, the Commission declared that it could not conclude that the innovation efficiency claims put forth by the parties were likely, verifiable, merger specific and beneficial to consumers.⁵⁶ Therefore, the Commission could not rule that the claimed innovation efficiencies would counter-balance or offset the declines in innovation competition that would result from the transaction.

26. As illustrated by the Commission’s approach in this case, antitrust enforcement authorities consider the criteria adopted with respect to efficiency claims in product and price competition (such as allocative or productive efficiencies) to apply in the case of innovation competition (i.e., innovation efficiencies) as well, where it is not always possible to prove or quantify the effects as easily as in other types of efficiencies.⁵⁷ This is also the case in developing jurisdictions such as Turkey, where the criteria adopted by the TCB is equivalent to the Commission’s standards.⁵⁸ The decisional practice of the TCB indicates that, although certain approval decisions contain references to the parties’ arguments on innovation (such as developing innovative products and encouraging future innovation), it is unclear whether the TCB has actually paid any attention or given any weight to these arguments in its competitive analyses.⁵⁹ For instance, analyzing the text of the reasoned decisions in the *Dow/DuPont* and *Bayer/Monsanto* cases, we are unable to determine whether the parties raised any arguments pertaining to innovation efficiencies and, if so, whether the TCB paid any attention

50 OECD, *supra* note 41.

51 *Id.*, 23.

52 Bearing in mind that the Commission’s reasoned decision in the *Bayer/Monsanto* case has not been published at the time of writing, we are only able to evaluate the information provided in the press release on the *Bayer/Monsanto* clearance decision, and therefore, we are unable to provide any commentary regarding the question of whether innovation efficiencies were evaluated for the purposes of this transaction.

53 *Dow/DuPont*, *supra* note 13, at 503, ¶ 3266.

54 *Id.*, at 504, ¶ 3277.

55 *Id.*, at 505, ¶ 3281.

56 *Id.*, ¶ 3284.

57 See the merging parties’ arguments regarding this point in *Dow/DuPont*, *supra* note 13, at 504, ¶ 3278.

58 See the Turkish Horizontal Merger Guidelines, *supra* note 18, Section 6.

59 We note that our review of the case law is constrained by the legal reasoning provided in the reasoned decisions of the TCB on mergers, which generally consist of only 2–5 pages of analysis. See further G. Gürkaynak, Ç. Koz and S. N. Topaloğlu, Turkey: Dynamic Efficiency Considerations in Merger Control Analyses, *Concurrences Review* No. 3-2018, Art. No. 87102, 3, ¶ 6.

or gave any weight to them in its assessments. In any case, historically speaking, it is clear that innovation efficiencies have not been taken into account to a great extent by competition agencies,⁶⁰ either in developing jurisdictions such as Turkey, or even in more advanced economies such as the European Union. Therefore, we conclude that competition enforcement authorities have often fallen short with respect to making room for innovation claims that are advanced as pro-merger arguments, despite the fact that the current legal framework acknowledges the existence and significance of dynamic efficiency considerations.

27. In their analysis of innovation efficiencies, competition enforcement authorities should bear in mind that the results and effects of innovation are uncertain and difficult to measure with numbers, and they should further remember that even the undertakings involved in innovation and R&D cannot be 100% certain that their innovative efforts will ultimately succeed and bear fruit in the marketplace. Thus, it would be a critical mistake for competition authorities to impose an extremely heavy burden of proof on the merging parties in terms of substantiating their efficiency claims merely because these claims are related to a future event, especially because the anti-competitive effects of a merger control decision are by nature speculative as well.⁶¹

28. In this regard, the uncertain results and indeterminate nature of innovative efforts should not be used as an excuse for rejecting innovation defenses at the outset or for dismissing them out of hand on the grounds that innovation claims are hard to substantiate with concrete data anyway. Competition authorities should be especially mindful of the fact that almost all types of analyses with respect to merger control are predictive in nature, as they are necessarily based on speculation about the future. Therefore, competition authorities should not apply their predetermined standards (which were designed for the static efficiency considerations of earlier eras) to their assessments of innovation efficiencies as well. Instead, competition authorities should consider that there are differing views on the specific circumstances that promote innovation,⁶² and also keep in mind that there is a lack of “good legal presumptions” in the current legal framework that can be relied on in terms of analyzing and measuring

innovation efficiencies.⁶³ Therefore, competition agencies should consider developing new methods/standards that would match and respond to the particular dynamics and stochastic nature of innovation. Alternatively, they could even consider adapting a case-by-case approach to merger analysis, whereby the specific characteristics and innovative nature and potential of each relevant market would be taken into consideration. What we can say for certain is that significant progress needs to be made with respect to enabling the proper assessment and consideration of the innovation efficiency claims asserted by the merging parties in a proposed transaction.

IV. Conclusion

29. Innovation is considered to be an important driver of the economy⁶⁴ and of economic growth.⁶⁵ Therefore, innovation is a vital engine for the maximization of total welfare, as well as for addressing the most urgent and critical challenges with respect to economic development.⁶⁶ In this context, a successful and inclusive development strategy will involve improving the innovation capacities of the firms in a given economy through competition policies and enforcement strategies.

30. Our analysis of the most recent cases addressing this issue reveals that competition authorities have taken some encouraging steps on this crucial matter, and are on the way to recognizing innovation as a dynamic concept and integrating it effectively into their merger control reviews. This is particularly evident with respect to the adaptation of innovation into the “theory of harm,” and its incorporation into the competitive assessment of mergers. Having said that, the merger analysis conducted by competition authorities (particularly from developing jurisdictions) is still highly linked to static considerations and concerns, such as price competition and consumer choice.

31. Innovation is the new frontier for competition enforcement. In order to achieve continuous growth and development, competition authorities need to engage in a dynamic approach on this frontier and refrain from resorting to enforcement tools and standards that predate the technological advancements of the digital age in the 21st century.

60 OECD, Dynamic Efficiencies in Merger Analysis, Policy Roundtables DAF/COMP(2007)41 (2007), 12, <https://www.oecd.org/daf/competition/mergers/40623561.pdf> (last accessed on October 30, 2018).

61 D. A. Crane, Rethinking Merger Efficiencies, *Michigan Law Review* 110, No. 3 (2011): 347, 352 and 355 (“... most modern merger review requires predictions about the likely consequences of an event that has not yet occurred and that cannot be sampled, studies or tested. (...) merger control is an inherently predictive exercise”).

62 This is a reference to the Schumpeter v. Arrow debate mentioned earlier, in which Schumpeter argues that reduced competition in a market leads to more innovation and that innovators need significant market power, whereas Arrow argues that monopolies would have limited incentives to innovate due to the risk of cannibalization. See European Commission Policy Brief on EU Merger Control and Innovation, 1–2, available at http://ec.europa.eu/competition/publications/cpb/2016/2016_001_en.pdf (last accessed on October 30, 2018).

63 C. McConnell, Innovation analysis lacks reliable presumptions, says US DOJ deputy, *Global Competition Review* (June 7, 2018), available at <https://globalcompetitionreview.com/article/1170347/innovation-analysis-lacks-reliable-presumptions-says-us-doj-deputy> (last accessed on October 30, 2018).

64 R. P. Maradana et al., Does innovation promote economic growth? Evidence from European countries, *Journal of Innovation and Entrepreneurship* (2017), 6:1, 2.

65 R. Brandenburger, Promoting Innovation through Competition, Speaker at the 2nd BRICS International Competition Conference (Sept. 2011) (last access omitted), as cited in Trattner, *supra* note 44, at 28. See also OECD, *supra* note 46, at 4.

66 OECD, Innovation for Development: A Discussion of the Issues and an Overview of Work of the OECD Directorate for Science, Technology and Industry (May 2012), <http://www.oecd.org/innovation/inno/50586251.pdf> (last accessed on November 4, 2018).

32. In this regard, we invite antitrust authorities to adopt a more experimental and open-minded approach in their merger review process by exploring different modes of analysis, such as making room for innovation efficiencies. Furthermore, we continue to hope that they will abandon the complacent and self-righteous comfort of assuming that innovation efficiencies must not exist merely because it is not always possible to quantify or

verify them with numerical data. In this way, competition authorities would advance one step closer to implementing a coherent and consistent merger control regime that puts innovative concerns at the forefront, and they would not miss the opportunity to help maximize total welfare and economic growth through the astonishing power of innovation. ■

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