DIGITAL ECOSYSTEM MERGERS: A CONVENIENT LOCK-IN?

FEDERICO DE MICHIEL, PAULO ABECASIS, NORBERT MAIER, TUOMAS HAANPERÄ

The recent Booking/eTraveli merger investigation marked the first time the European Commission (the "Commission") concluded that a merger was likely to raise competition concerns based on an "ecosystem theory of harm".[1] In its assessment, the Commission did not follow its standard Non-Horizontal Guidelines despite the concern being related to the combination of non-overlapping products.[2]

The Commission's approach (and conclusion) on Booking/eTraveli has added to an already lively debate amongst competition law practitioners and scholars. Taking an economic perspective, we seek to shed light on these novel theories of harm that may become increasingly prevalent in digital markets. In this brief, we address the following questions: What is an "ecosystem", and how might a merger involving an ecosystem give rise to competitive concerns? How can economic analysis help identify when the strengthening of an ecosystem can be harmful, and how can it help to balance any potential harm against consumer benefit from ecosystems?

What is an "ecosystem" and how might a merger involving an ecosystem give rise to competitive concerns?

Increasingly, digital platforms offer a wide range of services around their core services, and these services develop into a so-called ecosystem. The OECD defines ecosystems as "*lines of products and services linked through shared functionalities, which provide benefits to the consumers when used together*".[3] While these ecosystems create convenience, they may also trigger a lock-in effect for consumers who use one of the services of the ecosystem.

Competition authorities have looked at mergers between firms supplying products or services in neighbouring markets before. The concern typically was that a firm dominant in one market may use its market power to negatively affect competition in the neighbouring market of the target firm,

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1 See the Commission's press release on the prohibition decision in Booking/eTraveli: https://ec.europa.eu/commission/presscorner/detail/en/IP_23_4573. The Commission also rejected the remedies proposed by the merging parties and blocked the merger. Booking.com has announced its intention to appeal the decision to the General Court. See the press release here: https://ir.bookingholdings.com/news/news-details/2023/Booking-Holdings-Intends-to-Appeal-European-Commission-Decision-to-Prohibit-the-Companys-Acquisition-of-Etraveli-Group/default.aspx

2 European Commission: *Guidelines on the assessment of non-horizontal mergers under the Council Regulation on the control of concentrations between undertakings (2008/C 265/07)*, https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2008:265:0006:0025:en:PDF.

3 OECD (2020), *Some Economics of Digital Ecosystems – Note by Marc Bourreau*, https://one.oecd.org/document/DAF/COMP/WD(2020)89/en/pdf.

by foreclosing the latter's rivals.[4] The Commission has followed its Non-Horizontal Merger Guidelines to assess such concerns.

The ecosystem theories of harm deviate from this scenario. The acquisition of a neighbouring, linked service by a firm operating an ecosystem may raise competition concerns if the acquisition entrenches the acquirer's already strong market position, because of new consumers or new capabilities that it acquires. This strengthening can arise from the leveraging of technological links and complementarities between the different assets and products of the parties. This effect can be magnified by the presence of network effects, economies of scale and scope, or accumulation of critical data.[5]

There are two key aspects to this novel theory of harm: First, harm arises in a market where the acquirer already has market power. In this way, the direction of leveraging is reversed compared to traditional non-horizontal theories of harm. Second, the theory of harm does not seem to focus on specific conducts (such as refusal to supply, tying, or bundling), but rather on the *structural* change brought by the accumulation of new assets and capabilities. Consequently, the assessment is structural rather than behaviour-specific. In doing so, authorities may see a need to deviate from the standard behaviour-focused ability, incentive, and effects framework.[6]

The Commission and the UK Consumer and Markets Authority ("CMA") assessed some of these aspects, without always explicitly categorising them as ecosystem theories of harm, in recent non-horizontal digital mergers such as Amazon/MGM (Commission), Google/Photomath (Commission), and Booking/eTraveli cases (Commission, CMA).[7] The outcome of these cases suggests that competition authorities may look into an ecosystem theory of harm when the following conditions cumulatively hold:

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4 Throughout this note, we assume a situation in which a firm (the acquirer) that is potentially dominant in a market buys a firm (the target) selling a linked product where it is not necessarily dominant. This is only for expositional purposes. Competition concerns can arise independently of whether it is the acquirer or the target who have market power.

5 We note that the theory and its applications are continuously evolving. For additional discussion on ecosystems theories of harm see, for example, Crémer, J., Montjoye, Y., Schweitzer, H., *Competition policy for the digital era*, European Commission Publications Office, 2019, https://data.europa.eu/doi/10.2763/407537 ("*Crémer Report*") or OECD (2023), "*Theories of Harm for Digital Mergers, OECD Competition Policy Roundtable Background Note*", www.oecd.org/daf/competition/theories-of-harm-for-digital-mergers-2023.pdf.

6 The shift from abilities to capabilities can be seen in the language used by the Commission in the Booking/eTraveli prohibition press release where it says "*Booking could have leveraged eTraveli's capabilities to become the main flight OTA in Europe.*"

7 See European Commission M.10349 Amazon/MGM (https://ec.europa.eu/competition/mergers/cases1/202250/M_10349_8691929_626_3.pdf), M.10796 Google/Photomath (https://ec.europa.eu/competition/mergers/cases1/202339/M_10796_9559358_891_3.pdf), M.10615 Booking/eTraveli and UK CMA: *Booking Holdings Inc / eTraveli Group AB merger inquiry* (https://assets.publishing.service.gov.uk/media/6363e1dce90e0705a2e5b21c/Booking_Etraveli_-_Full_text_decision.pdf). In other cases, the ecosystem element was in the background as an additional, unconventional, horizontal effect (see for example European Commission M.9660 Google/Fitbit (https://ec.europa.eu/competition/mergers/cases1/202120/m9660_3314_3.pdf)) or as an additional factor complementing a vertical effect (see for example, European Commission M.10262 Meta/Kustomer (https://ec.europa.eu/competition/mergers/cases1/202242/M_10262_8559915_3054_3.pdf)). For an overview, see Sean Mernagh (2023) "*EU merger control in the digital sector: an expanding toolkit, an evolving practice*" https://eulawlive.com/competition-corner/op-ed-working-title-eu-merger-control-in-the-digital-sector-an-expanding-toolkit-an-evolving-practice-by-sean-mernagh/#.

1. The buyer is already in a strong position in its core market. For example, in the Booking/eTraveli case, pointing to a market share of above 60 per cent, the Commission found that Booking "*is the dominant hotel OTA* [online travel agent] *in the EEA*".[8]

2. There is a plausible mechanism through which the target's service(s) can reinforce the market position of the acquirer in its core market. In Booking/eTraveli, the Commission emphasises a *"clear link between flight OTA services provided by eTraveli and hotel OTA services provided by Booking."*[9] By contrast, in Amazon/MGM the Commission considered an ecosystem theory of harm but did not find a sufficiently strong link between the provision of audio-visual content (possessed by MGM) and online marketplace services (where Amazon had a strong position).

3. The asset/capability acquired is scarce and valuable. In Booking/eTraveli, the Commission found that eTraveli was "*a best-in-class OTA and the number two player in the EEA*".[10] Conversely, in Google/Photomath the Commission did not find that the integration of a function to solve math equations (offered by Photomath) would have significantly improved the overall competitive position of a Google general search because a) Photomath's product was niche, and b) there were already other providers offering the same functionality.

Finally, ecosystem theories of harm have so far been linked to harm found in well-defined product markets (e.g., hotel OTA, online marketplace, and general search services). As such, there have been no cases of harm such as the one identified in the Commission's *Crémer Report* on competition policy for the digital era where the focus was on competition in the ecosystem space. There, the concern focused on the removal of an actual or potential competitive constraint in the "technological or user space" that form ecosystems.[11]

How can economic analysis help identify situations where the strengthening of an ecosystem can be harmful?

Standard economic models are often used to analyse foreclosure incentives in non-horizontal mergers, from simple vertical arithmetic to more advanced merger simulations. However, these models do not seem applicable in the context of ecosystem theories of harm. It appears that the types of theories of harm investigated in "ecosystem" mergers to date have boiled down to (i) an assessment of the acquirer's market position and (ii) an assessment of how the target further entrenches an already strong market position.

Assessing the acquirer's position in its core market

The ecosystem theory of harm must first establish that the acquirer has an already entrenched position in its core market. In doing so, it is particularly important to assess (and quantify) the drivers of potential barriers to entry into that market, which may enhance market power.

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8 See the Commission press release on the prohibition decision in Booking/eTraveli.
9 See the Commission press release on the prohibition decision in Booking/eTraveli.
10 See the Commission press release on the prohibition decision in Booking/eTraveli.
11 See footnote 5, p. 117.

Notably, digital platform markets are often characterised by, among other things, network effects generated by the number of users present on the platform. These network effects contribute to the creation of barriers to entry. While the precise quantification of the strength of network effects may not be implementable, there are tools to help inform their presence and magnitude. For instance, an analysis of how consumer engagement (e.g. measured through repeat-purchases) increases with the number of users could indicate direct network effects. Other factors that tend to warrant analysis in the context of platform markets include access to valuable data and technologies, multi-homing, switching costs, and associated customer inertia.

Assessing the incremental impact of the target's assets and capabilities

After establishing that the acquirer has a strong position in its core market, the competitive assessment turns to identifying the mechanisms through which the target's capabilities may incrementally reinforce the acquirer's market position. The economic mechanisms for leveraging capabilities across markets could manifest either on the supply side or the demand side.

On the *supply side*, the theory of harm may be that the acquirer will improve its core services by, for example, accessing valuable data accumulated by the target firm or integrating specific technical functionalities of the target. Relevant elements to consider may include the degree of complementarity between these assets, the presence of economies of scale and scope arising from using the target's assets, and the value and uniqueness of the data accumulated by the target firm.[12]

On the *demand side*, the transaction may allow the acquirer to bring the target's existing customer base to its core service more easily. In this case, the ecosystem effect would depend on factors such as the degree of "consumer inertia" (accepting default options or multi-homing). For example, the merged entity may offer the acquirer's core services to the target's user base as the default.

In theory, it would not be sufficient to show that the target has an incremental impact on the acquirer's strong market position, but it would also be necessary to show that this effect is significant. This will depend on the existing barriers to entry discussed above. For example, it may be important to understand whether and how an acquisition might reinforce network effects on the affected services. This will depend on the additional value that users get from new joiners, which, in turn, may vary depending on the number of users already on the platform. Where a buyer can leverage its multi-product ecosystem to strengthen network effects, a merger can raise barriers to entry. Conversely, if a platform already has a large user base before a merger, the network effects generated by the marginal user may be limited, in other words, the network effects may exhibit declining returns. If that were the case, the additional user base that the acquirer could gain through the merger might not raise to a significant extent the barriers to entry already present in the core market, thus limiting the merger-specific ecosystem harm.[13]

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[12] See OECD (2021), *Executive Summary of the Hearing on Competition Economics of Digital Ecosystems, Annex 6 (https://one.oecd.org/document/DAF/COMP/M(2020)2/ANN6/FINAL/en/pdf)*, p. 2.

[13] We note that it could still potentially significantly raise barriers to entry if it removes a market access channel for potential rivals, precluding them from benefiting from network effects.

Two sides of the same coin? Balancing potential harm against consumer benefits

Any risk of potential harm could, in principle, be offset by efficiencies or other benefits generated by the merger. In the context of ecosystem mergers, the harm arises from an alleged competitive advantage that typically generates immediate consumer benefits through, for example, the added convenience of one-stop-shopping, or tailored ads and services. Some of the conceivable efficiencies can therefore be considered an ingredient of the theory of harm.

In some instances, authorities have recognised these types of efficiencies, at least in principle.[14] However, further research is needed to establish a sound economic framework for the balancing act. The high degree of uncertainty when comparing short-term efficiencies with potential long-run harm, and the focus of the analysis on the changes in market structure rather than on the expected effects of the merger, may present challenges to this balance. As already suggested by some authors[15], a first step would be to analyse efficiencies simultaneously with the anti-competitive effects rather than sequentially, as is currently done. This would also reflect a key feature of the ecosystem theory of harm, where the mechanism generating harm and efficiencies can be the same.

Finally, some of the large digital ecosystems have just been designated as gatekeepers under the Digital Market Act (DMA), which aims to foster fairness and contestability in certain core platform markets.[16] The two policy tools, the DMA and merger control, have different objectives and are complementary. However, a core objective of the DMA is to impose restrictions on core platform service providers' ability to leverage their market power across markets. As such, in certain mergers, an ecosystem theory of harm may not be possible because of the restrictions already imposed by the DMA obligations.

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[14] For example, in M.9660 Google/Fitbit para 467, "*Although post-Transaction the quality of Google's services may increase in the short term as a result of better ads targeting, as explained above this will be accompanied by an increase in barriers to entry and expansion. In the long term, given the lack of contestability in these markets, Google would likely raise its prices to both advertisers and publishers (in the case of intermediation services) and would likely reduce its innovation efforts. This would have a detrimental effect on advertisers and publishers which would likely more than compensate the short-term gains of better ads targeting*."

[15] See Bourreau, M. and A. de Streel (2020), "*Big Tech Acquisitions - Competition & Innovation Effects and EU Merger Control*", Centre on Regulation in Europe - Issue Paper, https://cerre.eu/wpcontent/uploads/2020/03/cerre_big_tech_acquisitions_2020.pdf.

[16] See the Commission press release: https://digital-markets-act.ec.europa.eu/commission-designates-six-gatekeepers-under-digital-markets-act-2023-09-06_en .