Innovation theories of harm in merger control: plugging a perceived enforcement gap in anticipation of more far-reaching reforms?

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Introduction

After decades of transatlantic convergence and a growing international consensus around the concept of an economics-based, consumer welfare-led approach to antitrust enforcement, we are witnessing a reversal of this trend amidst a wave of politically fuelled interventionism and the renaissance of a "big is bad" philosophy that forms part of wider populist, anti-elitist movement.

In the aftermath of Facebook's Cambridge Analytica scandal, an increasingly vocal "techlash" and "hipster antitrust" movement is growing more influential in shaping policy debates which frequently conflate multiple different topics and seek to resolve a wide range of societal issues going far beyond the existing remit of antitrust. National governments, themselves under pressure to (be seen to) be doing more to address the power of large companies, including so-called "tech titans", appear to be losing faith in the ability of their antitrust authorities to change tack and intervene with greater speed and determination. Several governments are looking to newly appointed panels of experts for advice on the extent to which a far-reaching overhaul of the legislative framework governing antitrust and merger control is needed.

In Germany, for instance, the "Kommission Wettbewerbsrecht 4.0" has been tasked to make recommendations to equip German and European competition law with the tools to address (what is described as) *online platforms and globally acting, data-driven digital companies that are driving globalisation and digitisation of the economy and society*.[1] Many expect the recommendations, due in the autumn of 2019, to lay the foundations for attempts to re-design EU competition law when Germany holds the EU Council presidency in 2020.

In the UK, the Treasury has appointed a "Digital Competition Expert Panel" to

> "conduct an independent review of the state of competition in the digital economy, and consider what the opportunities and challenges are for policy, both in the UK and internationally"[2]

and a government minister has already concluded that "the era of self-regulation of the internet is coming to an end".[3] The Panel's report was published on 13 March 2019 and calls, amongst other proposals, for

> "a new digital markets unit with capabilities and resourcing to deliver greater competition, backed by new powers to set and enforce competition-enhancing rules".[4]

With regard to merger control specifically, the Panel called for decisions to be adopted on the basis of a "balance of harms" standard, rather than a balance of probabilities—the "balance of harms" approach would result in a greater number of transactions being prohibited.[5] As the CMA rightly pointed out in its response to the report, such a "fundamental shift in merger policy" could result in "unintended consequences".[6] Contrary to the Panel's findings, the CMA has suggested "that non-price outcomes such as harm to innovation and improving the customer experience […] can be assessed in the current framework", citing its recent investigation of the proposed acquisition of ClearScore by Experian as an example.[7]

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1 Kommission Wettbewerbsrecht 4.0, Bundesministerium für Wirtschaft und Energie, *https://www.bmwi.de/Redaktion/DE/Artikel/Wirtschaft/kommission-wettbewerbsrecht-4-0.html* [Accessed 1 April 2019]..

2 Digital Competition Expert Panel, HM Treasury, *https://www.gov.uk/government/consultations/digital-competition-expert-panel-call-for-evidence/digital-competition-expert-panel* [Accessed 1 April 2019].

3 Jeremy Wright, the digital, culture, media and sport secretary, as quoted in "Shadow of UK tech regulator looms over internet groups" (6 February 2019), *Financial Times*. In addition, on 6 February 2019, the Labour Party proposed the introduction of a dedicated technology regulator stating that "Our competition laws are not fit for the age of big data" (as quoted in "We'll take on social media giants, Labour Party says" (6 February 2019), *Reuters*).

4 Digital Competition Expert Panel, "Unlocking Digital Competition" (March 2019), p.8.

5 According to the report, the proposed "balance of harms" approach would provide "a clear basis to address the underenforcement in digital markets to date". The only evidence of this alleged underenforcement, however, appears to be that "mergers involving the major digital platforms" have been permitted to date. Whilst the CMA stated that it is conducting a limited review of previous decisions, this review has not been finalised: somewhat unusually, arguably in a "cart before the horse" manner, the policy recommendation has been made prior to an underlying assessment having been performed.

6 Letter from Andrea Coscelli (CEO, CMA) to Alex Chisholm (Permanent Secretary, Business, Energy and Industrial Strategy) and Charles Roxburgh (Second Permanent Secretary, Her Majesty's Treasury) dated 21 March 2019, available at *https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/788480/CMA_letter_to_BEIS_-_DCEP_report_and_recommendations__Redacted.pdf* [Accessed 17 April 2019].

7 Tim Geer, Project Director, Mergers, CMA, *Merger controls in the digital age: investigating the proposed Experian and ClearScore merger*, 11 April 2019, available at *https://competitionandmarkets.blog.gov.uk/2019/04/11/merger-controls-in-the-digital-age/* [Accessed 17 April 2019]. Experian abandoned the deal with ClearScore prior to the CMA adopting a final report.

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The perception of an enforcement gap in merger control has already resulted in the introduction of new jurisdictional thresholds in Germany, based on the value of the transaction rather than the turnover of target companies.[8] The EU and other jurisdictions may follow suit to ensure that competition authorities have the ability to review transactions where the target currently has little turnover, but may nevertheless exert competitive pressure on the acquirer in the future.[9] Although the European Commission's report on Competition Policy for the Digital Era (the "EC Digital Report") concluded that it is currently too early to change the EUMR's jurisdictional thresholds, it noted that the performance of transaction-value thresholds in Member States would be monitored and that "a 'smart' amendment to the EUMR thresholds may be justified".[10]

However, the next wave of reforms may bring about a seismic shift in the application of competition law. Merger control is regarded as an important tool to intervene at an early stage in markets that may lend themselves to "tipping" on the basis that they exhibit network effects resulting in "winner takes all" tendencies.[11] Aside from the usual suspects, Jean Tirole, Nobel prize winner for his work on market power and regulation, is weighing into the debate, noting that the current substantive merger control test

> "makes it impossible to invalidate the many acquisitions that occur before any real competition has actually taken place, such as Facebook's acquisition of the platforms WhatsApp and Instagram."[12]

In light of this ongoing debate and the shift in public opinion, it is no longer inconceivable that a reformed substantive merger control test may shift the burden of proof onto the merging parties[13]: rather than competition authorities being required to demonstrate that a merger is harmful in order to intervene, the parties to a merger may have to prove that the merger is pro-competitive.[14] On that basis, mergers could be blocked even if it is unlikely, on the balance of probabilities, that they give rise to substantial competition concerns. The Digital Competition Expert Panel's proposed "balance of harms" standard would be a first step in this direction insofar as it would confer an even greater margin of discretion on competition authorities, opening the floodgates for decision-making that can no longer be assessed or judicially reviewed on the basis of objectively verifiable evidence. The EC Digital Report proposed that it may be necessary to revisit the application of substantive "conglomerate" theories of harm in cases involving dominant players active in industries benefiting from strong network effects acquiring small start-ups. It suggested that

> "where an acquisition is plausibly part of [a 'killer acquisition'] strategy, the notifying parties should bear the burden of showing that the adverse effects on competition are offset by merger-specific efficiencies."[15]

There is even a risk of large companies operating in the "tech sector" or in "digital markets" being singled out, whatever that may mean in a digitised economy.

Any such wide-reaching changes should not be adopted without detailed consideration of empirical evidence supporting the proposition that there is indeed a systematic enforcement gap going beyond one or two individual cases which regulators nowadays regret clearing—in other words, there should be no mandate for a "lex Facebook/Instagram" or "lex Google/Doubleclick" in the absence of probative evidence justifying legislative reform.

In the meantime, pending any potential reform efforts, there is a risk of merger reviews being unduly influenced by wider macro-economic observations about a slow-down in productivity growth, higher corporate profits and greater inequality, rather than being informed by case-specific, economic evidence. These macro-economic factors and a politically fuelled perception of underenforcement appear to drive competition authorities to expand speculative theories of harm revolving around "innovation competition" to justify interventions where the economic evidence would not otherwise indicate competition concerns.

There is no doubt that mergers may have a detrimental impact on incentives to innovate. Theories of harm based on potential competition and innovation competition are neither new nor are they inherently flawed. However,

[8] The new jurisdictional threshold provides that a transaction is notifiable if (i) the combined worldwide turnover of the parties exceeds €500 million; and (ii) at least one party has German turnover exceeding €25 million; and (iii) neither the target nor any other party has German turnover exceeding €5 million; and (iv) the value of the consideration for the transaction exceeds €400 million; and (v) the target is active in Germany to a considerable extent, unless the merger is between public facilities and undertakings resulting from territorial reforms at the municipal level.

[9] Tommaso Valletti, the Chief Competition Economist of the European Commission's Competition Directorate General, has commented that over the last decade Google has apparently made one acquisition every three weeks (more than 270 altogether) and only one such transaction qualified for review by the European Commission: Google's acquisition of DoubleClick, which was cleared unconditionally.

[10] Jacques Crémer, Yves-Alexandre de Montjoye and Heike Schweitzer (European Commission), *Competition Policy for the Digital Era* (4 April 2019), *http://ec.europa.eu/competition/publications/reports/kd0419345enn.pdf* [Accessed 17 April 2019].

[11] Another tool that may become more widespread is behavioural enforcement action against companies who are not (yet) dominant, based on the concept of "relative market power" under the German Act against Restraints on Competition ("ARC").

[12] Jean Tirole, "Regulating The Disruptors" (1 January 2019), *Livemint*, *https://www.livemint.com/Technology/XsgWUgy9tR4uaoME7xtITI/Regulating-the-disrupters-Jean-Tirole.html* [Accessed 1 April 2019].

[13] Jean Tirole, "Shaping Competition Policy in the Era of Digitisation" (17 January 2019), European Commission, Brussels, *https://webcast.ec.europa.eu/shaping-competition-policy-in-the-era-of-digitisation/* [Accessed 1 April 2019], making this suggestion in respect of dominant firms' acquisitions; See also Heike Schweitzer, Special Adviser to Commissioner Vestager, id.: "[Given the uncertainty in the evolution of the digital sector], in a context where we have actors in a strong position […] with market power we should be less concerned with false positives and very concerned with false negatives. Maybe we should err on the side of competition in this context."

[14] On 8 February 2019, Margrethe Vestager noted that in the future "Companies that want to use data, for instance, will have to work harder to explain what they want to do, and why", "An innovative digital future" (8 February 2019), *Prague*, *http://www.mlex.com/GlobalAntitrust/DetailView.aspx?cid=1064026&siteid=190&rdir=1*.

[15] Crémer, de Montjoye and Schweitzer (European Commission), *Competition Policy for the Digital Era* (4 April 2019), p.11, *http://ec.europa.eu/competition/publications/reports/kd0419345enn.pdf* [Accessed 17 April 2019].

competition authorities should bear in mind that concerns about potential competition are easy to allege and difficult to rebut unless those concerns are based on probative evidence. It would be concerning if a combination of populist pressure and unsubstantiated perceptions of past Type 2 errors (i.e. underenforcement) resulted in an expansion of innovation competition theories of harm such that legal certainty is undermined and much needed investment in tech start-ups or other smaller entrepreneurs is deterred. The European Commission's broadened interpretation of innovation competition in *Dow/DuPont*[16] may prompt a proliferation of ill-defined and poorly evidenced theories of harm around an alleged dampening of incentives to innovate. However, the evidentiary threshold justifying intervention, which also applies to innovation-related theories of harm, cannot be brushed aside in an attempt to fend off more far-reaching regulation that could leave competition authorities with fewer responsibilities. In practice this should mean that a few cherry-picked internal documents from marketing teams should not, for instance, form a sufficient evidentiary basis for harm to "innovation competition" if the economic evidence does not otherwise support substantial competition concerns.

Competition Commissioner Margrethe Vestager outlined the tension between a potential major overhaul of legislation and a different application of existing regulations on 17 January 2018, when she explained at a conference on "Shaping Competition Policy in the Era of Digitisation" that, "[w]e don't know if we should just reinterpret the rules we have already, or to what degree we should add new rules".[17]

This article provides a brief overview of cases frequently cited in the context of perceived underenforcement of merger control in "digital markets" before it goes on to make observations on the evolving application of innovation competition theories of harm against the background of increasing pressure to demonstrate that the existing framework is fit for purpose and can address competition concerns in dynamic markets. Finally, the article concludes that, while greater intervention based on feebly evidenced innovation concerns may appease populist concerns and reduce the pressure for more far-reaching ex ante regulation, any new policies ought to be based on an empirical analysis of a representative body of previous decisions.

Concerns based on imperfect hindsight—what about the counterfactual?

Perhaps driven by this context, regulators and politicians have questioned whether it was a mistake to clear previous acquisitions made by large companies, in particular those operating in multi-sided markets. For example, we understand that the CMA is currently examining whether some of its (and its predecessors') previous merger clearances could be regarded as examples of Type 2 errors. Some decisions, such as the UK Office of Fair Trading ("OFT")'s clearance of Facebook's acquisition of Instagram, have become popular examples of potential under-enforcement.[18] Indeed, on 17 January 2019, Jean Tirole stated that

> "competition authorities are currently at a 'disadvantage' because it's hard to prove that such deals harm competition; Did Facebook's acquisition of Instagram and Whatsapp reduce competition? My own gut feeling is yes, but am I able to prove it? No."

However, such a backward-looking view and reliance on "gut feel" rather than economic evidence often ignores the counterfactual, as it is based on the assumption that, absent the merger, both companies, and particularly the target, would have developed in exactly the same manner as they did following the transaction.

By way of example, while Instagram is now a large social network with significant influence on the market, at the time of its acquisition by Facebook in 2012, it had 13 employees, had never generated revenue and operated solely as a photograph-sharing site without any additional features.[19] Moreover, the OFT's assessment noted that "there are several relatively strong competitors to Instagram in the supply of camera and photo editing apps"[20] and that "one third party told the OFT that it does not consider that Instagram provides significant marketing opportunities".[21] Viewed in this context, it is far from clear that the OFT could have reached a reasonable, evidence-based decision to the effect that the acquisition of such a small company, which had numerous competitors, would lead to a realistic prospect of a substantial lessening of competition.

While it is impossible to know exactly what the counterfactual would have looked like if the merger had been referred and blocked, it seems unlikely that Instagram would have innovated and grown so quickly and effectively without Facebook's expertise and capital injection, meaning that it would not have been able to offer consumers the features and experience which have

[16] Commission Decision of 27 March 2017 declaring a concentration to be compatible with the internal market and the EEA Agreement (M.7932-*Dow/DuPont*), *http://ec.europa.eu/competition/mergers/cases/decisions/m7932_13668_3.pdf* [Accessed 1 April 2019].
[17] Vestager, (8 February 2019), Prague, *https://ec.europa.eu/commission/commissioners/2014-2019/vestager/announcements/shaping-competition-policy-era-digitisation_en* [Accessed 15 April 2019].
[18] See, for example, Tommaso Valletti's tweet dated 26 July 2018 stating, "Was it ok to approve the mergers of #Facebook with #Instagram and #WhatsApp? What to do when Internet consolidation harvests human attention? Putting the ideas of Tim Wo @superwuster at work with @andreapratnyc Merger policy in the age of Facebook."
[19] UK Office of Fair Trading, Decision ME/5525/12, *Anticipated acquisition by Facebook Inc of Instagram Inc*, 22 August 2012, at [2].
[20] UK Office of Fair Trading, Decision ME/5525/12, *Anticipated acquisition by Facebook Inc of Instagram Inc*, 22 August 2012, at [21].
[21] UK Office of Fair Trading, Decision ME/5525/12, *Anticipated acquisition by Facebook Inc of Instagram Inc*, 22 August 2012, at [18].

made it so popular since. Is it more likely than not that Instagram would have become the social network it is today, and therefore the potential constraint that it would have been on Facebook, if it had not been for its acquisition? Would a different legal test, such as the "balance of harms" approach proposed by the UK's Digital Competition Expert Panel, make a meaningful difference in practice? What percentage of likelihood or scale of potential harm would one have to attribute in order to intervene?

There may well be individual examples of Type 2 errors having been made in the past: the unconditional approval by the European Commission of Google's acquisition of DoubleClick,[22] for instance, may well have contributed to legitimate competition concerns that are being raised about the (mal)functioning of the market for online advertising.[23] However, there is a risk that imperfect hindsight unduly influences today's perception of past decisions such as *Facebook/Instagram*[24] and may now lead to the application of speculative theories of harm and undue scepticism regarding entry and expansion in dynamic markets in an increasingly digitising economy.

Are lessons from cases like Just Eat/Hungryhouse or WRI/Hostelbookers being ignored?

A case in point is the CMA's investigation into the acquisition of Hungryhouse by Just Eat, a case involving online food platforms.[25] The CMA was initially dismissive of the ability of innovative new entrants to act as a competitive constraint on the parties, despite significant evidence to the contrary. The CMA's Phase 1 decision noted with regard to Deliveroo that "it is not yet possible to determine whether such expansion into smaller localities will be sustainable"[26] and that

> "the CMA cannot conclude with any confidence how UberEATS will behave in the future (eg whether it will continue to grow geographically [...])."[27]

Having expressed concerns about a loss of innovation, it was only after a lengthy Phase 2 investigation that the CMA finally recognised that "the restaurant food ordering industry is dynamic and evolving"[28] and acknowledged that Just Eat would be "challenged by well-funded competitors" which provide a "greater competitive constraint" than the target business. Indeed, the subsequent significant expansion of these players since the merger clearance has demonstrated that the CMA had been unduly sceptical at Phase 1 and that its initial reservations were unfounded.[29] Had the CMA blocked the deal, it would have been a clear case of overenforcement. However, it is not clear that this decision will form part of the ex-post analysis of cases in "digital markets".

Similarly, in *WRI/Hostelbookers*, the OFT received several complaints from hostels raising concerns about a lack of choice and commission increases post-merger, with some operators suggesting this online booking market would tip in favour of WRI with other competitors no longer being able to impose an effective constraint on the merged entity.[30] However, the OFT cleared the deal at Phase 1, largely on the basis of timely, likely and sufficient entry by third parties (including Expedia and Booking.com). When KPMG prepared an ex-post evaluation four years later for the CMA it found that "the evidence [...] gathered suggests that the expansion predicted by the OFT by these other OTAs has occurred and has been timely".[31] The report also noted that "if anything, the market for online hostel booking services is becoming more, rather than less, fragmented". Again, the evidence shows that a decision to prohibit this merger, or even to refer it to Phase 2, would have amounted to overenforcement. However, a more interventionist legal test, such as the "balance of harms" approach, may well have resulted in these transactions being prohibited.

Regardless of empirical evidence, as it is becoming increasingly "mainstream" to lament underenforcement in the past, there is now a growing sense of urgency to ensure that perceived "killer mergers" are not allowed to proceed in future.[32] Indeed, on 8 February 2019, Margrethe Vestager noted that "[we] need to make sure

[22] Commission Decision of 11 March 2008 declaring a concentration to be compatible with the common market and the functioning of the EEA Agreement (COMP/M.4731 – *Google/DoubleClick*), *http://ec.europa.eu/competition/mergers/cases/decisions/m4731_20080311_20682_en.pdf* [Accessed 1 April 2019].

[23] Damien Geradin, "What Should EU Competition Policy do to Address the Concerns Raised by the Digital Platforms' Market Power?" (12 December 2018) (*TILEC Discussion Paper No.2018-041*), at 11, *https://ssrn.com/abstract=3299910* [Accessed 1 April 2019].

[24] For example, the European Commission's Director-General for Competition, Johannes Laitenberger, noting that "[i]f we take [cases in markets with strong network effects] into account […] then one must be as concerned about under-enforcement as about over-enforcement", Johannes Laitenberger, "Accuracy and administrability go hand in hand" (12 December 2017), CRA Conference, Brussels, at 7, *http://ec.europa.eu/competition/speeches/text/sp2017_24_en.pdf* [Accessed 1 April 2019].

[25] The authors represented the seller, Delivery Hero, in this transaction which was cleared unconditionally following the CMA's Phase 2 investigation.

[26] CMA Phase 1 Decision ME/6659-16, *Anticipated acquisition by Just Eat.co.uk Limited of Hungryhouse Holdings Limited*, 9 June 2017, at [177].

[27] CMA Phase 1 Decision ME/6659-16, *Anticipated acquisition by Just Eat.co.uk Limited of Hungryhouse Holdings Limited*, 9 June 2017, at [180].

[28] CMA Final Report ME/6659-16, *Anticipated acquisition by Just Eat.co.uk Limited of Hungryhouse Holdings Limited*, 9 June 2017, at [14(d)].

[29] See, for example, "Uber Eats to cut fees in battle with Deliveroo and Just Eat" (21 February 2019), *Financial Times*, *https://www.ft.com/content/0a64006c-34f6-11e9-bb0c-42459962a812* [Accessed 1 April 2019] and "Deliveroo rolls out new Marketplace+ service" (12 June 2018), *Financial Times*, *https://www.ft.com/content/4314028e-6e7e-11e8-852d-d8b934ff5ffa* [Accessed 1 April 2019].

[30] *Anticipated acquisition by Web Reservations International of Hostelbookers.com Limited*, ME/6062/13, decision published on 15 August 2013, available at *https://assets.publishing.service.gov.uk/media/555de2b0e5274a7084000020/wri.pdf* [Accessed 1 April 2019]. At the time the decision was adopted by the OFT, Nelson Jung was the Director and Head of Mergers at the OFT.

[31] See "Entry and expansion in UK merger cases, an ex-post evaluation" (April 2017), *https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/606693/entry-and-expansion-in-uk-ex-post-evaluation-kpmg.pdf* [Accessed 1 April 2019].

[32] See, for example, Colleen Cunningham, Florian Ederer and Song Ma, "Killer Acquisitions" (28 August 2018), *https://ssrn.com/abstract=3241707* [Accessed 1 April 2019].

that businesses don't use mergers to get rid of innovative rivals".[33] The resulting over-enforcement could deprive consumers of innovation and increased competition that collaboration and M&A activity can bring about. By way of example, in 2009, the UK's Competition Commission blocked Project Kangaroo, the video-on-demand joint venture between ITV, Channel 4 and BBC Worldwide.[34] In a sharp turnaround, Ofcom is now calling on UK broadcasters to revisit the project in response to increased competition from players such as Netflix[35] and has described the Competition Commission's prohibition decision as "something of a tragedy".[36]

The changing application of innovation theories of harm

For innovation to be considered an important parameter of competition is of course by no means novel. Indeed, the European Commission's guidelines on the assessment of horizontal mergers[37] make it clear that part of the European Commission's role is to prevent mergers that would deprive consumers of the benefits of competition, including innovation, by

> "significantly increasing the market power of firms. By 'increased market power' is meant the ability of one or more firms to profitably increase prices, reduce output, choice or quality of goods and services, *diminish innovation*, or otherwise influence parameters of competition"[38] (emphasis added).

Accordingly, it is not unusual, nor is it inappropriate, for the European Commission to assess the impact of a prospective merger on overlapping pipeline products and research and development ("R&D") activities. For example, in the 1990s, the European Commission looked at the impact of the *Pasteur-Mérieux/Merck*[39] and *Glaxo/Wellcome*[40] transactions on the R&D activities of the parties specifically in relation to monovalent vaccines and HIV/AIDS treatment respectively. Similarly, while later cases such as *Glaxo Wellcome/SmithKline Beecham*[41] introduced the terminology of "R&D markets", the European Commission's investigation continued to focus on the impact of the merger on specific products which were at a relatively advanced stage of development (in that case the development of treatments for chronic obstructive pulmonary disease).[42]

The Horizontal Merger Control Guidelines state that 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."[43]

While the competition assessments in the cases above, as well as others such as *Astra Zeneca/Novartis*,[44] focus on harm to innovation in relation to clearly identified product markets, more recent case law has gone beyond this remit to substantially expand the scope of innovation theories of harm.

Rather than focusing on a merger's likely impact on specific new or future products, the Commission's approach has shifted to include consideration of the impact of the transaction on incentives to innovate more generally and a potential reduction in R&D rivalry between the merging parties. For example, in *Novartis/GlaxoSmithKline Oncology Business*,[45] the Commission stated explicitly that:

> "[a concentration may affect competition in innovation and new markets when it] concerns entities currently developing new products or technologies which either may one day replace existing ones or which are being developed for a new intended use and will therefore not replace existing products but create a completely new demand. In principle, the effects of a concentration on competition in innovation in this type of situation

[33] Margrethe Vestager, "An innovative digital future" (8 February 2019), Prague, available at *https://ec.europa.eu/commission/commissioners/2014-2019/vestager/announcements/innovative-digital-future_en* [Accessed 15 April 2019].

[34] Competition Commission, "A report on the anticipated joint venture between BBC Worldwide Limited, Channel Four Television Corporation and ITV plc relating to the video on demand sector" (4 February 2009), *https://webarchive.nationalarchives.gov.uk/20140402233800/http://www.competition-commission.org.uk/assets/competitioncommission/docs/pdf/non-inquiry/rep_pub/reports/2009/fulltext/543.pdf* [Accessed 1 April 2019].

[35] See, Matthew Garrahan, "Ofcom head calls on UK broadcasters to develop rival to Netflix" (28 November 2018), *Financial Times*.

[36] Digital TV Europe, "Ofcom predicts 'Kangaroo 2' collaboration between UK broadcasters" (10 May 2018), *https://www.digitaltveurope.com/2018/05/10/ofcom-predicts-kangaroo-2-collaboration-between-uk-broadcasters/* [Accessed 1 April 2019], quoting Steve Unger, Ofcom's group director and board member.

[37] Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings (2004/C31/03) ("Horizontal Merger Control Guidelines").

[38] Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings (2004/C31/03), para.8.

[39] Commission Decision of 6 October 1994 relating to a proceeding pursuant to Article 85 of the EC Treaty and Article 53 of the EEA Agreement (IV/34.776 — *Pasteur Mérieux-Merck*), *https://eur-lex.europa.eu/eli/dec/1994/770/oj* [Accessed 1 April 2019].

[40] Commission Decision of 28 February 1995 pursuant to Article 4 of Council Regulation 4064/89 (IV/M.555 — *Glaxo/Wellcome*), *http://ec.europa.eu/competition/mergers/cases/decisions/m555_en.pdf* [Accessed 1 April 2019].

[41] Commission Decision of 8 May 2000 pursuant to Article 4 of Council Regulation 4064/89 (M.1846 — *Glaxo Wellcome/SmithKline Beecham*), *http://ec.europa.eu/competition/mergers/cases/decisions/m1846_en.pdf* [Accessed 1 April 2019].

[42] See also Commission Decision of 27 February 2003 pursuant to Article 4 of Council Regulation 4064/89 (M.2922 — *Pfizer/Pharmacia*), *http://ec.europa.eu/competition/mergers/cases/decisions/m2922_en.pdf* [Accessed 1 April 2019], at [22], in which the European Commission considered "products which are not yet on the market but are at an advanced stage of development", in particular focusing on urinary incontinence products.

[43] Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings (2004/C31/03), para.38.

[44] Commission Decision of 26 July 2000 declaring a concentration compatible with the common market and the EEA Agreement (M.1806 — *AstraZeneca/Novartis*), *http://ec.europa.eu/competition/mergers/cases/decisions/m1806_en.pdf* [Accessed 1 April 2019], which considered whether the merger resulted in reduced competition in relation to new strobilurin-based products.

[45] Commission Decision of 28 January 2015 pursuant to Article 6(1)(b) in conjunction with Article 6(2) of Council Regulation 139/2004 (M.7275 — *Novartis/GlaxoSmithKline Oncology Business*), *http://ec.europa.eu/competition/mergers/cases/decisions/m7275_20150128_20212_4158734_EN.pdf* [Accessed 1 April 2019].

> *may not be sufficiently assessed by restricting the assessment to actual or potential competition in existing product markets*."[46] (emphasis added)

Similarly, in *General Electric/Alstom*,[47] the Commission considered Alstom's general position as a "credible innovator"[48] rather than its development of any specific pipeline products and found that "[i]f Alstom disappears [ ] disruptive innovation from new entrants or start-ups will likely not happen"[49] and, as such, "the Transaction is likely to lead to significant and lasting harm on innovation".[50] That said, in both these cases, in the competitive assessment itself, the Commission grounded its analysis in identified products, or at least groups of products. In *Novartis/GlaxoSmithKline Oncology Business*, the Commission considered innovation in relation to treatments for certain cancer types and in *General Electric/Alstom* it considered innovation in relation to 50 Hz heavy duty gas turbines.

In *Dow/DuPont*,[51] the Commission stretched the application of the innovation theories of harm which had been foreshadowed in previous cases even further.

First, in *Dow/DuPont* the Commission explicitly conducted its competitive assessment by reference to "innovation spaces" rather than identified current or future product markets. The decision explains that an innovation space is broader than an individual downstream market as a discovery target may comprise the identification of new active ingredients ("AIs") which can be used in several downstream products markets.[52] Consequently, in order to assess competition in relation to innovation spaces, the Commission looked at the parties' lines of research[53] and early pipeline products.[54] This change had the effect of expanding the scope of the Commission's review to include not only specific potential future products, but also early stage R&D efforts in relation to ideas or products which are undefined and/or are years away from reaching the market.

Secondly, *Dow/DuPont* signified a key change in the tools used by the Commission to assess innovation theories of harm. The Commission extended the application of the standard unilateral effects model, which is generally used to evaluate pricing effects, to the assessment of innovation competition. Indeed, the decision states:

> "The diversion of sales between the merging parties becomes an additional opportunity cost of innovation for the merged entity. Following the merger, this new opportunity cost leads to lower incentives to innovate (absent merger-specific efficiencies). This is a standard 'unilateral effect' from a merger, similar to the effect of the suppression of price competition between merging parties."[55]

Not only does this represent an expansion of the use of the unilateral effects test from measuring pricing effects to measuring impact on innovation, but, its combination with the concept of "innovation spaces", means that it is being expanded to apply not only to current identified products, but also to future products and ideas which are at the very early stages of (potential) development.

Finally, Dow/DuPont appears to lower the standard of proof required for a finding that, post-merger, the parties would be likely to exit certain lines of research and pipeline products (i.e. innovation spaces). A theory of harm based on the discontinuation of specified R&D activities is not new: for instance, in *General Electric/Alstom* the Commission cited concerns that the merged entity planned to discontinue the parties' overlapping R&D activities, including in relation to Alstom's GT26 and GT36 turbines.[56] In *Dow/DuPont*, the Commission took this a step further and concluded that the merger would reduce innovation efforts by the parties, which would significantly affect a large number of innovation spaces even though, by its own admission,

> "it cannot identify precisely which early pipeline products or lines of research the Parties would likely discontinue, defer or redirect, and thus on which innovation spaces there would be a significant reduction of innovation competition."[57]

Overall, against a background of increasing concern about the growth, and possible entrenchment, of large companies, the scope of innovation theories of harm

[46] M.7275 — *Novartis/GlaxoSmithKline Oncology Business*, *http://ec.europa.eu/competition/mergers/cases/decisions/m7275_20150128_20212_4158734_EN.pdf* [Accessed 1 April 2019] at [89].
[47] Commission Decision of 8 September 2015 declaring a concentration to be compatible with the internal market and the EEA agreement (M.7278 — *General Electric/Alstom (Thermal Power - Renewable Power & Grid Business)*), *http://ec.europa.eu/competition/mergers/cases/decisions/m7278_6808_3.pdf* [Accessed 1 April 2019].
[48] M.7278 — *General Electric/Alstom (Thermal Power - Renewable Power & Grid Business)*, *http://ec.europa.eu/competition/mergers/cases/decisions/m7278_6808_3.pdf* [Accessed 1 April 2019], at [780].
[49] M.7278 — *General Electric/Alstom (Thermal Power - Renewable Power & Grid Business)*, *http://ec.europa.eu/competition/mergers/cases/decisions/m7278_6808_3.pdf* [Accessed 1 April 2019] at [995].
[50] M.7278 — *General Electric/Alstom (Thermal Power - Renewable Power & Grid Business)*, *http://ec.europa.eu/competition/mergers/cases/decisions/m7278_6808_3.pdf* [Accessed 1 April 2019] at [996].
[51] Commission Decision of 27 March 2017 declaring a concentration to be compatible with the internal market and the EEA Agreement (M.7932 — *Dow/DuPont*), *http://ec.europa.eu/competition/mergers/cases/decisions/m7932_13668_3.pdf* [Accessed 1 April 2019], point 9.
[52] M.7932 — *Dow/DuPont*, *http://ec.europa.eu/competition/mergers/cases/decisions/m7932_13668_3.pdf* [Accessed 1 April 2019], at [351].
[53] A line of research was defined as comprising "the set of scientists, patents, assets, equipment and chemical class(es) which are dedicated to a given discovery target whose final output are successive pipeline AIs targeting a given innovation space" Commission Decision of 27 March 2017 declaring a concentration to be compatible with the internal market and the EEA Agreement (M.7932 — *Dow/DuPont*), *http://ec.europa.eu/competition/mergers/cases/decisions/m7932_13668_3.pdf* [Accessed 1 April 2019], at [1958].
[54] M.7932 — *Dow/DuPont*, *http://ec.europa.eu/competition/mergers/cases/decisions/m7932_13668_3.pdf* [Accessed 1 April 2019], at [1957].
[55] M.7932 — *Dow/DuPont*, *http://ec.europa.eu/competition/mergers/cases/decisions/m7932_13668_3.pdf* [Accessed 1 April 2019], at footnote 2016. See also Annex 4, para.17.
[56] M.7278 — *General Electric/Alstom (Thermal Power - Renewable Power & Grid Business)*, *http://ec.europa.eu/competition/mergers/cases/decisions/m7278_6808_3.pdf* [Accessed 1 April 2019] at [1077]–[1078].
[57] M.7278 — *General Electric/Alstom (Thermal Power - Renewable Power & Grid Business)*, *http://ec.europa.eu/competition/mergers/cases/decisions/m7278_6808_3.pdf* [Accessed 1 April 2019] at [3053].

applied by competition authorities has clearly expanded. The case law demonstrates a marked move away from the assessment of defined concerns in relation to identifiable current or future products towards broader speculation in relation to "innovation spaces", resulting in (or potentially driven by a desire for) increased interventionism. This move has been facilitated by the application of the standard unilateral effects model to the assessment of innovation competition. However, there are legitimate questions as to whether the concept of unilateral effects can be easily applied to the analysis of standalone innovation theories of harm.

Limitations in applying a standard unilateral effects model to "innovation spaces"

As explored in detail by Nicolas Petit in the article "Innovation Competition, Unilateral Effects and Merger Control Policy",[58] the approach adopted by the European Commission in its formulation and assessment of innovation theories of harm in *Dow/Du Pont* and, to an extent, in the cases which preceded it, appears to suffer from a number of flaws. In particular, the European Commission relies on an extension of a standard unilateral effects analysis, despite the fact that the tools it uses to conduct such an analysis are less objectively measurable and reliable than price.[59] This difficulty is explicitly acknowledged in a study the European Commission it commissioned on the "microeconomic impact of enforcement of competition policies on innovation": the report states that

> "[innovation] can be measured in various ways, and only rarely is any single measure sufficient for an encompassing evaluation and all measures have limitations."[60]

This leads to the application of a legal test which is vague and imprecise and thereby creates considerable legal uncertainty for merging parties and the authorities attempting to apply this framework of analysis.

The theory of innovation diversion

A unilateral effects assessment based on estimated diversion of sales as a result of a merger is well established and widely considered by competition authorities as part of their assessment of the likely effects on competition of a proposed merger. In essence, if two close competitors merge, authorities attempt to measure the extent to which it would be profitable for the merged entity to increase prices on the basis that it would recapture a sufficient portion of the sales that would, absent the merger, have been diverted to the other merging party. The question is whether, post-merger, some of the adverse impacts of a price rise would be internalised and the merged entity would have less incentive to engage in price competition post-merger (or more of an incentive to increase prices).

The transposition of a standard pricing analysis to an assessment of innovation incentives assumes that innovation and R&D can be flexed by the merging entities and measured by those parties in the same way as price.

The inadequacy of tools available to measure "innovation diversion"

The underlying premise that a unilateral effects analysis can be applied to innovation theories of harm relies on an assumption that merged entities can internalise any adverse impact of a reduction in innovation and that this impact and resultant reduction is objectively measurable. In its decisions in relation to innovation theories of harm to date, the European Commission has used R&D spend, R&D headcount, patents and evidence from internal documents to measure the likely impact of a transaction on innovation. Each of these measures raises a number of problems which must be acknowledged and addressed if any analysis is to be robust.

Different types of innovation cannot be measured in the same way as price

In a speech on 12 December 2017, the European Commission's Director-General for Competition, Johannes Laitenberger stated that "innovation is not necessarily good, or at least, it is not always good in every respect" and that "the Commission now promotes 'responsible innovation': Innovation which is aligned with the needs and values of society".[61] Similarly, on 8 February 2019, Margrethe Vestager stated that "we need rules to make sure that innovation is used in a way that is good for our society".[62] Irrespective of whether one considers the Commission to be well placed to adjudicate on the merits of different types of innovation, it is undoubtedly the case that there is no "one size fits all" with regard to the concept of "innovation". For example, "breakthrough innovation", such as the manufacture of a new drug or the launch of an entirely new service, is likely to be easier to detect and measure than "incremental innovation", such as streamlining of processes or the addition of a new means for consumers to access an existing service. It is likely that any impact on

[58] Nicolas Petit, "Innovation Competition, Unilateral Effects and Merger Control Policy" (29 January 2018), *https://ssrn.com/abstract=3113077* [Accessed 1 April 2019], s.1.

[59] Petit, "Innovation Competition, Unilateral Effects and Merger Control Policy" (29 January 2018), s.1, *https://ssrn.com/abstract=3113077* [Accessed 1 April 2019], pp.1–24 and s.2.

[60] Peter Ormosi et al, European Commission, "Feasibility study on the microeconomic impact of enforcement of competition policies on innovation", Final Report (Directorate-General for Competition (European Commission, 2017) at 29, *http://ec.europa.eu/competition/publications/reports/kd0417860enn.pdf* [Accessed 1 April 2019].

[61] Johannes Laitenberger, Director-General for Competition, European Commission, "Accuracy and administrability go hand in hand" (12 December 2017), CRA Conference, Brussels, at 5, *http://ec.europa.eu/competition/speeches/text/sp2017_24_en.pdf* [Accessed 1 April 2019].

[62] Vestager, "An innovative digital future" (8 February 2019), Prague, available at *https://ec.europa.eu/commission/commissioners/2014-2019/vestager/announcements/innovative-digital-future_en* [Accessed 15 April 2019].

"breakthrough innovation" would represent a greater harm to consumers than any reduction in incremental changes which may only serve the purpose of increasing the volume of transactions rather than genuinely advancing the interests of consumers.

R&D spend and headcount do not necessarily accurately measure innovation

R&D spend and headcount are often used by the European Commission and other competition authorities as a proxy for innovation. However, both of these measures should be treated with caution.

In the case of R&D spend, it is clear that simply assessing whether, absent the merger, the merging firms would have combined R&D expenditure (or R&D intensity, i.e. the ratio of expenditure to revenue) of the same magnitude as that of the merged entity does not provide a complete picture of the effects of the proposed transaction on innovation competition. Such a simplistic calculation would fail to account for the removal of any genuine duplication of R&D efforts which may result from the proposed transaction. The use of R&D expenditure as a proxy for price rises in a standard unilateral effects analysis also raises a number of material concerns. For example, it is difficult to determine what constitutes a small but significant non-transitory increase in R&D spend because (i) there are significant sunk and fixed costs associated with R&D, which cannot be easily scaled up or down in the way that prices can,[63] and (ii) where companies are operating globally, and across multiple product areas, R&D spending is unlikely to be clearly allocated to defined product or geographic markets.

Moreover, as recognised by the European Commission's feasibility study,[64] not all R&D spend leads to innovation. In particular, in highly specialised industries, such as pharmaceuticals, significant expenditure is required at the exploration stage, a high proportion of which may not lead to the development of new products. Simply increasing spend at this stage of the process will not necessarily result in consumer benefits and the same holds true for the opposite case: a reduction in R&D spend will not necessarily result in consumer harm. Further, while some innovation is achieved through investment in in-house R&D, other innovations are brought about through the purchase of other innovators' work. As such, an assessment of innovation on the basis of spend alone appears too speculative and imprecise to form the basis of a robust theory of harm.

Counting patents is not necessarily an accurate measure of innovation, nor does consolidation of patents necessarily dampen innovation

Patents are an important tool used by companies to protect specific innovations. However, this does not mean that they necessarily represent an accurate measure of the extent to which firms are competing in relation to innovation in a merger control context.

Not all innovations are patented[65] and, conversely, some innovations, particularly in hi-tech industries, give rise to an extremely large number of patents, which can make it difficult to determine the innovative value of each single patent.

Patents may also limit innovation by preventing competitors from launching similar products and therefore reducing incentives to conduct R&D activities in the same product area. Moreover, consolidation of ownership in relevant patents can provide important synergies for future innovation.[66] Consequently, using patent numbers as a proxy for a potential loss of innovation competition is fraught with problems and unlikely to provide the foundation for a robust analysis that meets the evidentiary threshold to substantiate concerns.

Internal documents are not necessarily an accurate indicator of future innovation

Competition authorities are increasingly relying on internal documents which they consider may reveal the merging parties' "true" thoughts and intentions more clearly than formal submissions in merger control investigations. As the Commission states in *Dow/DuPont*,

> "[s]uch documents allow the Commission to gain better insight into companies' incentives. They often allow the Commission to verify factual claims made by the Parties and data they submit."[67]

Indeed, evidence from such documents is often used to support theories of harm where economic or empirical evidence is limited or unavailable.

While such documents can of course provide useful background, a lack of probative economic evidence supporting an innovation theory of harm should not result in "cherry-picking" documents which, if taken out of context, may look harmful at first sight. All evidence, including internal documents, should be considered in its appropriate context rather than given undue weight in order to plug an "economic evidence gap". The Commission in its *Dow/DuPont* decision rightly acknowledges the limitations of internal documents in

[63] Petit, "Innovation Competition, Unilateral Effects and Merger Control Policy" (29 January 2018), *https://ssrn.com/abstract=3113077* [Accessed 1 April 2019], at 26.
[64] Ormosi et al, European Commission, "Feasibility study on the microeconomic impact of enforcement of competition policies on innovation", Final Report (Directorate-General for Competition (European Commission, 2017), s.3.2.1, *http://ec.europa.eu/competition/publications/reports/kd0417860enn.pdf* [Accessed 1 April 2019].
[65] This may be because they are not suitable for patenting, for example, because they relate to improvements in operations or process rather than formulae or mechanical inventions, or because the developer chooses to protect their product in another manner.
[66] For further detail see Ormosi et al, European Commission, "Feasibility study on the microeconomic impact of enforcement of competition policies on innovation", Final Report (Directorate-General for Competition (European Commission, 2017), *http://ec.europa.eu/competition/publications/reports/kd0417860enn.pdf* [Accessed 1 April 2019], s.3.2.2.
[67] M.7932 — *Dow/DuPont*, *http://ec.europa.eu/competition/mergers/cases/decisions/m7932_13668_3.pdf* [Accessed 1 April 2019] at [3061].

informing an assessment of a potential post-merger exit from certain lines of research and early pipeline products.[68] However, the concerns raised in the decision are limited to possible manipulation of documents by merging parties "with a view to influencing the inferences which competition authorities draw from those documents".[69] It is important to also acknowledge that limitations may derive from the fact that documents are often created by people without the necessary knowledge or authority to implement the ideas contained therein, may represent early thinking which was quickly rejected or may have been created in order to "sell" a certain view of the world to a specific audience (for example, to potential investors) rather than genuinely reflecting senior management thinking.[70] This is even more so the case if internal documents are being used to support relatively speculative theories of harm in relation to which there is little or conflicting evidence: in *Dow/DuPont*, the Commission noted that innovation concerns supported by statements from internal documents (which are redacted from the decision) were only supported by approximately 25 per cent of respondents to the market investigation, with the majority of such support coming from the parties' competitors (who likely had a vested interest in opposing the transaction).[71]

Mergers can spur innovation—a plea for a more balanced assessment

Even setting aside the arguably insurmountable difficulties of accurately measuring any potential reduction in innovation, an approach focused solely on identifying harm to innovation competition lacks balance given that it fails to take into account pro-competitive innovation effects arising from a merger. Unlike in relation to price, where potential efficiencies are generally limited to cost synergies, a merger may give rise to significant innovation benefits which are much more likely to provide tangible consumer benefits, such as the introduction of new products on an accelerated timescale.

In particular, a merger can bring together operators with complementary skillsets whose ability to work together enables them to build on their combined experience to accelerate the development and roll-out of products and services at a faster rate, or into different areas, than they would be able to individually. For example, one party may have access to specific data sets or patents which could potentially be used to develop new products, but may lack the expertise or resources of the other party which would enable this innovation. As such, a merger could unlock pro-competitive benefits for consumers. These potential benefits, and others, were recognised by Carles Esteva Mosso in a speech in April 2018, in which he explained that:

> "a merger may stimulate innovation if it allows firms to better appropriate the social value of their innovation. For example, in the absence of a merger competitors may be able to free-ride on successful innovation carried out by their rivals. A merger could boost innovation by internalising these involuntary knowledge spill-overs. Similarly, a merger may enhance innovation by bringing together complementary R&D assets, by allowing for greater scale economies in process innovation, or by enabling cost efficiencies in R&D."[72]

Indeed, he went on to state explicitly that, "it would not be appropriate to establish any legal or economic presumption that a horizontal merger will have a negative impact on innovation".[73]

Numerous studies support this view which is consistent with Joseph Schumpeter's observation that large companies are often well placed and incentivised to innovate.[74] By contrast, it is by no means clear that the evidence supports a general hypothesis that mergers or consolidation have led (or would necessarily lead) to a reduction in innovation. The European Commission explicitly recognised the possibility that a merger may enable innovation in its decision in *TomTom/TeleAtlas*.[75] The authority noted that, through vertical integration between a navigation systems provider and a digital maps developer, "end-customers would certainly benefit from the more frequent and comprehensive map database updates made possible by the merger" and that

> "the proposed transaction [would] be likely to bring 'better maps — faster', as the parties suggested, than what could be achieved through contractual means in the absence of the merger".[76]

Furthermore, a recent study by the Centre for Competition Policy and the University of East Anglia found that there is no evidence that the consolidation of

[68] M.7932 — *Dow/DuPont*, *http://ec.europa.eu/competition/mergers/cases/decisions/m7932_13668_3.pdf* [Accessed 1 April 2019] at [3061]–[3069].
[69] M.7932 — *Dow/DuPont*, *http://ec.europa.eu/competition/mergers/cases/decisions/m7932_13668_3.pdf* [Accessed 1 April 2019] at [3069].
[70] Petit, "Innovation Competition, Unilateral Effects and Merger Control Policy" (29 January 2018), *https://ssrn.com/abstract=3113077* [Accessed 1 April 2019], at pp.22–23.
[71] M.7932 — *Dow/DuPont*, *http://ec.europa.eu/competition/mergers/cases/decisions/m7932_13668_3.pdf* [Accessed 1 April 2019] at [1984].
[72] Carles Esteva Mosso, "Innovation in Merger Control" (12 April 2018), Remarks prepared for the 66th ABA Section of Antitrust Law Spring Meeting, Washington, p.4, *http://ec.europa.eu/competition/speeches/text/sp2018_05_en.pdf* [Accessed 1 April 2019].
[73] Carles Esteva Mosso, "Innovation in Merger Control" (12 April 2018), Remarks prepared for the 66th ABA Section of Antitrust Law Spring Meeting, Washington, p.8, *http://ec.europa.eu/competition/speeches/text/sp2018_05_en.pdf* [Accessed 1 April 2019].
[74] Jopseph Schumpter, *The Theory of Economic Development* (1934); *Capital Socialism and Democracy* (1942).
[75] Commission Decision of 14 May 2008 declaring a concentration to be compatible with the common market and the EEA Agreement (COMP/M.4854 — *Tomtom/Tele Atlas*), *http://ec.europa.eu/competition/mergers/cases/decisions/m4854_20080514_20682_en.pdf* [Accessed 1 April 2019].
[76] COMP/M.4854 — *Tomtom/Tele Atlas*, *http://ec.europa.eu/competition/mergers/cases/decisions/m4854_20080514_20682_en.pdf*[Accessed 1 April 2019] at [248]–[249]. For completeness, the European Commission did not consider it necessary to precisely estimate the magnitude of these efficiencies given the proposed transaction's lack of anti-competitive effect in any event.

the HDD market in 2012, as a result of the *Seagate/Samsung* and *Western Digital/Hitachi* mergers, reduced the level of innovation.[77]

While the Horizontal Merger Guidelines recognise that a merger can actually increase the merged entity's ability and incentives to innovate, thereby also increasing the competitive pressure on rivals to create new goods and services,[78] efficiencies arguments are typically only considered as a countervailing factor once the authority has already formulated its competition concerns and are rarely assessed in depth. This may be sensible where concerns focus on price as the main parameter of competition: in those circumstances, there is an underlying assumption that if the merged entity will have market power, its incentives to reduce prices for the benefit of consumers are limited. However, as explained above, this assumption is not straightforwardly applicable to innovation, wherein a merged entity active in a fast-moving market has a strong incentive not only to improve existing products, but also to enter entirely new markets and create new demand. As a result, the current framework for analysing merger-specific innovation efficiencies suffers from material flaws and appears, in practice, incapable of accurately reflecting the commercial reality of transactions in dynamic markets where innovation is a key competitive parameter.

Conclusion: beware of the "theory in search of a case"—evidence matters

Despite the growing political pressure on regulators to show they have teeth where they enforce in dynamic markets, the fundamental issues associated with a greater reliance on innovation competition theories of harm to intervene cannot be overlooked. It is revealing that a report published by the European Commission on the "microeconomic impact of enforcement of competition policies on innovation" explicitly acknowledges that "we know relatively little about how specific competition policy interventions have impacted on firms' innovation activities".[79] Nevertheless, citing "potential competition" and "innovation competition" concerns is emerging as an increasingly popular means to plug a perceived enforcement gap—and perhaps to fend off broader ex-ante regulation that would leave competition authorities with a reduced portfolio.

It seems that regulators are on the lookout for the "next Facebook/Instagram", promising themselves that this time such a deal would be blocked. In practice, this attitude translates into a sharp increase in the volume of information requests in merger inquiries even in cases where such concerns are far-fetched: it is hard to rid oneself of the impression that the increasingly popular innovation competition theory of harm is often best characterised as a "theory in search of a case".

Meanwhile, policy makers appear to be seriously contemplating radical reform proposals, including a reversal of burden of proof in merger control investigations. They are encouraged by enthusiastic macro-economists who have discovered antitrust as their newfound weapon to cure a globalised and digitising economy from the harm that "big tech" and other large, profitable companies are allegedly causing.

However, even from a macro-economic perspective, the case for greater merger control intervention is far from clear: a new wave of over-enforcement based on highly speculative innovation competition theories of harm would likely have a dampening effect on investment in technology, a key driver of economic growth. Entrepreneurs launching innovative start-ups rely on investment from venture capital, which they are significantly less likely to secure in jurisdictions where over-enforcement by antitrust authorities reduces the likelihood of an eventual exit through a sale to an industry participant.

The authors therefore recommend a cautious and evidence-based approach to both decision-making and policy reform. Questions around the appropriateness of the current tools or the substantive test cannot be answered robustly without an empirical analysis of a much wider body of cases. Is there really probative evidence of an enforcement gap that could be closed by virtue of a different substantive test or a reversal of the burden of proof in merger control? Repeatedly citing *Facebook/Instagram* will not be sufficient to support a credible call for reform.

Insofar as potential harm to innovation from mergers is concerned, Margrethe Vestager once remarked: "As public authorities, we know innovation matters. But we also know that we can't predict or control it".[80] We hope that competition authorities and policy makers bear these words in mind as they consider next steps.

[77] Anna Rita Bennato et al, "The Effect of Market Consolidation on Innovation in the HDD Industry" (University of East Anglia and Centre for Competition Policy, 2018).
[78] Horizontal Merger Guidelines, paras 36 and 81; similarly, in relation to non-horizontal mergers, see the Guidelines on the Assessment of Non-Horizontal Mergers Under the Council Regulation on the Control of Concentrations between Undertakings [2008] OJ C265/7, para.13.
[79] Ormosi et al, European Commission, "Feasibility study on the microeconomic impact of enforcement of competition policies on innovation", Final Report (Directorate-General for Competition (European Commission, 2017) at p.29, *http://ec.europa.eu/competition/publications/reports/kd0417860enn.pdf* [Accessed 1 April 2019].
[80] Margrethe Vestager, "Setting Innovation Free" (12 October 2017), Bpifrance Inno Génération, Paris, *https://ec.europa.eu/commission/commissioners/2014-2019/vestager/announcements/setting-innovation-free_en* [Accessed 1 April 2019].