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# Innovation Competition in the Context of EU Merger Control

Received 05 November 2019; accepted 29 June 2020\*

Original Article

Muhammed Safa UYGUR\*\*

## Abstract

*The intersection between innovation and competition has always been one of the most significant debates in the literature. A strand of that broad debate, the impact of mergers on innovation, has gained momentum following a series of decisions by the European Commission in recent years. Particularly, Dow/DuPont decision has been widely seen as a landmark case which unlocked a whole different level to discuss the role of merger control in protecting innovation competition. Alongside these developments, some mergers in the digital markets set the scene for a heated debate on the validity of current approaches to substantial merger control. Against this background, this paper attempts to explore the current approach to innovation competition in the context of merger control under European Union competition law. First, it summarizes the key points and significant discussions which relate to the economic theory of innovation competition. Then it moves on to assess the existing legal framework and case-law in the European Union in the context of innovation competition. Subsequently, it puts digital markets into innovation competition perspective. Finally, it concludes by asking the question of whether a shift in the focus of competition policy is needed.*

**Keywords:** *innovation, competition, mergers, concentrations, EU, digitalisation.*

\* This article is based on a master's thesis presented by the author at Queen Mary University of London, United Kingdom.

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# AB Yoğunlaşmaların Kontrolü Çerçevesinde Yenileşim Rekabeti

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Muhammed Safa UYGUR

## Özet

*Rekabet ve yenileşim arasındaki ilişki üzerine tartışmalar literatürde her zaman önemli bir yer tutmuştur. Bu geniş tartışmanın kollarından birisi olarak nitelendirilebilecek olan devralmaların yenileşime etkisi üzerine tartışmalar, Avrupa Komisyonu'nun son zamanlardaki bir dizi kararının ardından ivme kazanmıştır. Özellikle Dow/DuPont kararı, devralmaların kontrolünün yenileşimin korunmasındaki rolüne dair tartışmada yeni bir dönem başlatan önemli bir karar olarak anılmaktadır. Bu gelişmelerin yanı sıra, dijital pazarlarda gerçekleşen bazı devralmalar, devralmaların kontrolüne ilişkin mevcut yaklaşımların geçerliliğine dair hararetli tartışmalara zemin hazırlamıştır. Sözü edilen gelişmeler ışığında, bu makalede, Avrupa Birliği rekabet hukukunda devralmaların kontrolü bağlamında yenileşimin rolüne dair güncel yaklaşımlar ortaya konulmaya çalışılmıştır. Bu çerçevede, ilk olarak, rekabet ve yenileşim arasındaki ilişkiye dair önemli iktisadi tartışmalar özetlenmektedir. Daha sonra, Avrupa Birliği devralmaların kontrolü mevzuatında yer alan yenileşime dair hükümler ve kararlar değerlendirilmektedir. Akabinde dijital pazarlardaki devralmalar, yenileşim rekabeti perspektifinden incelenmektedir. Son olarak ise, sözü edilen tartışmalar ışığında, rekabet politikasının mevcut odağının değiştirilmesine yer olup olmadığı tartışılmaktadır.*

**Anahtar Kelimeler:** rekabet, yenileşim, yoğunlaşmalar, inovasyon, dijitalleşme, AB.

## INTRODUCTION

Mergers and acquisitions<sup>1</sup> are considered as one of the most significant components of the liberal economy. Numerous benefits flowing from merger activity such as disciplining the management of companies, movement of capacity from declining industries to growing ones, increasing productivity, creating efficiencies through economies of scale and scope etc. have been often cited in the literature (Jones and Davies, 2014, p. 2). In that connection, mergers are generally treated with a broad tolerance in many jurisdictions, including the European Union (EU) which defines itself as a highly competitive social market economy.<sup>2</sup> Yet, as is valid for many liberties, the freedom to acquire or sell businesses also has limits as the idea of free markets call for at least a working level of competition. In that regard, ironically to an extent, government intervention delivers such a net of safety to the markets. In the EU, Merger Regulation<sup>3</sup> (EUMR or the “Regulation”) provides the European Commission (the “Commission”) with the authority to declare ‘concentrations’<sup>4</sup> *“which would significantly impede effective competition, in the common market or in a substantial part of it, in particular as a result of the creation or strengthening of a dominant position”*<sup>5</sup> incompatible with the common market.

What is competition all about? The answer to that question is without a doubt beyond the borders of this study. Nevertheless, it is crucial in identifying the relationship between competition and innovation (Kerber, 2017, p. 12). The idea of competition -along with perfect, effective, workable, contestable competition (Whish & Bailey,

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<sup>1</sup> Hereinafter “mergers”. Throughout this paper, “mergers” and “concentrations” will be used interchangeably to address concentrations as defined in Article 3 of the EUMR (see fn. 4).

<sup>2</sup> Treaty on European Union (TEU), Article 3(3). The Article is as follows: “*The Union shall establish an internal market. It shall work for the sustainable development of Europe based on balanced economic growth and price stability, a highly competitive social market economy, aiming at full employment and social progress, and a high level of protection and improvement of the quality of the environment. It shall promote scientific and technological advance.*”

<sup>3</sup> Council Regulation on the Control of Concentrations Between Undertakings, 2004.

<sup>4</sup> The term is defined in the EUMR as “*a change of control on a lasting basis*” which results from a merger, acquisition or creation of a joint venture as described in Article 3 of the Regulation.

<sup>5</sup> EUMR, Article 2(3).

2012, p. 18), has been commonly resonated with a process of rivalry (OFT Merger Assessment Guidelines, 2010, para. 4.1.2). It is also associated with welfare, fairness, contestability and diversity amongst many other things. In addition to the said descriptions, competition law in the EU has been held to protect consumer welfare and ensure an efficient allocation of resources (Guidelines on the Application of Article 81(3) of the Treaty, 2004, para. 13). The Commission has, in its Horizontal Merger Guidelines<sup>6</sup> (HMG or the “Guidelines”), referred to the benefits of such effective competition by “*low prices, high quality products, a wide selection of goods and services, and innovation*” (para. 8).

Having said that, the classical narrative of competition mainly concerns itself with the static aspects, putting the immediate price/output effects on the focus. Indeed, the mentioned focus is quite convenient because, amongst other reasons, firstly, most of the markets are responsive to short-term pricing decisions and secondly, ensuring consumer welfare in the short term provides a sound level of legitimacy to enforcement authorities which are in a position to condemn anti-competitive behaviour. However, the same reasoning might not hold true for some markets which are predominantly characterized by *innovation competition* rather than *price competition*. In particular, competition authorities might find themselves in situations where short-term pricing decisions are outweighed by huge R&D investments to capture the “future markets” (e.g., pharmaceutical markets) or where there is no price competition but the industry is characterized by innovation and quality (e.g., digital platforms). In such cases, effects of innovative activities are more likely to materialize in the future markets rather than immediately affecting prices or outputs.

The intersection between competition and innovation has been a long-standing and heated debate in the EU. Nevertheless, in a merger context, the said debate has gained momentum just in the recent years. This has been the case especially after a series of mergers in the pharmaceutical, agro-chemical, online platform and several other sectors. The topic has drawn even more attention after the *Dow/DuPont* decision, where the Commission has elaborated its approach to innovation competition. Finally, the allegedly “killer acquisitions” by the digital technology giants attracted much attention by the public, competition authorities and academics.

<sup>6</sup> Guidelines on the Assessment of Horizontal Mergers under the Council Regulation on the Control of Concentrations Between Undertakings, 2004.

In light of the foregoing, this paper attempts to explore the current approach to innovation competition in the context of EU merger control. Firstly, it summarizes the key points of the debate amongst academics relating to the economic theory of innovation competition. Then it moves on to assess the existing legal framework and case-law in the context of innovation competition. Thirdly, the paper puts digital markets into innovation competition perspective. Particularly, it attempts to examine the recent phenomenon called “killer acquisitions”. Finally, it concludes by asking the question of whether a shift in the focus of competition policy is necessary or not.

## 1. ECONOMICS OF INNOVATION COMPETITION

Any discussion on the relationship between innovation and competition starts with Schumpeter vs. Arrow debate. At one end of the spectrum, Schumpeter argues that monopolies might be more innovative than the firms that operate in competitive markets (Schumpeter, 1942, p. 91). According to Schumpeterian point of view, as Bresnahan et al. (2011, p. 203) puts, “[the] ‘waves of creative destruction’ are [the] bursts of innovative activity that threaten to overwhelm established dominant firms”. In that connection, the basic assumption is that the monopolistic market structures provide for strong incentives to innovate because the fear of being replaced by another firm constantly threatens a monopolist’s existence.

At the other end, Arrow (1962, pp. 619–622) puts forward the idea that incentives to innovate are more in a competitive market setting due to a “replacement effect”.<sup>7</sup> In that regard, he basically asserts that since a monopolist replaces itself when it innovates, it has fewer incentives to innovate as compared to a competitive firm that aims to replace the incumbent. Between these two ends, other economists found various interactions between market structures and innovation.

Although such a beginning to this topic is quite convenient -since the said relationship is by far the dominant discussion in the literature-, it must also be stated from the outset that the market structure-innovation approach is not without heavy criticism. Sidak and Teece (2009, p. 601), for example, reprimand such an approach on the grounds that

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<sup>7</sup> The term was coined by Tirole. See (Jullien & Lefouili, 2018, p. 368; Tirole, 1988, p.392).



the proponents of the said-approach do not focus on dynamic aspects of competition because of a bias which stems from the analytical tools that they use “*for their convenience*”.<sup>8</sup> Regardless of the view taken, it is important to note here that both views of innovation provide insights on how to conceptualize innovation from a competition law point of view. In that respect, in this chapter, a brief explanation for both approaches will be summarized.

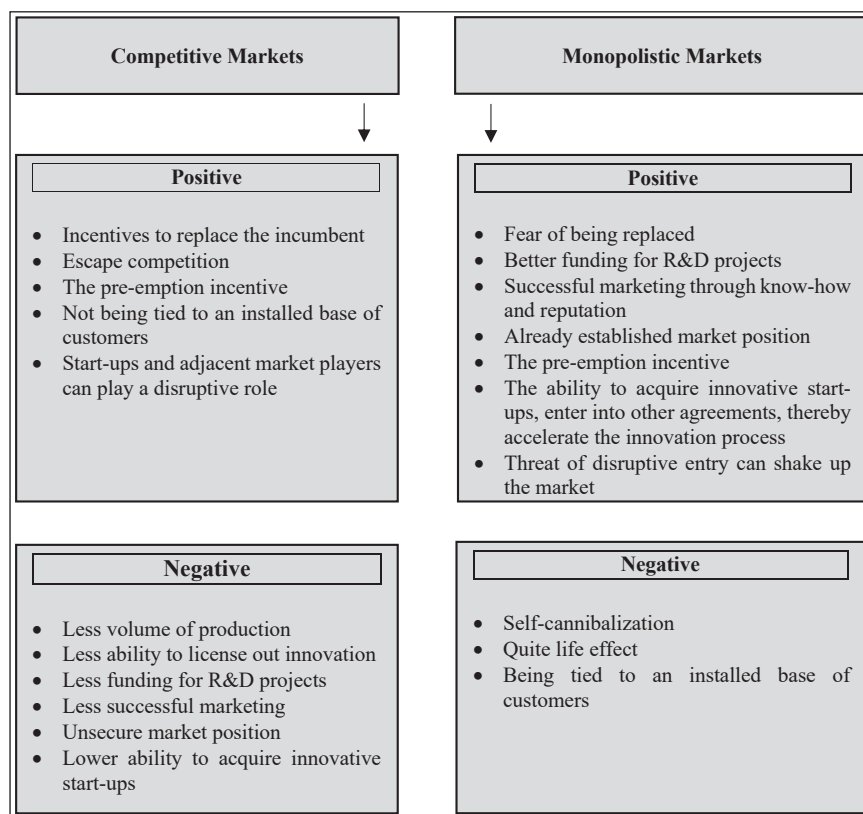
There are various interpretations for the term ‘innovation’ depending on the approach that an economist adopts. For example, Shapiro (2011, p. 377) describes innovation as a wide range of improvements in efficiency. Alternatively, Greenhalgh and Rogers (2010, p. 4) refer to innovation as “*the application of new ideas to the products, processes, or other aspects of the activities of a firm that lead to increased value*”. From this perspective, it is possible to conclude that -in very broad terms- innovation refers to the commercialization of new ideas which enable the production of products and processes that are of *better value* compared to the old ones. To that end, a faster way of producing lemonade or enabling to pay for the lemonade via mobile devices instead of credit cards might be given as examples for innovation.

Economists also draw a distinction between ‘process innovation’ and ‘product innovation’ (Tirole, 1988, p. 389; Greenhalgh & Rogers, 2010, p. 3). Product innovation is referred to as the development of new products that are “*superior to, or at least significantly distinct from, existing products*” while process innovation pertains to reducing costs associated with the production of goods and services (Shapiro, 2011, p. 371). Another distinction is drawn between ‘incremental innovation’ and ‘radical innovation’ (or disruptive innovation) according to the degree of novelty (Souto, 2015, p. 144). In that regard, incremental innovation refers to the “*process of making continuous but small improvements to a product service*” (Kurian, 2013, p. 156). Disruptive innovation, in return, drastically change the functioning of a market or involve the creation of a new business model (OECD, 2017, p. 2).

<sup>8</sup> The author goes on to say that: “*For these and other reasons, the profession tends to resist abandoning the old tools of neoclassical economics. Economists shun dynamic analysis either because they do not understand that framework or because they fear that recognizing it will be excessively hostile to well-accepted and well-practiced analytical frameworks. We contend that advocates of competition policy should not accept this state of affairs any longer*”. (Sidak & Teece, 2009, p. 602)

The debate amongst economists on the interaction between competition and innovation puts strong emphasis on market structures to explain the said relationship since Schumpeter. On that note, *abilities* and *incentives* to innovate are key terms in determining the relationship between innovation and competition according to that point of view.<sup>9</sup> In this connection, a general overview of the abilities and incentives that competitive and monopolistic market structures provide could be summarized as in the below scheme:

**Figure-1:** Market structure and innovation: abilities and incentives



**Source:** The figure was created by the author based on the following papers: Baker, 2007, pp. 578–579; R. Gilbert, 2006; Shapiro, 2011, pp. 366–367

<sup>9</sup> For the purposes of this paper, ability to innovate refers to any capability of a firm to innovate. This may include R&D assets or skilful employees. On the other hand, incentive to innovate means “*the difference in profit that a firm can earn if it invests in research and development compared to what it would earn if it did not invest*”. (R. Gilbert, 2006, p. 159)

Contingent upon the market structure, there are various parameters that could affect an innovator's incentive to innovate as can be observed from the above-scheme. First of all, competitive markets provide incentives to innovate because innovative start-ups may desire to replace the monopolist. This might particularly be true in the case of disruptive innovation. Another case could be in competitive markets where rivals compete neck-and-neck to escape competition (escape competition). Another scenario under the competitive setting could be that a firm might wish to pre-empt strategic areas in order to prevent its competitors from entering into that respective domain (the pre-emption incentive).

Contrariwise, a monopolist might have better incentives to invest in innovation because of the fear of being replaced by a new-entrant. Furthermore, an increased chance of success might better incentivize a monopolist since it has better means for R&D and marketing. On the other hand, a monopolist might be disincentivized due to self-cannibalization. That essentially means that a monopolist would replace itself by innovating, thereby 'cannibalizing' own profits.

Beyond the monopolistic-competitive markets dichotomy, Aghion et al.'s paper (Aghion et al., 2005) on the relationship between competition and innovation has been particularly prominent in the economic literature (Shapiro, 2011, p. 373). In their work, "*Competition and innovation: an inverted-u relationship*", the authors suggest that competition encourages neck-and-neck firms to innovate but it discourages laggard firms from innovating (Aghion et. al., 2005, p. 701). According to their model, technological leaders and their followers exist in the market and innovation by the market players are characterized as step-by-step innovation as opposed to disruptive innovation (Aghion et al., 2005, p. 702). They assert that the incentives to innovate do not predominantly hinge upon post-innovation rents, but on the difference between post- and pre-innovation rents of incumbent firms (Aghion et al., 2005, p. 702). Because pre-innovation rents are typically low in competitive product markets, the neck-and-neck firms "escape competition" by innovating (Aghion et al., 2005, p. 702). On the other hand, where laggard firms innovate, post-innovation rents are low, thereby Schumpeterian view dominates (Aghion et al., 2005, p. 702).

In that regard, according to this study, in markets where competition is high, incentives to innovate are low because the difference between laggard firms' rents post-innovation would also be low as such. Conversely, when the competition is low, incentives to innovate are high because of the said difference by neck-and-neck firms would be high, thereby "escape competition" effect dominates. On the other hand, in monopolistic markets, Arrow's "replacement effect" prevails, meaning that the monopolist has less incentives to innovate because incentives to replace itself are low. Overall this creates an Inverted-U shaped model for the innovation-competition relationship.

Another important study by Gilbert, who attempts to "*unravel the genetic code*" of the said relationship, analyse the "*effects of competition on R&D investment and outcomes for product and process innovations under the conditions of exclusive and nonexclusive intellectual property rights*" (Gilbert, 2006, p. 160). In his study, Gilbert (2006, pp. 161–162) finds "*modest support*" that process innovation is more profitable for large firms because of the large-scale production. He also states that there is "*little evidence*" that supports the Schumpeterian point of view that highly concentrated market structures better incentivize innovative activity (Gilbert, 2006, p. 162). Moreover, he asserts that there is "*some evidence*" to show that innovation is best flourished in competitive markets (Gilbert, 2006, p. 162). The author also expands his analysis into management theories. He asserts that more competition affects managerial efforts in two opposite directions. Firstly, bankruptcy risk encourages managers to innovate because they would wish to keep their jobs. Conversely, it reduces the incentives to innovate because of the low rents post-innovation, as explained above (Gilbert, 2006, p. 181).

Federico et. al's paper on the relationship between mergers and innovation is a significant piece since the study represents a different strand of the literature which attempts to examine the specific relationship between mergers and innovation (Federico, Langus, & Valletti, 2017). They find in particular that mergers between two out of a limited number of innovators lower the incentives to innovate when there are no efficiencies or any other spill-over effects associated with them (Federico et al., 2017, p. 8). This is mostly due to the "*cannibalization effect*" which can be defined as the internalization of negative externalities that parties to a merger have as a result of innovative

activities absent the merger. They also assert that the cannibalization effect is the “*dominant driver of the impact*” on incentives to innovate (Federico et al., 2017, p. 9). In a more recent study, the same authors use price coordination and innovation externalities as channels to describe the relationship between competition and innovation (Federico et al., 2018, p. 2). In short, they come to the conclusion that a reduced price competition post-merger favours innovation (Federico et al., 2018, p. 2).

Contrastingly, Jullien and Lefouili (2018, p. 370) argue that there are fundamental differences between unilateral price effects and unilateral innovation effects. They say firstly that innovation externalities are not sufficient for a claim that the merged entities would reduce innovation (Jullien & Lefouili, 2018, p. 370). Secondly, they state, positive externalities flowing from R&D spill-over puts innovation effects in a different place (Jullien & Lefouili, 2018, p. 370). Finally, the authors state, because of the dynamic nature of the innovation process, a static analysis would be reductionist (Jullien & Lefouili, 2018, p. 370).

Sidak and Teece (2009, p. 588) fundamentally differ from the existing views on the relationship between innovation and competition. Particularly, they find the said relationship between market structures and innovation largely irrelevant. They argue that framing competition issues in a monopoly vs. competition dichotomy is “unhelpful”. They note: “[d]espite 50 years of research, economists do not appear to have found much evidence that market concentration has a statistically significant impact on innovation” (Sidak & Teece, 2009, p. 588). In that regard, they do not submit to the idea that market structure determines the level of the innovation. Instead, they suggest that innovation shapes market structure (Sidak & Teece, 2009, p. 596).

At that point, the authors’ focus on evolutionary and behavioral economics is particularly worth mentioning. They mainly focus on the *enterprise-level capabilities, imitation* and *managerial strategies* to innovate rather than product market-oriented *incentives* approach. The authors also suggest factoring in other elements such as the availability of venture capital and public support (Sidak & Teece, 2009, p. 618). However, as might be intended by the authors, the paper falls short of developing a working competition law framework that explains such effects in a real case.

Shapiro (2011, p. 363) takes a reconciling approach, suggesting that Schumpeter and Arrow effects are “*fully compatible and mutually reinforcing*”. The author points out that findings in the economic literature should not lead to an understanding of “*too much competition=less innovation*”. He underlines that the “*real lesson*” from the literature, which connects competition and innovation with static market structure terms, would be that these static measures are “*poor metrics for assessing innovation competition*” (Shapiro, 2011, p. 375). The author goes on to say that the theory of the inverted U relationship is not scrutinized as it should have been, taking into account the “*industry differences in technological opportunity and for the endogeneity of product market structure*” (Shapiro, 2011, p. 380).

Finally, on that note, Gilbert (2019) explains the relationship between mergers and R&D diversity. Briefly, he arrives at the conclusion that mergers often decrease R&D diversity. However, he also states that mergers can promote innovation if technology spillovers benefit imitators or enable follow-on innovations (Gilbert, 2019, p. 466). In parallel, Bresnahan et al. (2011, p. 266) find that, far from using the advantages of scope economies, incumbent firms are disadvantaged compared to new entrants from a diversity point of view. They maintain that shared assets and strategic interdependencies play a significant role regarding that outcome. In that respect, they assert that incumbent firms cannot duplicate the diversity characteristic of the market (Bresnahan et al., 2011, p. 267).

The overall idea in the economic literature is that mergers may have unilateral/coordinated effects that lead to the diminishing of innovation. However, still, the economic literature offers little guidance on the impact of mergers on innovation (Coninck, 2016, p. 43; Déchamps & Fanton, 2018, p. 96; Kerber, 2017, p. 8; Motta, 2004, p. 54). The biggest hurdle regarding the empirical analysis of the relationship between innovation and competition from a structural point of view appears to be isolating many other factors (e.g. technological opportunities) which apparently have an impact on the level of innovation in a given industry (Baker, 2007, p. 584; Gilbert, 2006, p. 206). Whilst several authors argue that empirical evidence is sufficient enough to highlight the importance of competition in promoting innovation (Baker, 2007, p. 587), it is still inadequate

to point out such importance without explaining how competition interacts with innovation. In any case, it can safely be stated that there is no consensus amongst economists even disregarding such significant obstacles to deciphering the said relationship.

Admittedly, in its current state, the impact of mergers on innovation is a continuing debate. However, the glass is half-full. As suggested by Gilbert (2006, pp. 164–165), the various theories can be read as alternative models:

*“The many different predictions of theoretical models of R&D lead some to conclude that there is no coherent theory of the relationship between market structure and investment in innovation. That is not quite correct. The models have clear predictions, although they differ in important ways that can be related to market and technological characteristics. It is not that we don’t have a model of market structure and R&D, but rather that we have many models and it is important to know which model is appropriate for each market context.”*

In that respect, it is possible to conclude that economic theories provide at least a working framework to suggest that, depending on the facts of each case, mergers might negatively affect merging parties’ incentives to innovate and reduce overall innovation in a given industry.

## 2. THE LEGAL THEORY OF INNOVATION COMPETITION

Innovation is described as a parameter of competition (para. 8), a barrier to market entry (para. 71), a factor to render coordination amongst market players more difficult (para. 45) and an efficiency gain (para. 81) in the HMG. In particular, paragraph 38 of the Guidelines explains the role of innovation as a competitive parameter as follows:

*“In 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. Similarly, a firm with a relatively small market share may nevertheless be an important competitive force if it has promising pipeline products.”*

Therefore, the Guidelines explicitly provides for the possibility of a significant impediment to effective competition resulting from a merger between two important innovators. Notably, this is the only mention in the HMG on the said possibility. In that regard, essentially, there is no specific theory of harm in the HMG relating to innovation competition.

Technology Transfer Guidelines<sup>10</sup> (TTG) also provides a background to the general framework of innovation competition in Article 101 context. In the former guidelines (2004), it was stated that: *“Some licence agreements may affect innovation markets. In analysing such effects, however, the Commission will normally confine itself to examining the impact of the agreement on competition within existing product and technology markets”* (para. 25). In that regard, the concept of “innovation markets” was firmly attached to existing product and technology markets. However, the Commission also stated in the said Guidelines that in exceptional circumstances where the *“agreement affects innovation aiming at creating new products and where it is possible at an early stage to identify research and development poles”*, it would not confine itself to the existing product and technology markets. There was not much of a change in its position in that respect. Nevertheless, the concept of *“innovation markets”* was replaced by the term *“competition in innovation”* (para. 26). It is worth mentioning here that in *Dow/ DuPont* (2017, para. 2161), it is stated that;

*“When considering both the downstream product markets and the upstream technology markets, innovation should not be understood as a market in its own right, but as an input activity for these markets. While innovation eventually results in products which compete on these markets, the assessment of innovation competition cannot be directly conflated neither with the relevant downstream product markets, nor with the relevant technology markets.”*

The above-mentioned shift represents an evolutionary change of how the Commission perceives innovation in its decisions. In one of the earliest decisions in 1992, the Commission found that the strengthening of the acquirer in the nylon carpet fibre market would have led to a *“considerable reduction of competition, in particular with*

<sup>10</sup> Guidelines on the Application of Article 101 of the Treaty on the Functioning of the European Union to Technology Transfer Agreements



*regard to the competition in product development*” (DuPont/ICI, 1992, para. 47). In this case, the Commission paid particular attention to product differentiation that resulted from continuous innovation as it was one of the “driving forces” of the market. *Pasteur/Merieux* introduced a future product analysis with respect to ‘pipeline products’ which were in an advanced stage of clinical trials (Pasteur Merieux/Merck, 1994, para. 63). In *Glaxo/Wellcome*, again, pipeline products were discussed in the context of potential competition (Glaxo/Wellcome, 1995, para. 30). Similar to that, “future markets” were part of the analysis in *Glaxo Wellcome/SmithKline Beecham* (Glaxo Wellcome/SmithKline Beecham, 2000, para. 70 et seq.). The decision concerned pipeline products which were defined as “products which are not yet on the market but which are at an advanced stage of development” (Glaxo Wellcome/SmithKline Beecham, 2000, para. 70). In *AstraZeneca/Novartis*, similarly, the analysis was based on pipeline products (Astra Zeneca/Novartis, 2000, para. 219). Likewise, “late-stage R&D projects” (Phase-III) were taken into account in *Pfizer/Pharmacia* (Pfizer/Pharmacia, 2003, para. 22).

Besides the foregoing, there is not much explanation on innovation competition in the relevant legislation under EU law. It is sensible to assume that this is due the lack of clarity in the economic theory of innovation competition. As stated above, currently, a well-recognised and over-arching economic theory for innovation competition does not exist. Instead, economists identify the effects of mergers on innovation competition with different specific models and assumptions. To bridge the gap, in *Dow/Dupont*, the Commission concludes that the provisions under HMG are also applicable to innovation competition.

In *Dow/Dupont* (2017, para.1987-1993), the Commission states that the analytical framework for non-coordinated effects under HMG is also, at least partially, applicable to innovation. In that regard, it firstly refers to paragraph 8 of the HMG to confirm that the term “*increased prices*” is only a shorthand to refer to a competitive harm (*Dow/DuPont*, 2017, para. 1995). Secondly, it explains that paragraph 38 of the HMG expressly confirms innovation competition as a criterion in assessing likely effects of a merger (*Dow/DuPont*, 2017, para. 1996). Thirdly, it emphasizes that the same paragraph explains the possibility of a harm to innovation competition by a merger between two companies with pipeline products related to a specific

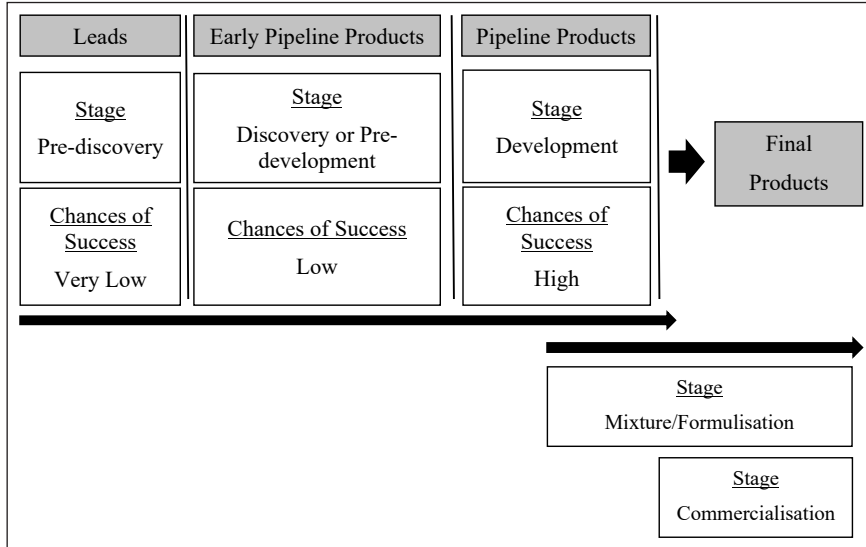
product market as only one example amongst other possibilities (*Dow/DuPont*, 2017, para. 1997). Lastly, it puts forth that it is implied in the paragraph 24 *et seq.* of the HMG that the Commission “needs to assess whether the transaction reduces important constraints on one or more sellers and significantly impede effective innovation competition” (*Dow/DuPont*, 2017, para. 1998). In particular, the Commission underlines the following excerpt from paragraph 25 of the HMG: “mergers in oligopolistic markets involving the elimination of important competitive constraints that the merging parties previously exerted upon each other together with the reduction of competitive pressure on the remaining competitors” (*Dow/DuPont*, 2017, para. 2006).

The Commission puts forward the idea that a reduction in innovation competition would result in effects in the innovation spaces. Innovation spaces are described in the decision as the specific *discovery spaces* that R&D players target when setting up their innovation capabilities and conducting R&D within a given industry (*Dow/DuPont*, 2017, para. 350). *Discovery spaces* could be equated with *discovery processes* and *development stage*. *Discovery process* include creation, screening (such as the efficacy, toxicological and environmental properties, and fit with company targets) and patenting of the new product (*Dow/DuPont*, para.162). After the successful completion of the discovery processes, the product enters the development stage, which includes steps such as regulatory studies and safety testing (*Dow/DuPont*, 2017, para. 165, 173 *et seq.*). The Commission states that *innovation spaces* become smaller as innovation outputs are “confined to ever narrower spaces from which it is more difficult to adapt the innovation to other purposes” (*Dow/DuPont*, 2017, para. 351). In that regard, it can be said that *adaptability* is an important factor in defining innovation spaces.

The Commission also designates two sub-concepts regarding innovation competition: (i) lines of research and (ii) early pipeline products. In that context, lines of research refers to a “set of scientists, patents, assets, equipment and ... which are dedicated to a given discovery target whose final output are successive pipeline [products] targeting a given innovation space” (*Dow/DuPont*, 2017, para. 1958). According to the decision, early pipeline products “correspond to products which are intermediate results of lines of research” (*Dow/DuPont*, 2017, para. 1960).

Innovation spaces and related concepts could be shown as in the following scheme:

**Figure 2:** Innovation Spaces and Related Concepts



**Source:** The figure was created by the author based on *Dow/DuPont* decision.

In *Dow/DuPont*, the Commission also identifies four stages of value chain: (i) discovery, (ii) development, (iii) mixture/formulisation and (iv) commercialisation (*Dow/DuPont*, 2017, para. 222). However, not every player is active in all of these stages. The Commission refers to some of these players R&D players, together with R&D integrated players which are active in all stages of the mentioned value chain (*Dow/DuPont*, 2017, para. 225).

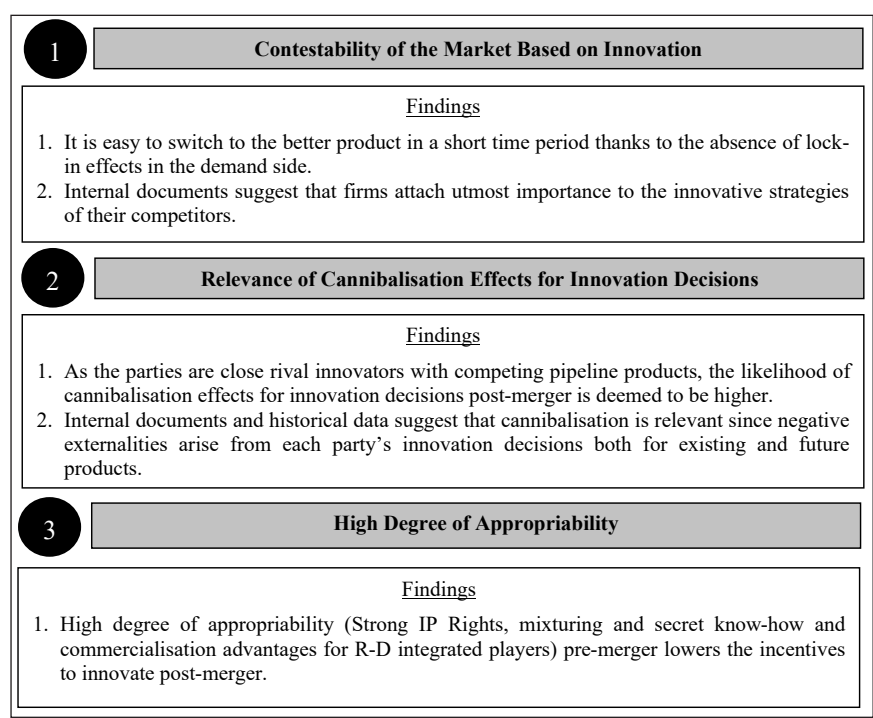
The Commission measures the strength of parties in relevant innovation spaces by measuring both input and output data. The Commission finds that the input measures, such as R&D expenditure, are not fully illustrative of parties’ positions in innovation spaces (*Dow/DuPont*, 2017, para. 385). As for output measures, the Commission uses citation-based patents index as a measure, as it states that “*citation-based indexes are informative on the technological importance of patents*” (*Dow/DuPont*, 2017, para. 389).<sup>11</sup> It also relies on “*Patent Asset Index*”<sup>TM</sup>

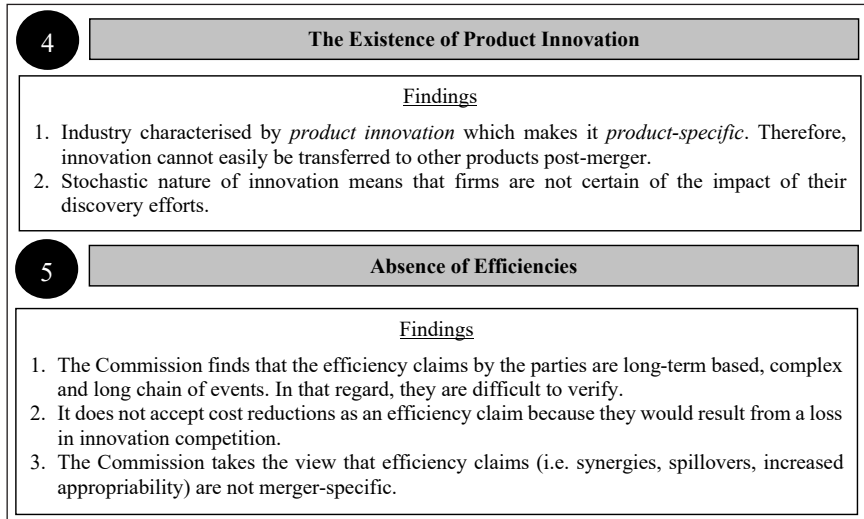
<sup>11</sup> It might be useful to mention that the Commission puts the weight on external citation as it finds a mechanical increase in internal citation as the patent portfolio grows (*Dow/DuPont*, 2017, para. 394).

methodology [... which] considers both the quantity and the quality of patents in a portfolio” (Dow/DuPont, 2017, para. 391). The Commission also takes the historical importance of innovations by the R&D players (i.e. blockbuster innovations) into account as an output measure.

The Commission points out five factors that had an impact on the assessment of anti-innovative effects in its decision: (i) contestability of the market based on innovation, (ii) high degree of appropriability post-innovation, (iii) the existence of product innovation, (iv) non-existence of offsetting efficiencies and (v) fear of self-cannibalization post-merger (Dow/DuPont, 2017, para. 2001). In markets where these conditions are present, the Commission concludes, reduction in rivalry results in a decrease in incentives to innovate by the parties (Dow/DuPont, 2017, para. 2002). In addition, the Commission also takes account of whether other active R&D players in the market would have increased incentives to compete post-merger in line with the paragraph 31 of the HMG (Dow/DuPont, 2017, para. 2018). The main findings with regard to above mentioned factors can be summarised as in the below chart:

**Figure 3:** Commission’s analysis of anti-innovative effects





**Source:** The figure was created by the author based on *Dow/DuPont* decision.

The Commission also accounts for five other factors to support its theory of harm:

**Figure 4:** Commission’s analysis of anti-innovative effects



<p>7. The strategic alliances between the Big 5 likely limit the incentives of these players to innovate in the same innovation spaces where they already have agreements with another party.</p>
<p><b>3 Importance of Dow and DuPont as Innovation Competitors at Industry Level</b></p>
<p style="text-align: center;"><u>Findings</u></p> <p>1. The Commission estimates the importance and closeness of the merging parties based on an analysis of patent shares. The analysis of patent shares is done in 5-steps. Firstly, the Commission considers every patent filed during a specific period in specific categories and sub-categories. Secondly, it excludes mixture patents. Thirdly, it measures quality of patents using citations. Fourthly, the Commission excludes some patents filed by companies which are not seen as full-function innovators. Fifthly, it presents the patent data by using four different samples according to their quality: (i) all patents, (ii) top 50%, (iii) top 25% and (iv) top 10%.</p>
<p><b>4 Parties' Overlapping Lines of Research and Early Pipeline Products</b></p>
<p style="text-align: center;"><u>Findings</u></p> <p>1. The Commission analyses past innovation efforts of the parties and concludes that they have been taking away shares from each other as a result of their respective innovative activities. It also finds that many other parties in the relevant innovation spaces are not close competitors.</p>
<p><b>5 Absence of a Sufficient Number of Other Alternatives</b></p>
<p style="text-align: center;"><u>Findings</u></p> <p>1. The Commission states that the evidence gathered does not show that in the past, third-party R&amp;D-integrated players increased their R&amp;D expenditure and R&amp;D targets following a concentration. It makes reference to the paragraph 24 of the HMG which basically states that the non-merging firms can also benefit from the reduction of competitive pressure post-merger.</p> <p>2. The Commission finds that the close competitors are few in number. Furthermore, close competitors have differentiated innovation assets and capabilities, thus are not equally able to innovate in the same innovation spaces.</p> <p>3. It makes reference to financial constraints that exist for expanding innovation capabilities. It simply states that capacity expansion is expensive.</p> <p>4. The Commission states that as there is a high level of common shareholdings in the industry, there are reduced incentives to compete aggressively.</p>

**Source:** The figure was created by the author based on *Dow/DuPont* decision.

As regards the relationship between *product market competition* and innovation competition, the Commission recognises the fact that economic literature is not really conclusive on that matter (*Dow/DuPont*, 2017, para. 2044). However, it posits that potential countervailing effects resulting from a less intense product market competition are unlikely to offset “direct adverse effects” resulting from

the loss of innovation competition between rivals (*Dow/DuPont*, 2017, para. 2045).

Can HMG's unilateral effects model be plausibly transposed into innovation competition context? Possibly. Nevertheless, doing so is obviously not fit for the purpose of any guidance paper, that is providing legal certainty and predictability for market players. As explained above, currently, there is no widely accepted and over-arching theory of innovation competition both amongst economics and lawyers. In that regard, transposing HMG, which is nearly entirely based upon static theories, into innovation competition context is a difficult quest for the Commission. Here are the reasons why:

**First of all**, concepts of price competition and innovation competition are markedly different. The Commission's innovation competition theory of harm in *Dow/DuPont* is as follows:

*"The Commission's theory of harm innovation implies an immediate effect of the Transaction on the Parties' behaviour, and not only in a timeframe of 10 to 15 years. Although the reduction on innovation competition would harm consumers directly in the long-term, it would result in effects in the innovation spaces that would take place shortly after the Transaction, namely the immediate discontinuity, redirection or deferment of early pipeline products or lines of research by the merged entity."* (*Dow/DuPont*, 2017, para. 2034)

Obviously, this significantly differs from the static effects analysis in merger control. Firstly, from an effects-based approach, reduction in innovation harms consumers in the long-term. Contrastingly, in a standard merger assessment, immediate/foreseeable effects are put on the focus. Secondly, proving reduction of innovation competition is conceptually different from proving reduction price competition. In that regard, novel concepts which does not exist in HMG (e.g. cannibalisation, appropriability, synergies) are at the core of the analysis. Thirdly, the incentives to undertake or abandon R&D projects are different from price effects (Petit, 2018, p. 26). For example, it has been suggested that R&D programmes cannot be ended without friction in contrast to prices (Petit, 2018, p. 26). Petit (2018, p. 27) states that "R&D decisions are lumpy, unlike pricing or output decisions which are continuous choice variables with continuously differentiable impacts on quantities sold". The said incompatibility problem might go way deeper than the given examples. For example, it has been suggested that a

correct understanding of “innovation” requires taking into account the evolutionary approaches, behavioural theories, management, resource-based views, etc (Kerber, 2017, p. 20; Sidak & Teece, 2009, p. 581).

**Secondly**, the standard merger control assessment is not fit for defining “innovation spaces” with respect to innovation competition (Déchamps & Fanton, 2018, p. 97). The point is one of the most crucial aspects of the competition law because the effects-based approach advocate evidencing the effects in the relevant markets in modern competition policy (Drexel, 2012, p. 507). As could be seen from *Dow/DuPont* decision, the idea of innovation spaces is markedly different from product markets approach.

**Thirdly**, balancing the harm to innovation and offsetting efficiencies is one of the big questions in practice (Oxera, 2019, p. 4).<sup>12</sup> According to the HMG, any efficiencies resulting from a merger have to benefit consumers, be merger-specific and be verifiable (para. 78). Coninck (2016, p. 48) argues that proving efficiency claims in an innovation context is a difficult mission. The main problem is that the burden of proof on the parties and on the Commission is not well-balanced. First of all, the parties may not be in a better position than the Commission for the assessment of probabilities of success for an R&D project (Coninck, 2016, p. 49). Secondly, verifiability and consumer benefit criteria seem to be too heavy because any foresight into future markets is by nature speculative. We might also add a third point as in *Dow/DuPont*, the Commission avoids answering important questions on synergies, technology spill-overs, increased appropriability claims by putting the onus on the parties. It defends the point that parties’ claims in such regards are long-term based, complex and consists of long chain of events. It merely states that these channels are not specific to a merger. However, not being able to isolate these “channels” from innovation competition analysis is exactly why economists’ cannot build a consensus on the issue, as could be seen from the topic above.

**Fourthly**, the theory on “significant impediment to effective innovation competition” (SIEIC) (Petit, 2018) does not take intra-firm innovation competition and counter-balancing of intra-firm cooperation across innovation spaces into account (Petit, 2018, p.

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<sup>12</sup> Also see *Western Digital Ireland/ Viviti Technologies* [2011] European Commission COMP/M.6203 [1029 et seq.]. In that case, the Commission did not accept efficiency arguments that related to fixed cost savings.



32). The discussion on diversity is not yet concluded in the economic literature (Kerber, 2011, pp. 29–30). Bresnahan, for example, states that incumbent firms cannot duplicate the diversity characteristic of the market. However, there are other views that promote intra-firm diversity. Here, parallels might be drawn with media plurality cases where a strong qualitative analysis is conducted, *inter alia*, by taking into account “internal plurality.”

Overall, addressing innovation competition concerns under the current HMG is not an easy task. This is mainly because the theories of innovation competition are markedly different from price/output based static theories under the current HMG. In that sense, a revision in the Guidelines that takes an extensive account of dynamic competition is much needed. The suggested action is of significance since it would deliver predictability and legal certainty to the market.<sup>13</sup>

### **3. PROTECTING INNOVATION IN DIGITAL MARKETS: HOW DOES IT FIT IN THE PICTURE?**

The debate on innovation competition has significant implications for digital markets as the survival of firms depends much on innovation along with price competition. In that context, some recent mergers in the industry attracted much public attention and criticism as super dominant “technology giants” (hereinafter “tech-giants”) allegedly killed their potential competitors in their infancy via acquiring start-ups in order to preserve their monopoly status (‘American Tech Giants Are Making Life Tough For Startups’, 2018; ‘Big Tech Sets Up a “Kill Zone” for Industry Upstarts’, 2018). Another argument was that the potential innovators were discouraged from entering certain new markets, also referred to as “kill zones” (Schechter, 2018), either by mergers or by threats of expansion even if they are better innovators (Bourreau and de Streel, 2019, p. 21). Overall, it was argued that incumbents were acquiring companies which could have been a credible threat to their businesses in the future. Along with several other authorities in the world, the Commission also examined several cases with respect to such concerns. However, in any of them, it found

<sup>13</sup> For a similar proposition in the US, see: Gilbert & Greene, 2015; Sidak and Teece, 2009, 618.

harm to effective innovation competition. Yet, the debate on the so-called “killer acquisitions” persists.

Why do tech-giants acquire start-ups? Bourreau and de Streel (2019) focus on four ‘old’ industrial organization theories that might explain tech-giants’ appetite for –particularly– conglomerate mergers:<sup>14</sup> i) agency theory, ii) market power theory, iii) resource theory and iv) the internal capital market theory. In addition to these theories, they state that the economies of scope in product development and synergies from the demand side are mainly relevant to the conglomerate growth model in the digital world (Bourreau and de Streel, 2019, p. 9).

According to the agency theory, managers could be interested in expanding to the markets where their specific knowledge would be of value to the company even if the company makes losses because of that move. Market power theory explains such mergers by conglomerates’ motivations to indirectly increase their market power (e.g., market coordination amongst conglomerates). Resource theory refers to excess resources of a firm that might enable a firm to expand in proportion to its excess capacity. Lastly, the internal capital market theory argues that firms might choose to expand due to the imperfections of external capital markets (Bourreau and de Streel, 2019, pp. 6–7).

Bourreau and de Streel (2019, p. 10) suggest that tech-giants have strong economies of scope in product development. In that regard, digital firms do not incur significant costs when they decide to produce ‘variants’ along with their ‘basic’ product. For example, they suggest, knowledge of artificial intelligence or a map service can be used in a variety of services. In addition to that, the authors emphasize the role of data as a sharable input for product development (Bourreau and de Streel, 2019, pp. 10–11). In that connection, they suggest that “data-driven indirect network effects” may provide incentives to enter new markets. They refer to Prufer and Schottmüller’s paper, which suggest that firms that benefit from such effects may leverage their market power in the primary market where it produces its basic product to dominate the new market, in particular where the data from one market leads to the improvement of the other (Prufer & Schottmüller,

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<sup>14</sup> The emphasis here will be on conglomerate mergers because horizontal mergers in such markets would most probably be caught by the standard analysis.

2017). Additionally, the authors suggest that tech giants might seek to be the “gate-keepers” for access to consumers in advertising markets (Bourreau and de Streel, 2019, p. 11).

As regards demand-side synergies, Bourreau and de Streel refer to consumption synergies (Chen & Rey, n.d.) and ecosystem linkage (Koca, 2018). In the former, it is argued that consumers may have different valuations for bundled products. On the other hand, the latter approach argues that a ‘category product’ might be linked to a ‘base product’ to gain an advantage over competitors (Bourreau and de Streel, 2019, p. 13).

In the view of the foregoing, it can be seen that there are various reasons for a tech-giant to expand its activities beyond its core business. On the other hand, how does one distinguish the above-mentioned motivations from the intention of killing target’s innovations? In any case, is it necessary or helpful to show what motivation does the acquirer have in buying the target in the first place? Regardless, what could be the conditions to turn the said ‘intention’ into a credible threat to innovation competition?

In an attempt to answer these questions, firstly, the concept of killer acquisitions must be clarified. The term “killer acquisitions” was coined by Cunningham et al. (Cunningham et al., 2018). They defined killer acquisitions as “*acquiring innovative targets solely to discontinue the target’s innovation projects and pre-empt future competition*” (Cunningham et al., 2018, p. 1). One can observe that the idea of killer acquisitions is considerably narrower than the Commission’s analysis in *Dow/DuPont*. In particular, killer acquisitions refer to a specific aim which is to “*solely discontinue the target’s innovation projects*” with a view to pre-empt future competition. In that regard, whilst the Commission had due emphasis on internal documents in proving that the acquiring party would have discontinued on-going innovation efforts by the target, the main idea in that case was that the acquiring party would have *reduced incentives* to innovate post-merger which would lead to reduced innovation competition in the relevant innovation spaces and in the industry.

In light of *Dow/DuPont* case, it can be said that the focus on acquiring with the specific aim to “*solely discontinue the target’s innovation projects*”

is neither necessary nor helpful. It can be noted that first of all, because such analysis is based on internal documents and expert opinions, it is highly subjective. In that regard, there is a possibility that it may lead to misleading conclusions. Secondly, an abundance of such documents may not be present in each and every case. Thus, intervention would then be expected only where companies produce such internal documents. Thirdly, the Commission's "incentives" analysis in *Dow/DuPont* goes beyond the party's intent in acquiring the target firm. In that respect, acquiring party's intention cannot be determinative in deciding whether the acquiring party would discontinue, redirect or defer the target's innovation projects to pre-empt the market. Even if it does, it does not automatically lead to a conclusion that innovation would be reduced post-merger.

In any case, innovation competition debate in digital markets goes beyond the discussion of whether the acquiring party discontinues target's innovation projects or not, as will be explained below. Digital markets are significantly different from agro-chemical markets as regards innovation and competition dynamics (Holmström et al., 2019, p. 10). Firstly, the industry is very fast paced due to several reasons such as the absence of heavy regulations, low financial barriers to entry, extensive testing possibilities (Holmström et al., 2019, p. 10).<sup>15</sup> Secondly, the industry is characterised by network effects which lead to consumer lock-ins on the demand side. Thirdly, appropriation levels are lower compared to agro-chemical sector as other players may copy the idea easily (Holmström et al., 2019, p. 10). Fourthly, the possession of big data gives a significant advantage to incumbents in implementing innovative ideas (i.e. data-driven indirect network effects). Fifthly, both product and process innovations are present. Therefore, synergies and spill-over effects are more relevant since innovations could possibly be transferable to other products. Sixthly, stochastic nature is not a dominant element to consider since there are extensive testing capabilities.

Crémer et al. state that because the research for digital innovation is much closer to the market than it is for agro-chemical and

<sup>15</sup> For instance, in *Microsoft/Skype*, the Commission gave the example that *Facebook* had achieved a market share of 50% in less than 3 years (*Microsoft/Skype*, 2011, para. 126).

pharmaceutical industries, the concept of innovation competition is not as useful as it is for the latter. In that sense, they argue that the said concept should not be separated from product market competition but “rather capture emerging threats to entrenched market power in a conglomerate market setting” for the digital markets (Crémer, Montjoye, & Schweitzer, 2019, p. 120).

The Commission also, in *Google/DoubleClick*, adopted the said approach. In *Google/DoubleClick*, there were claims that the target would develop into a credible competitor to *Google* in online ad intermediation markets (*Google/DoubleClick*, 2008, para. 222). The Commission basically referred to paragraph 60 of the HMG.<sup>16</sup> It went on to explain that it could not be established that *DoubleClick* would not be in a unique position in that regard (*Google/DoubleClick*, 2008, para. 241). In particular, the Commission considered a combination of technologies, existing user bases and network effects. It found that even in the event that absent the merger, *DoubleClick* could have become a significant competitor, there is still a sufficient number of credible competitors in the market to restrict the merged entity (*Google/DoubleClick*, 2008, p. 72).

On the other hand, the said approach does not explain how the Commission ensures innovative markets in “kill zones”. Because, irrespective of whether the incumbent continues the innovation project or not, innovative firms cannot operate in these zones as they do not have incumbent advantages such as an already established network and consumer data. Furthermore, as innovation projects can be copied by the incumbents, new entrants may face competition from already-advantaged (for example by using ecosystem linkages, data-driven indirect network effects) firms post-innovation. In that regard, there are two possibilities for new-entrants targeting these innovation spaces. **Firstly**, they may innovate with the expectation to sell their

<sup>16</sup> The said paragraph is as follows: “For a merger with a potential competitor to have significant anti-competitive effects, two basic conditions must be fulfilled. First, the potential competitor must already exert a significant constraining influence or there must be a significant likelihood that it would grow into an effective competitive force. Evidence that a potential competitor has plans to enter a market in a significant way could help the Commission to reach such a conclusion. Second, there must not be a sufficient number of other potential competitors, which could maintain sufficient competitive pressure after the merger.”

business to incumbents. In such case, these firms specifically have to target kill zones in order to attract the incumbent. As a result, the most successful innovator gets the prize of being bought (or hired) by the incumbent. Alternatively, the new-entrant may have other advantages (i.e. high appropriability of the innovation) which may enable it to stay in the kill zone. **Secondly**, new entrant may choose not to enter the kill zone in the first place, considering the risks of being killed by the incumbent.

Overall, it seems, identifying kill zones –regardless of acquirer’s intent- is more important than identifying the target’s capabilities of being a credible competitor in the future from an innovation competition point of view. In line with such idea, it has been suggested by some that there should be a legal presumption of harm in the case where a start-up is being acquired by a tech-giant.<sup>17</sup> Arguably, an assumption of harm to innovation competition may serve to protect innovation competition in innovation spaces that can be characterised as “kill zones”. In particular, it may encourage new-entrants which target such spaces to gain market power either by organic growth or by mergers whilst preventing tech-giants to kill innovation competition in these innovation spaces. However, it might also have downsides. First of all, as stated above, there is no widely-recognised and overarching theory of innovation competition that explains the relationship between mergers and innovation. It means that the Commission cannot yet fully distinguish between innovation enhancing mergers and innovation reducing ones. Therefore, blind interventions may lead to false positives. Secondly, a policy change in that regard may also stifle innovation as it disincentivizes the firms which innovate with the aim to sell their inventions. In the broader sense, it can also be said that social costs/benefits of such an intervention must be accounted for (Petit, 2019, p.42) since the intervention would most likely to result in

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<sup>17</sup> See for example, Valletti’s speech in the conference “Shaping Competition Policy In The Era Of Digitisation”. <https://webcast.ec.europa.eu/shaping-competition-policy-in-the-era-of-digitisation#> (Accessed 18.09.2019). Alternatively, Petit (2019, p.42) suggests that the adequacy of ex post intervention must be checked before adopting such a presumption. However, ex-post intervention seems less likely to address these problems since the fast-paced & winner-takes-all nature of digital markets could render efforts to “*unscramble the eggs*” more difficult.

considerable wealth transfers. In light of the foregoing, a case-by-case approach with a vigilant enforcement seems to be the best strategy for the moment.

## **CONCLUSION: A NEW FOCUS FOR COMPETITION POLICY?**

What should be the way forward in taking account of innovation in merger control? On a policy level, this paper supports the idea that competition law interventions should focus on “*industry settings and categories of behavior where enforcement can promote innovation*” as competition law is not a “*general-purpose competition intensifier*” (Baker, 2007, p. 589).<sup>18</sup> However, it also finds that EU merger control does not offer much guidance for a robust innovation competition analysis for different industry settings or categories of behaviour. It argues that a mere transposition of the HMG into innovation competition context also does not provide useful guidance. In that respect, it calls for a revision in the Horizontal and Non-Horizontal Merger Guidelines.

This paper argues that the Commission’s competition law enforcement in digital markets does not wholly address killer acquisitions. In that regard, firstly, it points out that “intent” should not be a determinative factor in assessing these types of acquisitions. Secondly, it advances that identifying kill zones are more important than identifying targets’ prospects of being a credible competitor to the acquirer in the future. Thirdly, it cautions on the idea that adopting a presumption of harm to innovation competition could ensure innovation competition. It supports the view that a case-by-case approach with a vigilant enforcement seems to be the best strategy for the moment.

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<sup>18</sup> The said-approach can also be found in the earliest cases relating to merger control in the EU. See for example, *British American Tobacco Company Limited and R. J. Reynolds Industries Inc. V. European Commission*, 1987.

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