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Innovation is King. Or is it?

Summary Observations on the Application of EU Antitrust and Merger Control Law to Innovation-related Transactions

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I. INTRODUCTION

Nowadays, it is undisputed that innovation is a key driver of consumer welfare. As a result, unwarranted restraints on desirable innovative activity as a consequence of enforcement errors that incorrectly condemn pro-competitive or competitively neutral conduct (Type 1 errors), are potentially most damaging.[2] Obviously, by the same token, private restraints—whether through mergers, cartels, or unilateral conduct—which hamper innovation may bring about significant negative effects.

Against this background, one would expect that, over time, the application of EU competition law under Articles 101 and 102 TFEU, as well as the European Commission's ("Commission") enforcement practice under the EU Merger Control Regulation ("EUMR"), would have given rise to a refined analytical framework as to how to adequately integrate dynamic efficiencies (as well as restraints on innovation) into the overall analysis of business transactions.

However, it is striking that, despite the general recognition that innovation is an important source of welfare gains, the precise significance of innovation in EU competition law has remained, at best, opaque. In fact, it appears that, in many instances, the very notion of innovation is given remarkably short shrift and is, as a result, not yet well developed. This is particularly surprising as the Commission has, over the past few years, risen as a pro-active leader in single-firm conduct enforcement by bringing abuse of dominance actions against firms including Qualcomm, Intel, and Microsoft and, more recently, against Samsung and other owners of standard essential patents ("SEPs") in the smart phone sector.[3]

Regardless of whether the outcome in these matters is correct, it has sometimes been argued that the Commission has paid little—perhaps too little—attention to the nature and significance of the specific type of innovation that is of importance in the market. This argument

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[2] *See*, e.g., H. Hovenkamp, *Signposts of Anticompetitive Exclusion: Restraints on Innovation and Economies of Scale*, 2006 FORDHAM COMPETITION. L. INST. 000, 409-31 (B. Hawk ed.) (2007), noting that " [t]he often underappreciated corollary of Schumpeter's and Salow's work is that, because innovation is such an important engine of economic growth, restraints on innovation very like cause considerable greater social harm, than restraints on price. Such restraints may be more harmful even than cartels, but they are almost certainly more harmful than the price effects of exclusionary practices."

[3] *See*, 5(2) CPI ANTITRUST CHRON. (April, 2012).

is particularly made in relation to the European *Microsoft* case.[4] In general, in Commission decisions under Article 102 TFEU one searches in vain for an analysis of the innovation potential of the various players on the market, let alone an attempt to weigh the innovation benefits that those parties bring to consumers against those of the dominant company.

For example, in the *Intel* case the Commission observed that innovation is one of the main factors that triggers demand in the x86 industry and that the pace of innovation is rapid. The decision also lists a number of examples that demonstrate that AMD brought several innovative products to the market with faster and improved CPU performance. But how do those benefits weigh up against the innovation brought about by Intel and other competitors, especially in light of the fact that "the pace of innovation is rapid?"

In the *Intel* case, and reflecting what may very well be a more general approach, the Commission seemed to satisfy itself that exclusionary conduct results in some undefined magnitude of consumer harm in the form of lost sales and a reduction of consumer choice.[5] And would it be correct to distinguish between original, perhaps even breakthrough innovation, for which AMD was responsible in the market for CPUs and computers on the one hand, and the follow-on innovation of Microsoft's competitors in the Microsoft case on the other hand?

Looking at the types of cases in which innovation is important, while the role of innovation may be prominent in unilateral conduct cases under Article 102 TFEU and, occasionally, in 101 TFEU matters,[6] innovation-related considerations tend to arise relatively infrequently in the context of cartels. Indeed, the vast majority of those cases center on the direct elimination of price competition, market-sharing, the restriction of supply, or similar conduct. That being said, cartels may have negative effects on innovation by indirectly diminishing companies' incentives to compete on the merits. As a consequence, they would have less incentive to innovate as a means to improve their competitiveness. Also, cartel activity might be considered to directly affect the parties' innovation incentives by explicitly restricting the cartel members' innovative activities. The Hydrogen Peroxide cartel might be an example of the latter category.[7]

The remainder of this article concentrates on innovation-related arguments in mergers. Alongside unilateral conduct cases, mergers are the second area where these types of arguments frequently occur, although they often take a different shape than in the area of unilateral conduct. Among the recent Commission decisions that involve sectors where innovation is important are *Intel/McAfee,*[8] *Microsoft/Skype*,[9] *Google/Motorola Mobility*,[10] and *TomTom/Tele Atlas*.[11]

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[4] Larouche, *The European Microsoft Case at the Crossroads of Competition Policy and Innovation*, 75 ANTITRUST L.J., 601-631 (2008). ("In Microsoft, regrettably, neither the Commission nor the CFI went into the basic issue of why competition in the market and incremental innovation should be preferred to competition for the market and breakthrough innovation.") *See* in this respect in particular ¶ 783 of the Microsoft decision (Case COMP/C-3/37.792, Microsoft) and ¶ 698 of the CFI judgment. (Case T-201/04, Microsoft v. Commission).

[5] *See* in particular ¶¶ 1598- 1616.

[6] *See* for instance Case C-501/06 P, GSK v. Commission (Glaxo Spain).

[7] Case COMP/F/38.620 – Hydrogen Peroxide and Perborate

[8] Case M.5984 Intel/McAfee, March 28, 2011.

[9] Case M.6281 Microsoft/Skype, November 7, 2011

[10] Case M.6381 Google/Motorola Mobility, February 13, 2012.

II. DEVELOPING INSIGHTS

First, let's briefly turn to a few developing insights that are relevant for the appreciation of innovation-related arguments in merger control.

While the complexities involved in incorporating innovation and dynamic efficiencies considerations in merger analysis are not new,[12] there is a growing body of academic literature that studies the effects of mergers on R&D spending and technological activities of the merging parties post-merger.[13] Part of this literature studies the potential of mergers to reduce both R&D expenditures—for instance in the case of eliminating duplication of pre-merger R&D activities—and R&D efficiency, depending on the product markets and whether the merging parties are active in the same or complementary technology markets. Obviously, these studies may be helpful to better appreciate the effects of mergers on innovation in concrete settings.

Second, there is an increasing appreciation for, and interest in, more clearly articulating the concept and various guises of innovation. There have been a number of attempts made to further differentiate various types of innovation on the basis of a range of parameters, in particular: (i) the distance between the state-of-the art and the innovation (*breakthrough* versus *incremental* innovation), (ii) the value network surrounding the technology (*sustaining* versus *disruptive* innovation),[14] (iii) the type of innovating firms (large *established firms* versus small *start-up* companies),[15] (iv) the market participants driving the innovation (*user-* versus *manufacturer-driven innovation*),[16] (v) the question whether the innovating firm acts as autonomous innovator (innovation *by a firm* versus innovation *"beyond" the individual firm*),[17] (vi) the question whether subsequent innovation is based on prior innovation (*stand-alone* versus *cumulative* innovation),[18] and, finally, (vii) the way innovations are made available to the market (*open* versus *proprietary* innovation).[19]

Clearly, a deeper understanding of how innovation manifests itself in a specific sector, as well as the origins and key drivers thereof, may—and should—contribute to a better understanding of how business transactions may affect the innovation potential in the markets at hand. And it would conceivably enable decision makers to better evaluate dynamic efficiency claims. But, while the volume and nature of innovation discussion in legal literature has, to a limited degree, filtered into the Commission's decisional practice, the complexity of the issues

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[11] Case M. 4854 TomTom/ Tele Atlas, May 14, 2008

[12] *See,* for instance, Richard J. Gilbert & Steven C. Sunshine, *Incorporating Dynamic Efficiency Concerns in Merger Analysis: The Use of Innovation Markets,* 63 ANTITRUST L.J. 569 (1994-1995).

[13] *See*, for instance, G. Valentini, *Measuring the effect of M&A on patenting quantity and quality*, 33 STRATEGIC MGMT. J. 336-346 (2012).

[14] CHRISTENSEN, THE INNOVATOR'S DILEMMA: WHEN NEW TECHNOLOGIES CAUSE GREAT FIRMS TO FAIL (2003).

[15] *Id.*

[16] VON HIPPEL , THE SOURCES OF INNOVATION (1988) and DEMOCRATIZING INNOVATION (2005).

[17] Govindarajan & Trimble, *Organizational DNA for Strategic Innovation*, CALIFORNIA MGMT. REV. (Spring 2005).

[18] SCOTCHMER, INNOVATION AND INCENTIVES (2004).

[19] *See* also Miller & Cote, *The Faces of Innovation*, *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1106740.

involved—and the exact role to be played by innovation in overall antitrust analyses—appear not to be fully reflected in the Commission's decisions.

III. INNOVATION ARGUMENTS IN EU MERGER CONTROL

Pursuant to Article 2 EUMR, the Commission is charged to investigate whether a concentration notified to it will significantly impede effective competition on any market affected by the transaction. Article 2(1)b EUMR, recital 29 of the EUMR, and paragraph 76 of the EC Commission's Guidelines on Horizontal Mergers stipulate that efficiency claims will be considered during the appraisal of the transaction.[20]

Innovation and innovation-related considerations in merger cases under the EUMR can take various forms. The problem is not that there is no acknowledgement of the significance of innovation in EU merger reviews, but that there is little consistency in the prominence and level of analysis given to the role played by innovation.

Very generally, one can distinguish among the following three main categories of cases:

A. Innovation and Market Power

The first category of cases consists of notified transactions that may raise the concern that the transaction itself will result in reduced innovation. For instance, it might be likely that the merging parties would have an incentive to discontinue R&D post-merger, or the merger would eliminate an important independent source of innovation.

The Commission's recent decision in *Seagate/HDD Business of Samsung*[21] is illustrative of the latter concern. In that case, Seagate argued that, because the target business was rarely or never the first to introduce a completely new product on to the market, their acquisition would not result in the elimination of a breakthrough-innovator and, therefore, there should be no innovation-related concerns.[22] In its decision, however, the Commission did not go into any detailed analysis of the merits of these arguments and it did not explicitly link its approval with any innovation-based reasoning.

In contrast, in *Intel/McAfee,*[23] the Commission noted the importance of innovation in the security software market and concluded that the combined entity would have the means and incentive to foreclose security software vendors from competing with McAfee, and would then no longer be able to continue to undertake necessary investments in innovation. The resulting set of remedies sought to safeguard sufficient interoperability in respect of McAfee's competitors' access to Intel's platforms, thereby enabling them to continue to compete with Intel/McAfee and innovate.

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[20] *Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings*, OJ C 031 p. 5-18 ¶77 (02/05/2004). The Guidelines on the assessment of non-horizontal mergers contains similar wording. *See, Guidelines on the assessment of non-horizontal mergers under the Council Regulation on the control of concentrations between undertakings*, OJ C 265, pp. 6-25 (10/18/2008).

[21] Case M.6214 Seagate/Samsung HDD Business, October, 19, 2011.

[22] *See,* in particular, ¶¶425-426. Seagate also argued that its own ability to innovate would not be inhibited by the acquisition of the Samsung HDD business.

[23] Case M.5984 Intel/McAfee, March 28, 2011.

One interesting element of this decision is that the treatment of dynamic efficiencies associated with the transaction itself is cursory. As a result, the decision provides little information on the trade-offs between the different types of innovation that the Commission was confronted with, if any. Moreover, the decision is not specific with regard to the nature, type, and magnitude of innovation that McAfee's competitors are likely to generate. Instead, the decision appears to be premised on the assumption that innovation potential is substantial enough to merit protection.

B. Reduced innovation as Anticompetitive Outcome

In a second category of cases innovation may be an important element in the analysis of whether the proposed transaction would result in an impediment of effective competition, as set out in Article 2 EUMR, by creating or enhancing the parties' market power. In many of the cases falling in this second category, the pace of innovation, the presence of a number of innovating firms in the market, and the corresponding fluctuating market shares over time form the basis for the argument that high combined market shares cannot be equated with durable market power.

The 2001 *Philips/MMS* acquisition is a good illustration.[24] In that decision, the Commission noted that the MRI industry was marked by "leapfrogging" innovation, *i.e.* a company being able to jump ahead of a few large incumbents through the introduction of new innovations.[25] As a result, the Commission took the view that, despite relatively high combined market shares in several markets, the transaction did not give rise to anticompetitive effects in the markets concerned.

In a more recent case, *Microsoft/Yahoo*,[26] the Commission again looked at the role played by leapfrogging innovators in assessing Yahoo's ability to innovate in the search engine market and any consequences for its analysis of whether or not Microsoft's acquisition would be anticompetitive. Having established that Yahoo was a weakening presence in the search engine world, the Commission agreed with Microsoft's contention that Yahoo was not an important innovator, whereas an acquisition by Microsoft could give it the vital boost it needed to become an innovator and therefore an effective competitor in the search engine market.[27]

Finally, in three of the recent Phase II decisions, *Unilever/Sara Lee,*[28] *Caterpillar/MWM,*[29] and *Syngenta/Monsanto,*[30] the Commission identified concerns about the elimination of an important market innovator. In the first transaction Sara Lee, the target business, was identified as "contributing to the major innovations on the market [for deodorants]."[31] Although it was not argued by market study respondents that Sara Lee was the only innovator in the market, the Commission concluded that innovations brought into the market by Sara Lee had contributed to

[24] Case M.2537 Philips/Marconi Medical Systems, October 17, 2001.
[25] *Id.*, ¶¶41-43.
[26] Case M.5727 Microsoft/Yahoo! Search Business, May 18, 2010.
[27] *See,* in particular, ¶¶214-226.
[28] Case M.5658 Unilever/Sara Lee, November 17, 2010.
[29] Case M.6106 Caterpillar/MWM, October 19, 2011.
[30] Case M.5675 Syngenta/Monsanto, November 17, 2010.
[31] ¶167 of the decision.

recent growth in the market.[32] The Commission concluded that "the merger would not only remove a close competitor of Unilever's brands, but also a dynamic competitor which has spurred competitive rivalry in the [relevant market]."[33]

In *Caterpillar/MWM* the Commission considered the possible elimination of an innovator as a result of the concentration, but concluded that CAT and MWM were not close innovation competitors. And in *Syngenta/Monsanto* the Commission found that the transaction would not only remove the competitive constraint represented by the target business in the commercialization of sunflower seed, but would also remove the competitive constraint Monsanto represented as a strong innovator in Spain, thereby ensuring Syngenta's leading position in the long run.[34]

C. Innovation and Dynamic Efficiencies

The third category consists of cases where the notified transaction would involve significant dynamic efficiency gains that would potentially outweigh (static) anticompetitive effects of the transaction. Thus, in theory, it is conceivable that a transaction would give rise to price increases in a particular market, but would nevertheless be cleared because it would involve significant dynamic efficiencies, for instance in the form of improved or new products.

To our knowledge, in none of the 49 Phase II decisions issued since 2004 have dynamic efficiencies been decisive. While those types of efficiencies seem to have been claimed in four instances, they were only accepted in one case, *Metso/Aker Kvaerner*.[35] In that case the Commission concluded—without any detailed discussion—that the dynamic efficiencies were very unlikely to counterbalance the identified static anticompetitive effects.[36] In the other three cases, the innovation-related efficiency claims were deemed not verifiable, merger specific, or deemed not to generate consumer benefits.[37]

IV. CHALLENGES IN ASSESSING INNOVATION EFFICIENCIES IN MERGERS

While the EUMR specifically allows for taking account of dynamic efficiency arguments, the evidentiary standard seems formidable. As confirmed by the OECD Competition Committee in its 2007 Roundtable on Dynamic Efficiencies in Merger Analysis, there are several factors that may in part explain, or at least contribute to, the tendency of competition agencies to hold back from truly in-depth analysis of the ins and outs of innovation-related issues in merger reviews.[38]

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[32] ¶692 of the decision.

[33] ¶693 of the decision.

[34] ¶¶246-253 of the decision.

[35] Case M.4187 Metso/Aker Kvaerner, 12 December 2006. It is remarkable that the Commission applied a low evidentiary threshold for the verifiability of the claimed efficiencies; the parties' claims and the reactions from customers seem to have been sufficient.

[36] ¶¶103-109 of the decision.

[37] Case M. 4942 Nokia/ Navteq, Case M. 4854 TomTom/ Tele Atlas and Case M. 3916 T-Mobile/ Tele.ring. *See Innovation in EU Merger Control: Walking the Talk, Reinhilde Veugelers* (Brueghel Policy Contribution)

[38] OECD, Policy Roundtables Dynamic Efficiencies in Merger Analysis, DAF/COMP(2007) 41.

A. Quantification of Prospective Benefits

Assessment of innovation-related efficiencies is, by definition, a prospective analysis, making it more difficult for the Commission and other antitrust agencies to conduct comprehensive merger investigations in a confident manner. Indeed, in remarks related to *Intel/McAfee*, Commissioner Almunia referred to the difficulty during a speech at the IBA's 2011 annual competition conference when he said "the real challenge for us in these [high-tech] markets is separating the potential for innovation from the potentially excessive market power a company can acquire."[39]

One illustration is *Nokia/Navteq*,[40] a case involving the vertical integration of a navigable digital map database provider by a mobile telephone producer. The parties submitted that the vertical integration of the two companies would lead to innovation in the form of faster and better development of map functionalities—ultimately leading to benefits for consumers. Although it had accepted certain static efficiency arguments by the parties with respect to the elimination of double mark-ups, the Commission rejected the mooted innovation-related efficiencies and concluded that the proposed dynamic efficiencies were not verifiable.

B. Lack of an Overall Analytical Framework

The lack of a clear analytical and practical framework in respect of assessing innovation arguments in the context of mergers is reflective of legislative and decisional practices outside the merger sphere. The Commission notice on the application of Article 101(3)[41] provides limited guidance on the quantification of such efficiencies and how they can be balanced against potential competitive harm. The guidance itself notes that any such assessment necessarily requires value judgment and that "it is difficult to assign precise values to dynamic efficiencies of this nature."[42]

V. APPROACH IN THE UNITED STATES

In contrast to the Commission, in the 2010 Horizontal Merger Guidelines the U.S. Department of Justice & Federal Trade Commission set out the analytical framework for both how they assess a merger's likely effects on innovation and how they consider dynamic efficiencies in merger review. The Guidelines state that the agencies consider whether the merger would negatively affect innovation by actions such as discontinuing existing product development or reducing the incentive to initiate new R&D.[43]

Both of these effects are more likely to occur if one of the merging firms is developing a new product (or has the capability to do so) that would capture substantial revenues from the other merging firm. The Guidelines state that the "Agencies therefore also consider whether a merger will diminish innovation competition by combining two of a very small number of firms

[39] Joaquin Almunia, *New Challenges in Mergers and Antitrust*, Florence, September 16, 2011.
[40] Case M.4942 *Nokia/Navteq*, July 2, 2008.
[41] *Guidelines on the application of Article 81(3) of the Treaty*, 2004/C 101/08.
[42] *Id.*, ¶103.
[43] U.S. Department of Justice & Federal Trade Commission, *Horizontal Merger Guidelines* at Sec 6.4 (Aug. 9, 2010).

with the strongest capabilities to successfully innovate in a specific direction."[44] Past and analogous agency practices in the United States suggest that anticompetitive effects in innovation may only arise when there are a small number of firms capable of engaging in the innovation in question.[45]

Furthermore, both the Guidelines and agency practices counsel that, for mergers that may raise significant anticompetitive concerns (whether concerning innovation or otherwise), the Agencies must also consider whether a merger might enhance competition through dynamic efficiencies such as increased or enhanced innovation.[46] This reflects the approach that "[t]he enforcement agencies in the United States have recognized that mergers may lead to 'increased innovation that results in lower costs and prices or in more rapid introduction of new products that benefit consumers.'"[47]

An example is the FTC's 2004 decision to close the investigation of Genzyme Corporation's completed acquisition of Novazyme Pharmaceuticals, Inc.[48] This acquisition combined the only two firms engaged in developing the first enzyme replacement therapy to treat Pompe disease. Genzyme was able to successfully show the FTC that by combining the R&D efforts of the two firms, the merged firm had both the incentive and ability to bring the product to the market faster than the companies standing alone. Specifically, Genzyme was able to show that, by combining its unique capabilities and technologies with Novazyme's existing R&D efforts, it was capable of avoiding delays and accelerating the product's development and commercial introduction.[49]

Concepts such as these have been incorporated into the 2010 Merger Guidelines, which state that when evaluating dynamic efficiencies, "the Agencies consider the ability of the merged

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[44] *Id.*

[45] *See, e.g.,* Statement of Chairman Timothy J. Muris, FTC Chairman, in the matter of Genzyme Corporation/Novazyme Pharmaceuticals, Inc. (Jan. 13, 2004) ("[E]xcept under 'extraordinary circumstances,' innovation market analysis should not even be considered unless the number of competitors is very small.") (citing FTC Staff Report, *Anticipating the 21st Century: Competition Policy in the New High Tech, Global Marketplace* (May 1996)). In the joint FTC/DOJ Guidelines for Collaborations Among Competitors, which guide the agencies' analysis of joint ventures, the agencies set out a safety zone, saying that, absent extraordinary circumstances, the agencies will not challenge JVs on the basis of effects on innovation where there are at least 3 independently controlled research efforts in addition to those controlled by the JV partners. *See* U.S. Department of Justice & Federal Trade Commission, *Antitrust Guidelines for Collaborations Among Competitors*, at §4.3 (April 2000).

[46] *Horizontal Merger Guidelines* at §6.4.

[47] *Roundtable on Dynamic Efficiencies in Merger Analysis, Note by the United States*, Competition Committee, Directorate for Financial and Enterprise Affairs, Organization for Economic Co-operation and Development, p. 2 (May 22, 2007) (quoting U.S. Department of Justice & Federal Trade Commission, Commentary on the Horizontal Merger Guidelines, p. 49 (March 2006)).

[48] *See FTC Closes its Investigation of Genzyme Corporation's 2001 Acquisition of Novazyme Pharmaceuticals, Inc.* (Jan. 13, 2004).

[49] *See id.; see also* Steve Sunshine, Deputy Assistant Attorney General, Antitrust Division, U.S. Department of Justice, *Initiatives in Merger and Joint Venture Analysis* (March 3, 1994) ("in a particular case, it is conceivable that economies of scale or scope may justify allowing a merger that creates market power because the merger is demonstrably necessary to . . . bring the benefits of significant innovation to market more quickly").

firm to conduct research or development more effectively. Such efficiencies may spur innovation but not affect short-term pricing."[50]

VI. CONCLUSION

The treatment of business transactions involving innovation-related arguments poses complex analytical problems for the Commission. The problem is not with the Commission accepting that innovation needs to be protected and should play a role in assessment of mergers in high-tech sectors—it is clear from recent cases that the Commission "gets" the fact that innovation is an important factor in deciding on these matters. However, while the role of innovation seems to have gained some ground in deciding whether a transaction results in durable market power, the phenomenon of innovation is much less well-understood and developed in unilateral conduct cases under Article 102 TFEU and mergers that may result in reduced innovation by either the merging parties themselves, or by third parties that may be negatively affected by the transaction.

This is surprising in light of the importance of innovation for economic growth and long-term consumer welfare and the growing insight that innovation may take many different guises and may come from different sources. A better understanding and articulation of the drivers for innovation and, to the extent reasonably possible, a quantification of the benefits that different market players generate in the case at hand may contribute to better decisions.

Finally, dynamic efficiencies are treated poorly under EU merger control. It would be helpful and desirable if the Commission would seek to develop a more practical, user-friendly, and clearer analytical framework for the evaluation of these types of efficiencies and would, in particular, re-address the quantification and verifiability requirements.

[50] Obviously, the actual evaluation of the potential for dynamic efficiencies in the specific cases is invariably complex. *See Horizontal Merger Guidelines* at §10.