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Article

INCUMBENT OR CHALLENGER?—ASSESSING ECOSYSTEM COMPETITION IN THE DMA

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ABSTRACT

This article examines the role of ecosystem competition and ecosystem power in designating gatekeepers under the Digital Markets Act (DMA). The study is prompted by ByteDance's objections to its designation, where it describes itself as a challenger instead of a gatekeeper. The article highlights the differing perspectives of ByteDance, TikTok's parent company, and the European Commission. ByteDance's 'challenger defence' rests on the idea that they lack ecosystem power. Despite its success within the core platform service, the size of their ecosystem of products is small in comparison to other gatekeepers. This would indicate that they are not entrenched. The Commission focuses on gatekeeper power, and views ByteDance as another incumbent gatekeeper. The Commission currently conducts a very limited assessment of ecosystem power when designating gatekeepers, making it difficult to determine the validity of the 'challenger defence'. Incorporating a more extensive assessment of ecosystem power and competition between ecosystem operators could enhance fairness and market contestability. Ignoring this aspect could lead to negative consequences and produce negative effects for users and competition in the long-term. The article proposes that there are benefits to contestability if the Commission expands its assessment to include ecosystem competition and offers suggestions on procedural implementation and effectuation of this broader analysis.

JEL: K20, K21, K23, L43

I. INTRODUCTION

The purpose of this article is to critically reflect on the role of economic assessment in designating entities as gatekeepers, particularly focusing on if and how concepts of inter-ecosystem

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competition and ecosystem power can be used in the process of deciding on the designation of gatekeepers. The article is prompted by arguments brought forward by ByteDance in response to the designation of the TikTok platform as a core platform service. Here, ByteDance contests its designation by arguing they should be considered a challenger to other gatekeepers under the Digital Markets Act (DMA), rather than a gatekeeper in its own right. The article discusses this line of argumentation as the 'challenger defence'.

The Commission has designated TikTok as they consider the platform to be a social media platform in accordance with Art. 2(2) DMA and the quantitative criteria laid down in Art. 3(2) DMA to be met.[1] ByteDance however argues that despite meeting the quantitative criteria, it should be considered as a challenger to the larger incumbents rather than a gatekeeper in its own right. TikTok bases these arguments on ideas related to ecosystem power: they are not as powerful as the incumbents they challenge within their core platform service, and they do not have an equally elaborate digital ecosystem of products surrounding their core platform service. The Commission however notes that 'nothing in Regulation 2022/1925 suggests that an undertaking cannot be simultaneously a challenger to certain gatekeepers and a gatekeeper in its own right'. The Commission also dismisses the idea that the size of ByteDance's ecosystem should be considered relevant in deciding its role as a gatekeeper, noting that any undertaking that operates one or more core platform service can be designated as a gatekeeper under the DMA. The General Court has largely affirmed Commission's decision in the ByteDance case. However, the court does not close the door on the challenger defence. Instead, it simply sets a high burden of proof on gatekeepers to bring forward such defences.

This article focuses on the question how it is assessed whether an undertaking is a gatekeeper or a challenger under the DMA, and whether designating an undertaking as a gatekeeper hinders its possibility to challenge stronger incumbents. At its core, it questions whether an analysis of inter-ecosystem power and ecosystem power are necessary to determine who the challenger is and who the gatekeeper, and to ensure that designations effectively promote contestability. It should be noted that it is not the purpose of this article to determine whether ByteDance should be granted an exemption based on its line of reasoning, nor is it to determine whether the Commission would err in law by only taking into account gatekeeper power. Instead, it aims to discuss why taking ecosystem power into account may help to strengthen the DMA as a regulatory framework, how it may help to promote fairness and contestability, and how it could include this dimension of power procedurally and substantively. Distinguishing between 'incumbent' gatekeepers on the one hand, and 'challenger' gatekeepers on the other, will remain relevant throughout the lifespan of the DMA as newly designated gatekeepers are likely to have less power relative to the largest ecosystems that have already been designated.[2]

The article is structured as follows. First, the arguments of ByteDance are used to frame the discussion on the distinction between incumbents and gatekeepers. Subsequently, the article sets out a theoretical framework for the ecosystem concept and ecosystem competition. It then moves on to discuss why the developing a theory of ecosystem competition is useful in assessing whether a firm should be considered an incumbent or a challenger, and why this assessment is warranted in light of the objectives pursued through the DMA. Finally, the article provides some ways forward on how to include ecosystem competition and the distinction between challenger

[1] See Case DMA 100040, ByteDance; the quantitative criteria laid down in Art. 3(2) DMA suggest that an undertaking can be considered a gatekeeper if it has a turnover of at least €7.5 billion or fair market capitalization of at least €75 billion, has over 45 million end-users and 10.000 business users, and has done so for at least three consecutive years.

[2] The first six designated gatekeepers are Alphabet, Apple, Amazon, ByteDance, Meta, and Microsoft. More designation decisions are likely to come, as there are ongoing investigations into Booking.com and X.

and incumbent into the process of designating entities, and what consequences could be given to the finding that a firm is a challenger.

II. BYTEDANCE V. COMMISSION-DIFFERENT CONCEPTS OF GATEKEEPER AND ECOSYSTEM POWER

ByteDance's TikTok platform was designated on September 5, 2023 in the Commission's first round of designation decisions. ByteDance contested this decision on the basis that they do not have a similar level of power in comparison to the other designated gatekeepers from that round: Alphabet, Meta, Amazon, Microsoft, and Apple. ByteDance has tried to convince the Commission that it should be considered a challenger, not a gatekeeper. The Commission remained unconvinced, and ByteDance has appealed their designation. The General Court has also dismissed ByteDance's arguments in their first ruling on the substance of the DMA. This section discusses the exchange between the Commission and ByteDance, the reasoning of the court, and the implications of the decision and judgement.

The Commission considers ByteDance to meet the conditions to be considered a gatekeeper over its TikTok platform, which it considers an online social network in accordance with Art. 2(2)(c) DMA. ByteDance has raised several points of contention related to its status as a gatekeeper and the nature of TikTok as a core platform service. In principle, ByteDance's arguments can broadly be divided into three categories: 1) TikTok is a video-sharing platform, not a social media platform;[3] 2) TikTok does not meet the conditions required for designation as a gatekeeper as it is not sufficiently entrenched;[4] and 3) TikTok is a challenger to incumbent gatekeepers and not a gatekeeper in itself due to its small position *across* markets.[5] In their appeal before the courts, ByteDance focused on the latter two points: its perceived lack of ecosystem power and its status as a challenger.[6]

The premise of this article rests on the idea that there is a fundamental difference between the concepts of gatekeeper power on the one hand, and ecosystem power on the other. The Commission's argumentation is focused on regulating 'gatekeeper power', whilst (perhaps purposefully) minimizing its assessment of dimensions of ecosystem power and competition between digital ecosystems, also referred to as inter-ecosystem competition.[7] ByteDance tries to argue that its lack of ecosystem power should excuse it from being designated as a gatekeeper. The question is then whether ByteDance's TikTok is durably entrenched and how we can understand the role of challenger and incumbent in relation to the term 'contestability'.

An overview of the arguments submitted by the parties helps us to understand the difference in perspective. ByteDance has raised arguments related to both the quantitative thresholds as well as its relative competitive position vis-à-vis the other regulated gatekeepers.

[3] Case 100040, ByteDance, Commission Decision of September 5, 2024, par. 25–37.

[4] Ibid., par. 67–111.

[5] Ibid., par. 112–163.

[6] Case T-1077/23, ByteDance v. Commission, ECLI:EU:T:2024:478, judgement of July 17, 2024 (*ByteDance)*, par. 29–35.

[7] See Jacobides and Lianos (2021), Ecosystems and competition law in theory and practice, *Industrial and Corporate Change*, Volume 30, Issue 5, October 2021, Pages 1199–1229 for theorization on the ecosystem concept. It is also worth noting that Hornung (2023), The Ecosystem Concept, the DMA, and sec. 19a GWB, *Journal of Antitrust Enforcement*, 00, 1–42, 23–28 observes that the Commission does not use the ecosystem concept in its assessments under the DMA, whilst Ribera Martínez argues that the Commission did consider ecosystem considerations when assessing the role of Samsung as a gatekeeper, see Ribera (n.d.), Rebuttal and Designation: Walking the Fine Line of Article 3(5) DMA, EU Law Live's Competition Corner, online: https://eulawlive.com/competition-corner/rebuttal-and-designation-walking-the-fine-line-of-article-35-dma-by-alba-ribera-martinez/. This article maintains the position that in the designation of TikTok, the Commission expressly avoided the discussion on the relevance of the multi-product ecosystem, but that there may be room to include such considerations within the DMA. This article will provide recommendations on how this concept can be included consistently and how it could impact the designation process and applicable obligations. Podszun (2024), Digital Markets Act: DMA: Article-by-Article Commentary, Nomos, Ch. 1, contribution by Thorsten Käseberg & Sophie Gappa, p. 69 describes that an analysis of the ecosystem concept as conducted for sec. 19a GWB is time consuming, and that the DMA relies on quantitative thresholds in lieu of such an assessment.

A. The Dispute between ByteDance and the Commission

The quantitative thresholds are clearly stated in Art. 3 DMA.[8] ByteDance accepts that TikTok has a 'fair value' market capitalization of over €75 billion and that it has more than 45 million active end-users, meeting the thresholds for these indicators.[9] ByteDance does raise objections in terms of business users and the revenue thresholds. In their notification, ByteDance relies on its number of self-registered business users, stating that there are less than 10.000 in the EEA. The Commission however notes that what constitutes a business account is broader than the number of self-registered users, as this is determined by objective criteria. Moreover, the self-registration function has only been available for a short period of time and in a limited number of Member States. The number of business users is therefore estimated to vastly exceed 10.000.[10] With respect to the revenue threshold, ByteDance argues that it does not generate over €7.5 billion *within* the EEA, but that the majority of its revenue is generated in China, where market conditions are different. The Commission also disregards this objection, as there is no requirement to generate the revenue within the EEA.[11]

The Commission decides that the quantitative conditions are met, thereby justifying its decision. This article does not aim to challenge how the Commission has established that these thresholds are met. Instead, it focuses on the arguments that are disregarded by the Commission in relation to TikTok's status as a challenger in the Core Platform Service (CPS) for social media. ByteDance's submission on the numbers may not have been sufficient to escape regulation. However, their line of reasoning does build up to their arguments related to their lack of ecosystem power: ByteDance claims that TikTok does not have an 'unassailable' position like the other gatekeepers. Instead, its activities create competitive pressures on incumbent gatekeepers. In ByteDance's words: it is a challenger to the incumbents, not a gatekeeper of similar size and position.[12]

ByteDance puts forward seven arguments to support this position. First, it argues that TikTok does not have an (extensive) ecosystem of products surrounding it that ByteDance could leverage and does not benefit from significant network effects. In fact, ByteDance argues that the Digital Markets Act is intended to prevent improper ecosystem leverage by incumbents.[13] Unlike other incumbents, TikTok 'lacks the ability to set conditions and terms in a unilateral and detrimental manner for advertisers'.[14] In connection to this, TikTok's business model (which employs a content graph instead of a social graph) would be less sticky than other types of social media as it leads to less lock in for users according to ByteDance.[15] Second, ByteDance refers to the multi-homing behaviour of users, which would demonstrate the absence of lock-in effects.[16] Third, ByteDance argues that as a challenger, it invests in interoperability and facilitating multi-homing, seemingly to indicate that it is not attempting to lock-in users and advertisers so that they can engage in abusive practices. Fourth, ByteDance points to TikTok's smaller revenues and user base, with which they must compete with other incumbents for advertising revenues. Its total revenues as well as average revenue per users is much lower

[8] Art. 3 DMA sets the following quantitative thresholds The operator of a CPS is presumed to be a gatekeeper if it has (1) a turnover of over €7.5 billion or a market capitalization of over €75 billion; (2) 45 million active end-users or 10.000 active business users; and (3) if it has had this position for more than three consecutive years.

[9] Case 100040, ByteDance, par. 67–75.

[10] Ibid., par. 89–100.

[11] Ibid., par. 121, 122.

[12] Case 100040, Commission Decision in ByteDance, par. 110.

[13] Ibid., par. 102.

[14] Ibid., par. 102.

[15] Ibid., par. 102.

[16] Ibid., par. 103.

than that of other incumbent gatekeepers with ad-centric business models.[17] They also charge lower prices for their advertisement services.[18] Sixth, TikTok faces heavy competition by better positioned incumbents which are emulating the services it offers on it TikTok platform.[19] Seventh, TikTok offers limited services related to social networking for its business users to reach users and TikTok's offer is limited compared with its competitors in this area.[20]

ByteDance argues that, based on its position compared with competitors and the competitive dynamics of the markets in which it operates, it does not enjoy an entrenched and durable position. Its position is not 'unassailable' as it does not enjoy the same advantages related to an expansive ecosystem like Meta and Alphabet.[21] Instead, it offers a single service in the Union without any ability to leverage its position across services. In contrast, its rivals entrench their position across different online services by leveraging their (far superior) user bases. ByteDance faces significant challenges to TikTok's position in its core platform services as undertakings with more elaborate ecosystems emulate their functionalities and are able to leverage their userbase into these activities, allowing them to achieve numbers almost instantly in a manner that took TikTok years to build.[22] ByteDance submits that in this role of challenger, where it faces competition from incumbents with elaborate multi-product ecosystems, it cannot be seen simultaneously as a gatekeeper.[23]

ByteDance submits that, in order to live up to the objectives pursued through the DMA, the Commission should focus on creating a level playing field for challengers such as TikTok. To that effect, the DMA should reduce incumbents' ability to leverage their powerful ecosystems, including the requirement to seek end user consent or separate user data between different services; prohibit self-preferencing, and create lower barriers to switch between competing services.[24] Instead, this application of the DMA would raise TikTok's compliance costs and reduce their chances to contest the incumbent gatekeeper, thereby reducing contestability.[25]

The Commission rebuts ByteDance's complaints point by point but does not engage with arguments on ecosystem competition. Instead, it states that it only has to take into account the scale and size of the respective core platform service and that it is 'irrelevant for the purpose of ByteDance's own gateway position whether other undertakings have ecosystems and are vertically integrated'.[26] This means that the Commission will not look at the competitive position of the conglomerates of others designated gatekeeper. Furthermore, the Commission will not look at the size of the ecosystem of ByteDance itself, referring to the text of the DMA, which states that '*some of those undertakings exercise control over whole platform ecosystems*'. The use of the word some implies that there are also gatekeepers without control over platform ecosystems, and thus the DMA is applicable to TikTok.[27] Finally, the Commission states that

[17] Nooren and others (2018), Should We Regulate Digital Platforms? A New Framework for Evaluating Policy Options: Evaluating Policy Options for Digital Platforms' 10 Policy & Internet 264; Bourreau (n.d.), Some Economics of Digital Ecosystems (OECD 2020) Note for the OECD DAF/COMP/WD(2020)89; Van den Boom (2023), Regulating Competition in the Digital Network Industry—A Proposal for Progressive Ecosystem Regulation, *Dissertation Tilburg University*, p. 103–107, 195–199, 251–258 examines differences in ad-centric and product-centric business models for platforms and multi-product ecosystems.

[18] Case 100040, ByteDance, par. 102.

[19] Ibid., par. 107.

[20] Ibid., par. 108.

[21] Ibid., par. 107–110.

[22] Ibid., par. 109–110.

[23] Ibid., par. 111.

[24] Ibid., par. 113.

[25] Ibid., par. 114–119.

[26] Ibid., par. 128, 129.

[27] Ibid., par. 130.

ByteDance does actually operate an ecosystem of services, but that these are popular in China and have failed to gain relevance in the EU as of yet but does not explain the relevance of the non-European parts of the ecosystem for the assessment here.[28]

On the challenger defence itself, the Commission states that there is nothing precluding an undertaking from being both a challenger and a gatekeeper and reiterates that ByteDance meets the thresholds to be considered the latter.[29] The Commission dismisses the points raised by ByteDance on the possible benefits it brings as a challenger without a substantive assessment. ByteDance's arguments are considered inconsequential as the existence of multi-homing between different gatekeeper platforms does not mean that ByteDance is not a gatekeeper. Similarly, the arguments raised by ByteDance on their investments into interoperability are dismissed as general and without indication towards a gatekeeper status.[30]

Finally, the Commission explains that even ByteDance's smaller scale compared with competitors within the CSP does not prevent them from being designated, and that relative scale based on revenues or revenue per user is not a good indicator as to whether the CPS is an important gateway, as different business models monetize differently. The Commission argues that based on absolute size, TikTok has achieved scale, and that it has around half the number of users when compared with Instagram.[31] This reasoning is peculiar as the Commission does not explain what relevant metrics to show that one is a challenger could be, whilst one would expect that in competition for the market, the challenger would have to build their userbases up to comparable levels as the incumbent, thus resulting in direct competition or even re-tipping the market.

B. The Court's Ruling in ByteDance v. Commission: Room for the Challenger Defence

The General Court's judgement is a landmark in DMA enforcement. Not only it is the first judgement related to substance of the DMA, but also it develops a number of important standards and practices. It clarifies definitional issues, establishes how the burden of proof is divided, and explains how the Commission can satisfactorily conduct the substantive assessment.

The judgement shows that there is a high burden of proof for the gatekeeper, affirming the idiosyncratic approach maintained in DMA enforcement and its departure from competition law. The court starts its reasoning on the question whether or not ByteDance operates an ecosystem of product by providing a working definition for the concept of the platform ecosystem.[32] It then explains that the existence of an ecosystem can constitute a relevant factor for the purpose of assessing whether the undertaking is a gatekeeper and whether the CPS is an important gateway, but that the absence of an ecosystem is insufficient to demonstrate this is not the case.[33] It is up to the gatekeeper to prove that the lack of ecosystem reduces their power over the gateway to the point that designation is not warranted.[34]

In assessing ByteDance's arguments, the court establishes that ByteDance insufficiently substantiates many of its arguments related to the lack of ecosystem power. First, they failed to prove that they do not—in fact—operate an ecosystem, as they did not submit documentation to explain why its activities in other areas did not result in the establishment of an ecosystem.[35]

[28] Ibid. par. 132.
[29] Ibid., par. 131, 133.
[30] Ibid-, par. 134–144.
[31] Ibid., par. 145–149.
[32] This definition is discussed in sec. 3, for now, see Case T-1077/23, ByteDance v. Commission, ECLI:EU:T:2024:478, judgement of July 17, 2024 par. 129–130.
[33] Ibid., par. 128–133.
[34] Ibid., par. 134 et seq.
[35] Ibid., par. 135–145.

Even if it were accepted that ByteDance does not operate an ecosystem it failed to provide evidence for any disadvantages associated with the lack of a platform ecosystem.[36] Thus, whilst leaving the door open for defences on the basis of ecosystem power, the court establishes that in the case of ByteDance the burden of proof is not met to invite a substantive assessment of these points.

Likewise, regarding entrenchment, the Commission cited ByteDance's significant and rapidly expanding user base to support its argument under Art. 3(1) DMA. The court concurs that the user numbers and growth justify this presumption. ByteDance attempted to bring forward evidence showing that their total market share in online social networking and video-sharing was relatively small. However, as this evidence was brought forward after the administrative procedure, this was no longer admissible according to the court.[37] Other arguments, related to their relative scale compared with Meta's online social networking platforms and their revenue per user did not hold as ByteDance failed to explain how this indicates a lack of gatekeeper power within their platform operations.[38] On their arguments related to investments in interoperability and multi-homing, the court again decided that ByteDance had failed to meet the evidentiary requirements to 'manifestly call into question' the Commission's findings. ByteDance has provided evidence related to the number of users that multi-home, but not the intensity of multi-homing. The latter would be more important to determine the actual lack of importance of TikTok as a gateway.[39]

Finally, the court rules that looking at TikTok's user numbers, growth, and the intensity of the use of their platforms, there is a reasonable presumption created by the Commission that ByteDance has gatekeeper power and that it is entrenched. When—like ByteDance—the quantitative thresholds are exceeded by a vast margin, and there is linear and sustainable growth for the platform, there is indeed nothing that would preclude the platform operator from being considered both a challenger and a gatekeeper.[40] However, the court does also not preclude firms that are considered for designation to raise the challenger defence. The court, in their assessment, confirms that considerations on the relevance of the platform ecosystem are valid, that one can bring forward evidence on the relative size of the platform operations when compared with other incumbents and competitors, and that the velocity and sustainability of growth can be considerations as to whether an undertaking is entrenched or not. We now know however that the gatekeeper must convincingly prove that those considerations are relevant.

In some instances, ByteDance did win arguments in appeal, however without impact on the validity of the decision. The court found that the Commission erred in law in two instances. First, when the Commission argued it was irrelevant where revenue is generated, be it in the EEA or China. The court noted that it is relevant if revenue is generated in the EEA and that this cannot be dismissed by the Commission. However, as the court considers market capitalization and revenue as alternative conditions, and ByteDance is considered to have a fair market value of over €75 billion, this did not affect the final decision.[41] The second instance is related to ByteDance's arguments on their rights of defence. ByteDance argued that the Commission had infringed their rights to defence by creating—first—the impression that arguments related to the relative scale of TikTok in comparison to all competitors—rather than just Meta's services—would not be determinative of gatekeeper status. Second, the Commission did not clarify during the administrative proceedings that it did not accept that ByteDance did not operate an

[36] Ibid., par. 146–162.
[37] Ibid., par. 222–235.
[38] Ibid., par. 236–285.
[39] Ibid., par. 171–215.
[40] Ibid., par. 286–320.
[41] Ibid., par 80–118.

ecosystem, but in fact believed that they did operate an ecosystem. It simply dismissed this claim as irrelevant. Here, the court found that the Commission did create a so-called irregularity in the treatment of ByteDance's defence. However, the ByteDance has not shown that it would be able to better defend itself had there been no irregularity, and the court again finds that the decision can remain intact.[42]

C. The Future of the Challenger Defence

The ByteDance decision and judgement have developed the limiting epitaphs for the challenger defence. Whilst it seems that such a defence is admissible, the burden of proof lies with the gatekeeper. According to the court, the Commission was right to observe that the absence of a platform ecosystem in itself is insufficient to argue that one should not be considered a gatekeeper. Moreover, being a challenger vis-à-vis other regulated gatekeepers does not preclude on from being regulated as a gatekeeper oneself.

At the same time, there seems to be room to take into account the relative position of a digital firm when compared with other gatekeepers and the relevant activity as a whole, and the ecosystem concept does find its way into the assessment of the Commission. The existence of ecosystems may also influence whether or not the platform concerned is an important gateway.

The court has provided their own definitions of ecosystems and some indication on the role of ecosystems and competition. However, the court has not gone as far as to explain how competition within or between ecosystems is considered to take place or how this type of competition may impact the designation of certain entities. Moreover, the Commission could do more to consider the role of platform ecosystems and ecosystem competition in the framework of the DMA pro-actively. Because the DMA is a legislative framework that pursues contestability, the existence of challengers should be integral to the design of the DMA. After all, one cannot contest the reigning champion without a challenge(r). In light of the importance of challengers and dynamic forms of indirect competition in achieving contestability, a more holistic approach to assessing such a status may be required. Moreover, the debate on whether one is a challenger or not currently takes place in the context of deciding whether an undertaking should be designated or not. There are however more nuanced possibilities to give consequence to the role of an undertaking as challenger in the context of the DMA. The upcoming sections first discuss the concept of ecosystems and ecosystem competition in more depth, before elaborating on the different ways to include the challenger defence in the DMA.

III. DEFINING DIFFERENT TYPES OF ECOSYSTEMS, ECOSYSTEM COMPETITION, AND POWER

This section defines several different concepts related to ecosystems. The idea of ecosystem competition is gaining attention due to the complex dynamics of competition in digital markets. The traditional concept of market power seems unable to capture the complexities of competition between platforms and digital business ecosystems.[43] By looking at the multi-actor and multi-product ecosystems in their totality, competition authorities can conduct their assessment with a more multidimensional concept of power. The ecosystem concept is increasingly used by the European Commission in their decisions, yet its use is often inconsistent, making it unclear how an ecosystem is understood, or to which type of ecosystem an argument refers.[44] There is a growing body of literature on the ecosystem concept that helps to clarify how ecosystems

[42] Ibid., par. 340–371.

[43] Lianos and Brunons Carballa-Schmichowski (2022), Coat of many colors—new concepts and metrics of economic power in competition law and economics, *Journal of Competition Law & Economics*, 18, 795–831, https://doi.org/10.1093/joclec/nhac002.

[44] See discussion in sec. 3.1.

and competition between them should be understood. An important development here is the identification of the multi-actor ecosystem, related to competition on a platform, and the multi-product ecosystem, which relates to competition between conglomerate digital firms.[45] The General Court has also provided its own working definition for the ecosystem concept. This definition is two-pronged. First, the court refers to the digital platform ecosystem in reference to recital 3, 32 and 64 DMA, explaining that—in essence—'a digital platform ecosystem may consist of one or more CPSs and other services connected to them, for example by means of technological links or interoperability; this is liable to exacerbate entry barriers for competitors of those undertakings and increase the cost of switching providers for end users, making it more difficult for existing or new market operators to compete with those undertakings or contest their position.' Second, the court explains that consequently, 'a digital "ecosystem" exists where several categories of suppliers, customers and consumers are brought together and interact within a platform, and where the products or services comprising that ecosystem may overlap with, or be connected to, each other in terms of their horizontal or vertical complementarity.'[46] This two-pronged definition by the court refers first to an ecosystem of interoperable products, and then to an ecosystem where value is co-generated between different parties. The upcoming section first looks into the literature on multi-actor and multi-product ecosystems to give more substance to these concepts and to see how the court's definition aligns with scholarship on the topic. Subsequently, the different types of ecosystem competition are explained in the context of distinguishing 'challengers' and 'incumbents'. Clarifying the functioning of the ecosystem and identifying the competitive dynamics of ecosystems helps to operationalize the concept in competition law enforcement and the enforcement of the DMA.[47]

A. Multi-Actor and Multi-Product Ecosystems

The ecosystem concept finds its roots in biology and has been adapted in management studies and computer sciences as well as other research areas.[48] It has more recently found relevance in the area of competition law, in particular in relation the functions of digital ecosystems. Here, the ecosystem concept may help to explain the co-generation of value between a central platform operator and third parties that rely on it, to capture efficiencies related to activities across different product markets, or in relation to the management and use of user data.[49] Early theorization on competition between digital conglomerates has highlighted the different rationales for conglomerate expansion in digital markets, as well as the possibility to use modularity, complementarity and economies of scope to expand across markets and leverage power from one market to another.[50] The ecosystem concept has been elaborated on in recent years in

[45] See Jacobides *et al.* (2018), Towards a theory of ecosystems, 39 *Strategic Management Journal* 2255; Lianos and Ivanov (2019), General Conceptual Framework, Ch. 4 of BRICS—Digital Era Competition: A BRICS View; Heidhues *et al.* (2024), A Theory of Digital Ecosystems, No 329, ECONtribute Discussion Papers Series, University of Bonn and University of Cologne; Fletcher (2020), Digital competition policy: Are ecosystems different?—Note by Amelia Fletcher for the OECD, DAF/COMP/WD(2020)96; Petit and Teece (2020), Taking Ecosystems Competition Seriously in the Digital Economy; Jacobides and Lianos (2021), Ecosystems and Competition Law in Theory and Practice 1 UCL Center for Law, Economics and Society Research Paper Series; Jenny (2021a), Competition law enforcement and regulation for digital ecosystems: understanding the issues, facing the challenges and moving forward 3 *Concurrences* 38; Lianos and Carballa-Schmichowski (2022); Hornung (2023). This article builds on the concepts developed and studied in the research conducted for my PhD dissertation, Van den Boom (2023), Regulating Competition in the Digital Network Industry—A Proposal for Progressive Ecosystem Regulation, PhD Dissertation Tilburg University.

[46] Case T-1077/23, ByteDance v. Commission, ECLI:EU:T:2024:478, judgement of July 17, 2024, par. 129–129.

[47] Van den Boom (2023).

[48] Ibid., see also Pavlikakis and Tsihrintzis (2000), Ecosystem management: a review of a new concept and methodology, *Water Resources Management*; Tiwana (2013); Gawer and Cusumano (2014), Industry platforms and ecosystem innovation, *Journal of Product & Innovation Mana*gement; Shipilov and Gawer (2020), Integrating research on interorganizational networks and ecosystems 14 *Academy of Management Annals* 92 on the use of this concept in management studies.

[49] Van den Boom (2023); Hornung (2023).

[50] Bourreau and De Streel (2019), Digital Conglomerates and EU Competition Policy, ERN: Regulation (European).

attempt to define how we should define and understand digital ecosystems and their relationship to competition in digital markets, as well as how competition law can adapt to the existence of such ecosystems.[51]

Whilst literature on this topic is advancing, the ecosystem concept is still used inconsistently. For instance, the *Google/Fitbit* merger decision refers to ecosystems throughout the decision. Amongst others, it refers to the Android-, Google-, Fitbit-, Wear OS-, Apple-, and ad-tech ecosystem. In some instances, the ecosystem concept refers to all products operated by an entity. In other instances, it only refers to some of the products operated by one undertaking (the ad-tech ecosystem). In others, it refers to a platform and all complementary products, irrespective of whether they are offered by third parties of the platform operator themselves. The Commission argues that the merger would create 'a stronger ecosystem' by attracting new users, yet it does not specify which ecosystems are strengthened and what impact this would have on third parties within the ecosystem or other ecosystems.[52]

The CMA's market investigation into online services and advertising shows similar inconsistencies. When defining the importance of ecosystems, they refer to the ecosystems of complementary products and services developed by Google and Facebook. In other parts of the investigation, they refer to mobile ecosystems which consist of the products by the undertaking in question and those offered by third parties, advertising ecosystems which relate to different advertising technologies operated by the incumbent of Facebook ecosystem of apps.[53] Whilst use of the ecosystem concept is helpful in identifying competitive dynamics and effects related to certain behaviour that are otherwise hard to classify, it is important to clearly define what type of ecosystems are referred to. Distinguishing between a multi-actor and multi-product ecosystem helps to clarify how a confluence of these distinct ecosystems shapes the value offered on platforms such as mobile operating systems, app stores, or other online intermediation platforms. It also helps to understand what exactly is meant when one refers to, for instance, 'mobile' or 'app' ecosystems.[54]

The first distinction to be made here is that between a multi-actor and a multi-product ecosystem. In platform markets, the value of the platform is not determined by producing a certain output. Instead, its value is determined by its ability to intermediate between users on different sides of the market. The ecosystem of complementors co-creates value together with the platform operator and raise the value proposition of its platforms by competing, cooperating or entering into coopetition on the platform or with the platform operator.[55] These users, together with the platform, form the multi-actor ecosystem. The platform serves as a technology on which professional users can offer their services and compete with one another whilst the end-users gain access to use or consume the offered services and products.[56] The more the userbase on one side of the market thrives, the better the platform can serve the other side of the market. The value is thus co-generated by the platform and its users, and more competition on the professional side of the platform has a beneficial effect on the users at the other side of

[51] Jacobides *et al.* (2018), Towards a theory of ecosystems 39 *Strategic Management Journal* 2255; Jenny (2021b), Competition law and digital ecosystems: learning to walk before we run, *Industrial & Corporate Change*; Van den Boom and Samranchit (2024); Jacobides & Lianos (2021); Van den Boom (2023); Hornung (2023).

[52] Case M.9660, Google/Fitbit, C(2020) 9105 final (2020).

[53] Competition & Market Authority, Online platforms and digital advertising, Market study final report (2020).

[54] Jacobides & Lianos (2021).

[55] Ibid.

[56] See amongst others Tiwana (2013), Platform Ecosystems: Aligning Architecture, Governance, and Strategy (Morgan Kaufmann 2013); Hagiu and Wright (2015), Multi-sided platforms 43 *International Journal of Industrial Organization* 162; Hagiu and Wright (2019), Controlling vs. enabling 65 *Management Science* 577; Jacobides and Lianos (2021), Ecosystems and competition law in theory and practice, *Industrial and Corporate Change*, Volume 30, Issue 5, October 2021, Pages 1199–1229; Montero and Finger (2021), The Rise of the New Network Industries (Routledge); Montero and others (2019), Digital Platforms-The New Network Industries? How to Regulate Them? 21 *Network Industries Quarterly*; these authors recognize the role of the platform as the technology or infrastructure for competition and offering services by third parties.

the platform.[57] The multi-actor ecosystem can be thus be understood as 'the collective of third parties and a firm that operates one or more digital platforms, where these third parties offer complementary goods or services on, consume the goods or services offered by, or co-generate value with one or more of the platforms offered by that firm'.[58]

Aside from the multi-actor ecosystems, there are also multi-product ecosystems at play. Most undertakings that operate in digital markets are however not active on just one platform or in just one platform markets. Instead, it seems that digital undertakings often form digital conglomerations that are vertically, horizontally or diagonally related.[59] This expansion drift is stimulated by the modularity and informational nature of digital goods, as well as complementarity and economies of scope that exist between different digital products, which allows for rapid expansion across markets.[60] Platform operators may engage in on-platform expansion by integrating new services into their existing platforms, or cross platform expansion by developing new platforms. On-platform expansion is focused on growing or extracting more value from the existing multi-actor ecosystem, whilst cross-platform expansion helps to attract new users and to further strengthen the position of the ecosystem as a whole.[61] The ability of digital platforms to integrate new products and services easily, or to remove features from platforms, makes platform markets highly adaptive. Consequently, business models may change and the nature of the platform itself may be dynamic. On platform-expansion may mean that a social media platform transforms as to include financial services, a video-game platform, or exhibit characteristics of a digital marketplace. This makes the nature of platforms hard to capture if they are not viewed as an ecosystem that integrates a number of downstream services. These downstream services may be offered by the ecosystem operator, or by the third parties that participate in the multi-actor ecosystem.[62] The division of who offers the downstream services may also change over time, as the platform operator can vertically integrate a number of downstream activities. It has been observed that many ecosystem operators maintain an open early, closed late strategy, where they start acting less as the operator of a gateway and are more inclined to keep users within the ecosystem consisting of their proprietary goods.[63]

The multi-product ecosystem comprises all platforms and services offered by the ecosystem operator and should be understood as 'a collection of goods and services built around a digital platform or a group of digital platforms that exhibit synergies, for which one undertaking is able to exercise control on terms for activities such as determining compatibility, coordination and the setting of standards'. This collection of goods and services create synergies in the form of complementarities or economies of scope between one another and the digital platform(s) offered by the undertaking. 'These synergies can either be achieved by integrating these products and services into the offering of a platform operated by the undertaking, or by looser links such as the internal sharing of data, reliance on complementary technologies, or the possibility

[57] The mutually reinforcing positive effects of activities on multiple sides of the platform are generally attributed to indirect network effects but are also strengthened by the presence of data and supply side efficiencies. For an in-depth study of these effects see Van den Boom (2023), Ch. 3 and 4.

[58] Jacobides & Lianos (2021); Van den Boom (2023), p. 138–140

[59] See Gawer and Cusumano (n.d.), How Companies Become Platform Leaders 49 *MIT Sloan Management Review* 28; Bourreau *et al.* (2009), Modularity and Product Innovation in Digital Markets 6 Review of Network Economics; Bourreau M., De Streel A., Digital Conglomerates and EU Competition Policy, ERN: Regulation (European) (2019). Available at SSRN: https://ssrn.com/abstract=3350512 or http://dx.doi.org/10.2139/ssrn.3350512; Bourreau (2020).

[60] Ibid., see also Van den Boom and Samranchit (2021), Assessing the long run competitive effects of digital ecosystem mergers, *SSRN Electronic Journal* for an intuition on the importance of economies of scope in digital product markets.

[61] Mandrescu (2021), Tying and Bundling by Online Platforms—Distinguishing between Lawful Expansion Strategies and Anti-Competitive Practices 40 *Computer Law and Security Review* 1.

[62] Lianos and Carballa-Schmichowski (2022).

[63] Bostoen and Petit (2023), Platforms' Treacherous Turn, Network Law Review.

to leverage the installed base'.[64] This definition of the multi-product ecosystem shows that—unlike non-digital conglomerates—there are direct and indirect links between these markets that create incentives and efficiencies for expansion. In terms of efficiencies, complementarity and economies of scope in technologies, data, and shared user bases may facilitate rapid expansion. In terms of incentives, the creation of a multi-product ecosystem may be attractive or necessary to bolster one's position in competition between digital ecosystems.

The multi-actor ecosystem and multi-product ecosystem have distinct competitive dynamics, yet they are inextricably linked: the multi-product ecosystem consist of the platforms on which multi-actor ecosystems are built, as well as the upstream and downstream products and services offered by the ecosystem operator that competes with these third parties in the downstream markets. Thus, whilst there is often a confluence of the multi-actor and multi-product ecosystems, the interests of the ecosystem operator and third parties do not always align. A growing multi-product ecosystem may create new venues for third parties to offer their goods and services but may also mean that competition between them and the ecosystem operator intensifies. These nuances get lost when one simply speaks of a mobile ecosystem, or advertising ecosystem, as this may not reflect the balance of interests between the ecosystem operator and third parties. This balance exists as on the one hand, the business activities of third parties in the multi-actor ecosystem co-determine the value of a platform and the multi-product ecosystem as a whole. On the other hand, the complementors in the multi-actor ecosystem are dependent on the ecosystem operator and subjected to their terms and conditions, providing the ecosystem operator with the ability to vertically integrate and compete with them from an asymmetrical position of power.[65]

This conceptual clarification may help to understand where competition authorities can look for sources of power that allows the ecosystem operator to coerce third parties or competitors into accepting unfavourable terms and conditions when accessing the platform. Once the ecosystem operator is powerful enough, complementors may act under explicit or implicit threat of foreclosure and being replaced through vertical integration. Besides coercion, the ecosystem operator may also exert other forms of power over ecosystem operators, including processes-based-, resource dependence-, and positional power.[66] Competition in- and between ecosystems thus require a different approach, and the use of different concepts, than competition between non-digital firms.[67]

Based on this review of the literature, the court's approach to delineating and defining ecosystems fits well with the literature, as the court refers to distinct yet related ecosystems of products and actors. However, the court has included both ideas related to the nature of ecosystems (i.e. they consist of interoperable services, multiple actors) and their competitive dynamics (increased barriers to entry, making it more difficult to contest).[68] This definition thus seems to focus inherently on the competitive harms related to the presence of digital ecosystems,

[64] This definition is proposed in Van den Boom (2023), on the basis of works by Jacobides and Lianos (2021); Petit and Teece (2022); Jacobides, et al. (2018); Crémer *et al.* (2019), Competition Policy for the Digital Era; Competition & Market Authority (2019); see also Van den Boom and Samranchit (2021), Assessing the Long Run Competitive Effects of Digital Ecosystem Mergers (December 10, 2020). Available at SSRN: https://ssrn.com/abstract=3746343 or http://dx.doi.org/10.2139/ssrn.3746343 for an in-depth analysis of the importance of economies of scope and complementarity in ecosystem competition.

[65] Van den Boom (2023); Bostoen and Petit (2023); Schweitzer (2021): Digital platforms as private legislators: A change of perspective for European 'platform regulation' (ZEuP 2019, 1); Lianos and Carballa-Schmichowski (2022).

[66] These types of power are discussed at length in BRICS Report (2019); Lianos and Carballa-Schmichowski (2022). The ecosystem operator can wield multiple types of power at once.

[67] For an in-depth study of this topic, see also van den Boom (2023), Ch. 4–8.

[68] Case T-1077/23, ByteDance v. Commission, ECLI:EU:T:2024:478, judgement of July 17, 2024, par. 128–129.

whilst not taking into account the possibility that ecosystems are beneficial for competition as they are operated by a challenger.[69]

B. Inter-Ecosystem, Intra-Ecosystem and Vertical Competition

Ecosystem competition is different from competition between firms and crosses the boundaries between horizontal and vertical competition. In fact, there are three distinct types of competition at play simultaneously. Competition between two ecosystems of products is inter-ecosystem competition. This competition occurs for example between Alphabet and Apple. The operators of these multi-product ecosystems compete for users—both business- and end-users—as a whole, leveraging their multi-product ecosystems and multi-actor ecosystems in competition with one another.[70]

Competition can happen directly, for instance by competing in the market for search engines horizontally with one another. It can also happen indirectly, by exuding competitive pressures on one another at the fringes of the ecosystem or by raising the uncertainty of a competing ecosystem operator.[71] Indirect competition—or nascent competition—is also a theory with a growing body of literature.[72] In light of indirect or dynamic competition, operators of digital ecosystems may experience competitive pressures even when there is no risk of direct entry into their core platform markets. Instead, the possibility that new technologies emerge, which could potentially disrupt their incumbency, creates a significant threat to the continued success and existence of the undertaking.[73] The concept of ecosystem power, which will be discussed shortly, relates to inter-ecosystem competition specifically.

Intra-ecosystem competition and vertical competition relate to competition on a platform operated by a digital undertaking. Intra-ecosystem competition refers to the competition between professional users *on* the platform. For instance, competition between app developers for similar apps in an app store, or between Uber drivers for passengers. Intra-ecosystem competition is valuable for the platform operator, as more competition on the professional side of the platform often means that there is more value for end-users (for instance in the case of sellers or service providers for end-users) or the platform itself (for instance in case of competition between advertisers).[74]

Vertical ecosystem competition refers to competition between the platform and its complementors in downstream markets. Examples can be found in Amazon offering its in-house products alongside the products offered by third parties, Apple and Google placing their own apps in their app marketplaces or Uber investing in self-driving cars.

Vertical competition within an ecosystem can take the shape of direct vertical competition, where the platform operator enters downstream markets and competes with complementors directly. Vertical integration can enhance the control that a gatekeeper has over their platform

[69] See Van den Boom (2023) Ch. 6–8 for extensive theorisation on ecosystem competition and the benefits of having entrant ecosystem operators that compete with incumbents.

[70] Jacobides & Lianos (2021).

[71] Petit (2020), Big Tech and the Digital Economy—the Moligopoly Scenario (1st edition, Oxford University Press) describes this type of competition as moligopoly competition.

[72] The idea of indirect and dynamic competition are not new concepts but have gained in relevance with the emergence of digital business models. See Sidak and Teece (2009), Dynamic Competition in Antitrust Law 5 *Journal of Competition Law & Economics* 581; Hemphill and Wu (2019), Nascent Competitors (2019) 168 University of Pennsylvania Law Review; Lécuyer (2020), Digital Conglomerates and Killer Acquisitions—A Discussion of the Competitive Effects of Start-up Acquisitions by Digital Platforms *Concurrences*; Digital Competition Expert Panel, Unlocking Digital Competition (2019); Petit and Teece (2020), Taking Ecosystems Competition Seriously in the Digital Economy (OECD 2020); Petit and Teece (2021), Innovating Big Tech Firms and Competition Policy: Favoring Dynamic over Static Competition Industrial and Corporate Change, Volume 30, Issue 5, Pages 1168–1198.

[73] Hemphill and Wu (2019), Nascent Competitors (2019) 168 University of Pennsylvania Law Review 1879; Petit (2020); Van den Boom (2023); Ezrachi and Stucke (2022), How Big-Tech Barons Smash Innovation—and How to Strike Back, *HarperCollins*; Lianos and Carballa-Schmichowski (2022).

[74] See Tiwana, Platform Ecosystems: Aligning Architecture, Governance, and Strategy (Morgan Kaufmann 2013); Jacobides and Lianos (2021); Van den Boom (2023).

and over its multi-actor ecosystem. Moreover, it allows the platform to extract a greater share of the generated value for itself. This type of vertical competition can create efficiencies (for instance by leveraging economies of scope and/or complementarities to offer products more cheaply, or to create better synergies for users between the platform and the downstream product). However, it also carries a risk of competitive problems, as the platform operator may enhance its ability and incentives to exclude certain professional users. The ability of a platform operator to discriminate, exclude, exploit or otherwise abuse the users which depend on it is known as gatekeeper power. The more locked in users of the platform are, and the less opportunities for multi-homing, the greater the ability of the platform operator to engage in abuses of its role as a gatekeeper.

There is also theorization on vertical competition that happens indirectly, at the ecosystem or value chain level. In theories related to ecosystem-level vertical competition, the structure or characteristics of the ecosystem and its value creation affect power and allocation between its members. In this situation, the dependency of parts of the network on a certain firm is so great that its removal would greatly affect the value of the rest of the network. This would allow the firm with a central position to wield certain power or influence over those that rely on it, as refusal to give access would significantly harm the downstream market.[75]

Whilst these different dimensions of power cannot be addressed in-depth here, the BRICS report 'towards the digital age' provides a comprehensive overview of different types and theories of vertical power, distinguishing between power related to resource dependence, positioning, bottlenecks, or power over processes. A better understanding of different types of vertical power and vertical competition—including the competitive pressures that are exerted on the gatekeeper by the bargaining power of downstream customers and indirect competitors—may help to understand sources of competitive pressure and to better understand how contestation of a gatekeeper is stimulated.[76]

C. Differentiating between Ecosystem Power and Gatekeeper Power

Digital ecosystem operators are able to exert power throughout and with their ecosystems. The central position of the ecosystem operator as the keystone firm in multi-product and multi-actor ecosystem(s), grants it forms of private regulatory power.[77] The ecosystem operator can develop corporate strategies where it uses this power to gain rents, foreclose (potential) competitors, and leverage its services into new markets. This article distinguishes between two interrelated types of power: gatekeeper power, which is the power that it wields over the complementors that depend on its platforms and services, and ecosystem power, which relates to its ability to expand its digital conglomerate in inter-ecosystem competition.

Gatekeeper power has been discussed extensively in literature and is the focus of the Digital Markets Act.[78] Gatekeeper power relates to the position of the platform operator in operating

[75] Lianos and Carballa-Schmichowski (2022) theorize on this form of vertical ecosystem or value-chain competition extensively, p. 820 et seq.

[76] Lianos and Ivanov (2019), General Conceptual Framework, Ch. 4 of BRICS—Digital Era Competition: A BRICS View, p. 202 et seq, p. 353 in reference to Carbala and Lianos, Vertical Power: Theory and Metrics (forth. CLES Research Paper Series, 2019); see also Lianos and Carballa-Schmichowski (2022); Ioannis Lianos, Klaas Hendrik Eller & Tobias Kleinschmitt, Towards a Legal Theory of Digital Ecosystems, CLES Research Paper Series 2/2024.

[77] Lianos, Eller and Kleinschmitt (2024), p. 13 et seq.

[78] See amongst others Ezrachi and Stucke (2016), Virtual Competition, *Harvard University Press*; Podszun (2019), Digital ecosystems, decision-making, competition and consumers—On the value of autonomy for competition, IO Regulation; Crémer *et al.* (2019), Competition Policy for the Digital Era; Bourreau M., De Streel A., Digital Conglomerates and EU Competition Policy, ERN: Regulation (European) (2019). Available at SSRN: https://ssrn.com/abstract=3350512 or http://dx.doi.org/10.2139/ssrn.3350512; European Parliament (2020), Regulating digital gatekeepers Background on the future digital markets act, Briefing; Geradin, D. (2021). What Is a Digital Gatekeeper? Which Platforms Should Be Captured by the EC Proposal for a Digital Market Act? LSN: Miscellaneous Consumer Matters; Vezzoso (n.d.), The Dawn of Pro-Competition Data Regulation for Gatekeepers in the EU, *European Competition Journal*, 17(2), 391–406. https://doi.org/10.1080/17441056.2021.1907080; Cappai and Colangelo (2021), Taming Digital Gatekeepers: The 'More Regulatory Approach' to Antitrust Law, *41 Computer Law and Security Review*; Heike Schweitzer, The Art to Make Gatekeeper Positions

an important gateway where business users and end users can connect with one another. As the platform serves as the technology where business users can offer their services and compete with one another for the commerce of end-users, the platform operator is able to set the terms and conditions for offering one's services or products, competing, and purchasing these services or products through the platform. Gatekeeper power grows as users become more dependent on the platform. Gatekeeper power grows as users become more locked in. This may relate to a lack of multi-homing, for instance due to natural single-homing or a lack of alternatives. Once users have become locked in with the platform, the platform operator is able to set increasingly exploitative terms and conditions for the use of the platform and engage in unfair behaviour towards its users.[79]

Whilst gatekeeper power is well studied, the concept of ecosystem power is less developed. I broadly define ecosystem power as 'the ability to leverage one's position in—and from—its occupied markets to capture new markets through strategic behaviour in one's multi-actor and/or multi-product ecosystem.'[80] Ecosystem power should be considered as a form of non-structural cross-market power. The power to behave independently from customers and competitors is not derived from the position of the undertaking in one market, or for one important gateway. Instead, it is derived from its position across a variety of product markets and platforms, which allows the platform operator to leverage its power and user base from one market to another, and to insulate its core platforms from competition.[81]

By leveraging the multi-actor ecosystem(s) related to its existing platforms and products, the ecosystem operator is able to expand aggressively into new markets. One example of such leveraging is emulation as described by ByteDance in its notification under the DMA: ecosystem operators copy the service offered by a challenger but are able to grow much faster in this market by creating links with their existing multi-product ecosystem.[82] After capturing a position in the new product or platform market, or to further entrench itself in its existing core markets, the ecosystem operator can use its multi-product ecosystem to suppress actual and potential competition.[83] By pre-emptively entering into emerging markets, ecosystem operators are able to suppress potential disruption in the markets where they are the incumbent. The entry of the largest ecosystem operators into cloud services, voice-based search, virtual reality, and Artificial Intelligence allow them to steer innovative efforts towards innovation that sustains their existing business models, rather than disrupt it.[84] Moreover, entry into strategic markets such as Cloud services helps to increase the dependence of potentially threatening third parties on the incumbent's ecosystem, helping to entrench them.[85] By suppressing potential disruption and anchoring their core platform services, the ecosystem operators reduce the risk of disruption and thereby reduce their competitive uncertainty.[86] Whilst incumbents can use their ecosystem power to entrench their position, ecosystem power developed by challengers may also be key

Contestable and the Challenge to Know What Is Fair: A Discussion of the Digital Markets Act Proposal, 3 *ZEuP* 35 (2021); Cabral *et al.* (2021), The EU Digital Markets Act: A Report from a Panel of Economic Experts (Publications Office 2021); Monti (2021), The Digital Markets Act—Improving Its Institutional Design 5 *European Competition and Regulatory Law Review* 90; Tombal (2022), Ensuring Contestability and Fairness in Digital Markets through Regulation: A Comparative Analysis of the EU, UK and US Approaches, *European Competition Journal* 1; OECD, Ex Ante Regulation and Competition in Digital Markets (2021).

79 Ibid.

80 Van den Boom (2023), p. 248–255; Heidhues *et al.* (2024) also discuss the cross-leveraging power of ecosystems, which allows them to steer users towards their own services and access points.

81 Van den Boom (2023), Ch. 6.

82 See also Bourreau (2019); Mandrescu (2020); Van den Boom (2023); Hornung (2023).

83 See ACCC, Digital Platform Inquiry (2019); Furman Report (2019)

84 Ezrachi and Stucke (2022); Van den Boom (2023)

85 For instance, Netflix relies on Amazon Web Services to provide its services; see AWS, Netflix Case Study (2016); Van den Boom (2023)

86 See Petit (2020) for the importance of uncertainty in stimulating moligopoly competition.

to contestability. By growing its multi-product ecosystem, and leveraging economies of scope, complementarities and data, a challenger may be able to overcome the barriers to entry raised by the incumbent in certain markets.[87]

Ecosystem power may be exerted through tying and bundling, the fusing of networks, creating or strengthening the links between different products and services offered through the ecosystem, or by denying compatibility and interoperability.[88] Ecosystem power is not measured by the presence of gatekeeper power in operating a platform, nor is it related to market power. Instead, it relates to the cross-market power of an undertaking, which allows it to leverage its position from the entirety of its multi-product ecosystem (i.e. its entire collection of products and services) into new markets and to leverage one's multi-actor ecosystem from one product to another.[89] Whilst ecosystem power differs from gatekeeper power conceptually, the presence of gatekeeper power strengthens ecosystem power and vice versa.

Gatekeeper power and ecosystem power, much like inter-ecosystem competition and intra-ecosystem competition, are intrinsically linked. A gatekeeper which is deeply entrenched in its platform market has the ability to squeeze their users, whilst a platform operator which faces competitive challenges will have less incentives and abilities to squeeze their userbase. After all, if users have the ability to leave the platform in case of exploitative of abusive behaviour, the platform may drive their multi-actor ecosystem into the hands of their competitor. If there is no alternative for the ecosystem offered by the incumbent ecosystem operator, users cannot leave. In many instances, the durability of the gatekeeper power is determined by the existence of competing ecosystems (and related possibilities for multi-homing or switching). Even if the competing ecosystem operator does not compete horizontally in the same platform market, the uncertainty related to the existence of a competitor that *could* enter reduces the ability and incentive of the platform operator to abuse their gatekeeper power.[90] Conversely, a platform operator with strong gatekeeper power is better able to leverage their userbase from one platform to another, thereby strengthening its ecosystem power.[91] When users are dependent on the platform, single-homing is likely due to the nature of the platform, and switching would be paired with fiscal or reputational losses, the gatekeeper is able to set more exploitative terms and conditions. One of these conditions could be to provide excessive amounts of personal and non-personal data, the mandatory use of related applications or platforms (such as in-app-payment systems), or prohibitions to distribute goods and services through other platforms. The gatekeeper can use this power to foreclose potential rivals in adjacent markets, thereby strengthening their power in the core market and overall ecosystem power.

The theory of harm related to ecosystem power differs from theories of harm related to gatekeeper power. Rather than abusing one's position as a gatekeeper, foreclosure through ecosystem power often happens more subtly, as the foreclosure happens by leveraging from a number of connected markets by creating linkages between the multi-product ecosystem and the entered market. Moreover, the expansive ecosystem is often paired with efficiencies.[92] As such, it is difficult to impose ex ante rules related specifically to cross-market power, especially rules that are self-executing like the DMA. It is therefore of vital importance to establish proper procedures to define ecosystems and to assess competition between ecosystems. If the

[87] This is discussed extensively in Van den Boom (2023), where I discuss phases of ecosystem competition in relation to the ability of an entrant to challenge an incumbent by growing its multi-product ecosystem.
[88] I provide a more extensive definition and explanation of ecosystem power in Van den Boom (2023), p. 248–255.
[89] Ibid.
[90] See Petit (2020); Crémer et al (2023), p. 994.
[91] Van den Boom (2023) elaborates on this idea extensively.
[92] See Heidhues et al. (2024); Van den Boom (2023); Hornung (2024); Van den Boom and Samranchit (2022).

ecosystem concept is properly used to create an understanding on which types of power are held by which firms, the distinction between challengers and incumbents and the concept of ecosystem power can be operationalized in a consistent and practicable manner.[93]

IV. DEFINING CHALLENGERS: INTRODUCING ECOSYSTEM COMPETITION INTO THE DMA

This section discusses how introducing an assessment of ecosystem competition and of the possible role of a firm as a challenger to the regulated gatekeepers is warranted under the DMA can aid the objectives of pursuing fairness and contestability. Subsequently, it reflects on how the Commission currently uses the ecosystem concept in designation decisions. Finally, it discusses how the identified conditions can help to develop a structured and consistent approach to assessing ecosystem power in decision-making by the Commission.

A. Why Assessing Ecosystem Power Is Warranted under the DMA

In the ByteDance case, the Commission asserted that it does not need to consider a firm's ecosystem competitiveness when making designations, as the DMA focuses on gatekeeper power, not ecosystem power. However, this article argues that evaluating ecosystem competition and the relative strength of different firms' ecosystems is important for achieving the DMA's goals of contestability and fairness.

In recital 32 DMA, the Commission states that contestability should relate 'to the ability of undertakings to effectively overcome barriers to entry and expansion and challenge the gatekeeper on the merits of their products and services'. Contestability is related to economic characteristics underpinning digital business models, including high barriers to entry or exit, such as high investment costs which cannot be easily recouped, as well as the requirement to collect large bodies of data. The DMA should therefore address and ban practices that are liable to increase barriers to entry or expansion and impose obligations on gatekeepers that lower those barriers. The obligations should also address situations where the position of the gatekeeper is sufficiently entrenched that inter-platform competition is not possible in the short-term, meaning that intra-platform competition needs to be created or increased.[94]

The DMA elaborates on the sources of these high entry barriers, and explains how contestability may be undermined through a number of factors: strong network effects, an ability to connect many business users with many end users through the multi-sidedness of these services, a significant degree of dependence of both business users and end users, lock-in effects, a lack of multi-homing for the same purpose by end users, vertical integration, and data driven-advantages.[95] These characteristics, especially when combined with unfair practices, may create particularly weak contestability when gatekeepers are entrenched.[96]

The previous section has highlighted how ecosystem power and gatekeeper power are linked to one another: weak inter-ecosystem competition may strengthen the gatekeeper power held by incumbents, as there are no alternatives available for users. Conversely, the emergence of challengers in inter-ecosystem competition would create alternative venues for business- and end-users, thereby decreasing their dependence on the incumbent's platforms and ecosystems. As users switch from the ecosystem of the incumbent to that of the challenger—or start multi-homing—this helps to lower entry barriers for everyone as the gap between incumbent and

[93] See on this topic also the analysis of phases of ecosystem competition in Van den Boom (2023), Ch. 7. Here, it is argued that capturing a platform market and establishing oneself as a gatekeeper may be the first step in developing a multi-product ecosystem that is actually able to compete as efficiently and contest incumbent ecosystem operators.

[94] Rec. 3, 32 DMA; see also Podszun (2024), p. 22, 77.

[95] Rec. 2, 3 DMA.

[96] Rec. 6, 7 DMA.

challenger becomes smaller in terms of network effects, lock-in, and the data-driven advantages.[97]

For users to truly benefit from the threat of contestation, challengers are a necessity. It is possible—even likely—that there are several incumbents present in one market at any given time. However, as the ecosystem power of incumbents is strong, the presence of several incumbents may lead to market saturation instead of intense competition. After OpenAI successfully launched its AI-driven large language model ChatGPT, the incumbent operators of digital ecosystems quickly followed suit.[98] However, one can question whether the stronger ecosystem operators intend to compete on the merits, or if they use their powerful position to steer users away from potentially disruptive AI applications towards their own. Apple recently announced that it would not introduce its AI services in the EU due to its obligations under the DMA. This was taken by Commission Vestager as a signal that Apple is not able to compete on the merits or introduce their services in a way that enable competition, rather than prevent it.[99] The launch of new products by incumbents to occupy possibly disruptive markets has been seen in the past, including in the markets for virtual reality, voice assistants, and mobile operating systems. Whilst this type of competition brings new products and services in the short-term, it rarely leads to intense competition or disruptive innovation in the long term.[100]

Now, with the DMA, it becomes possible to protect emerging challengers when they introduce new and disruptive digital technologies in competition with incumbent ecosystem operators. A prerequisite of such contestation is however that the challenger is granted the space to capture a platform market and to secure its competitive position to protect itself from challenges by entrants. If they have insufficient security, they may opt for a safer route of being acquired (partly) by Big Tech operators, as they otherwise face a threat of potential foreclosure in light of asymmetrical competition with incumbents.[101] Incumbents are able to steer users in multiple ways by using their entire multi-product ecosystem and leveraging their multi-actor ecosystems.[102] The multi-product ecosystem is an important tool held by the incumbent to thwart possible contestation. As such, promoting effective contestability requires an assessment of ecosystem competition and ecosystem power.[103]

Not only does capturing steering behaviour and other possible abuses of ecosystem power help to promote contestability, but it also promotes the objective of fairness. Firstly, it helps to combat unfair practices as mentioned in the DMA. Secondly, following recital 34 DMA, fairness and contestability are inextricably linked. Any behaviour that undermines contestability should be considered unfair, and the market should be fair to remain contestable.[104] This invites an assessment of behaviour that happens in the broader ecosystem if it may diminish contestability

[97] Crémer *et al.* (2019), Competition Policy for the Digital Era; see also Prat and Valletti (2022), Attention Oligopoly, *American Economic Journal*: *Microeconomics* vol. **14**, no. 3.

[98] Heaven (2023), The open-source AI boom is built on Big Tech's handouts. How long will it last? *MIT Technology Review*.

[99] Margrethe Vestager, Speech at Forum Europa of 27 June 2024, hr. 1 m. 17 and further, New Economy Forum.

[100] See Van den Boom (2023).

[101] There have been some high-profile acquisitions in the past, for instance the acquisition of Twitch by Amazon, YouTube by Alphabet, WhatsApp by Meta, and LinkedIn by Microsoft. More recently, Microsoft purchased a large stake in OpenAI. Firms that are not acquired tend to face heavy competition from incumbent ecosystems, leading to antitrust complaints by Spotify, Slack, and a variety of vertical search engine providers. See Slack Files EU (2024) Competition Complaint Against Microsoft, online, last edited on June 25, 2024; see https://slack.com/intl/en-gb/blog/news/slack-files-eu-competition-complaint-against-microsoft; see also Gittleson (n.d.), Amazon buys video-game streaming site Twitch (BBC, 25 August 2014); Van den Boom and Samranchit (2022); The Associated Press, Google Buys YouTube for 1.65 billion (NBC News, August 9, 2006).

[102] The European Commission has recently initiated its investigation into Microsoft Teams. Here, Slack's complaint states that Microsoft steered users by tying Microsoft Teams with its other Office services, and that Microsoft steers users through its position as the OS operator. See European Commission (n.d.), Antitrust: Commission opens investigation into possible anticompetitive practices by Microsoft regarding Teams, Press Release of July 27, 2023; see Slack (2024).

[103] See Ezrachi and Stucke (2022).

[104] Crémer *et al.* (2023), Fairness and Contestability in the Digital Markets Act, 40 *Yale Journal on Regulation* 973, pp. 973–1012.

and raises the question whether regulating a challenger too early may provide an undeserved advantage to the more powerful incumbents.

B. ByteDance's Arguments in Light of Ecosystem Competition: Challengers for Effective Contestability?

ByteDance's arguments should be understood in light of this question: when does an undertaking receive a fair assessment? Is it sufficient to establish that an undertaking meets the quantitative criteria to be designated as a gatekeeper, or should we establish the position of the ecosystem(s) operated by this undertaking relative to those of other regulated gatekeepers, so that we can establish whether their entry is pro- or anti-competitive? By relying solely on quantitative criteria, without looking at the actual or potential competitive pressures exerted by one undertaking towards another, the designation of a challenger with gatekeeper status under the DMA may in fact strengthen the advantageous position of the incumbent. Rather than creating a level the playing field, this could lead to further asymmetries in power between the regulated entities.[105] It is debatable whether the one-size fits all approach, which is applied in many facets of the DMA, does justice to the economic realities of competition in digital markets, the principles of fairness, and if it is able to establish a so-called 'level playing field'.[106]

Following the concept of contestability provided in the DMA, the application of the DMA should help undertakings to effectively overcome barriers to entry and expansion and allow them to challenge existing gatekeepers. The word *effectively* (emphasis added), indicates that the assessment conducted by the Commission should reflect the economic realities surrounding the designated firm. Currently, it remains unclear what is meant in the DMA with effectiveness in relation to contestability, as this must yet be defined under the DMA.[107] These early stages of implementation and enforcement may be used to explore and define what effective contestability means and how the DMA attempts to achieve it. As such, an economic analysis of the position of the gatekeepers, as well as the impact of designating a party and enforcing the DMA, is not only required to determine the actual effects on contestability of such a designation, but also warranted from the perspective of legal certainty and the legitimacy of the DMA by establishing how it intends to achieve its objectives.[108]

As contestability and fairness are inextricably linked, the regulator could promote effective contestability through a two-pronged strategy. The regulator should: (a) prohibit unfair practices that make entry and/or expansion difficult whilst at the same time hurting the welfare of users; and (b) proposing proactive procompetitive interventions that make entry of new platforms and expansion of small ones easier.[109] The purpose of such a two-pronged strategy is to stimulate competition for the market, competition in the market, or both.

Entrants into digital platform markets generally face a range of barriers to entry as they have to overcome the chicken-and-egg problem to create scale and reach critical mass.[110] Entry is even more complicated when there are already established incumbents. These challenges are

[105] See Van den Boom (2023), Ch. 5–9.

[106] Schweitzer (2021), p. 28 also describes the one-size-fits-all approach as a striking choice, but in the context of imposing *all* obligations on *all* gatekeepers irrespective of the type of platform that is regulated. The final version of the DMA has made some differentiation between platforms in this regard.

[107] The DMA does not relate to the concept of contestability as used when discussing contestable markets, yet its meaning seems broader. Because the DMA's notion of contestability is not tied to existing guiding principles of competition law, it serves a different or unique legal interest. It does not specify, delineate or limit this understanding of contestability, which may create uncertainty; see Budzinski and Mendelsohn (2022), Regulating Big Tech: From Competition Policy to Sector Regulation? Ilmenau Economics Discussion Papers, Vol. 27, No. 154, p. 18–19.

[108] Ibid., p. 19; Budzinski and Mendelsohn (2021) argue that without such clarifications, contestability and fairness risk becoming more like guiding principles, rather than objectives that are pursued directly.

[109] Crémer et al (2023), p. 994.

[110] See Crémer, Montjoye and Schweitzer (2019); Digital Competition Expert Panel (2019); Cappai and Colangelo (2021), Taming Digital Gatekeepers: The 'More Regulatory Approach' to Antitrust Law 41 *Computer Law and Security Review*;

part of the ratio behind introducing the DMA, as potential rivals to the incumbent often fail to achieve sufficient scale and are ultimately reduced to operating in the fringes. ByteDance has successfully entered into competition with the incumbent gatekeepers—be it Meta in social media or Alphabet in video-sharing—and now has an opportunity to actually contest the incumbents' position in these markets, and with the possibility to challenge more markets in the incumbents' ecosystems over time.

ByteDance has brought forward that its entry into competition with incumbents has increased users' ability to multi-home, provided new choices for consumers, that it invests in interoperability and ultimately reduces the lock-in faced by both business and end users. The Commission, in their rebuttal of ByteDance's defence, does not deny this. It is however considered irrelevant for their status as a gatekeeper in the CPS social media.[111] These observations are however relevant from the perspective of ecosystem competition, as it is considered that providing alternatives and options for users in inter-ecosystem competition tends to weaken gatekeeper power, and ultimately benefit users and promote contestability.

These observations raise significant questions on the desirability of designating TikTok as a gatekeeper in this stage of competition. In terms of competition, ByteDance has been able to successfully enter the market for social media (at least according to the Commission) and have been able to capture user bases on both sides of the market, they are able to expand their position, and they exert a significant competitive threat on the incumbent Meta. As noted by ByteDance, users are now able to multi-home between the TikTok platform and other social media platforms operated by Meta. It also offers advertising services at a lower price point. Thus, the presence of the TikTok platform enhances consumer choice for both end-users and professional users. These efficiencies of entry do not block application of the DMA. After all, TikTok meets the quantitative criteria required for designation. However, the question remains whether such a designation harms their chances of successfully challenging the incumbent Meta. TikTok notes that their compliance costs increase significantly if they have to adhere to the DMA, thereby skewing the balance of the challenge in the favour of Meta (or another incumbent).[112]

There is a risk of regulatory overreach in the DMA. Whilst regulating gatekeepers in relation to their platform may help to prevent unfair behaviour towards end-users, overregulation may lead to long-term harms to consumer welfare if it has the effect of reducing consumer choice by blocking attempts at contestation. Protecting user choice is of particular importance in oligopolistic competition, which characterizes digital competition.[113] The Commission's easy dismissal of ByteDance's arguments related to multi-homing and user choice shows that it has chosen not to make an in-depth economic assessment into the potential effects of multi-homing and increased choice. Looking at recital 32 DMA however, one must wonder whether the Commission should not assess if ByteDance is not competing with Meta on the merits, and what potential benefits this brings for users. The question whether ecosystem competition should influence the findings of the Commission should hinge on whether the firm for which designation is being considered is truly a challenger or if they simply act as a gatekeeper.

The approach of the General Court to defining ecosystems and setting the burdens of proof also raises questions. First, the idea that the presence of ecosystems inherently relates to high barriers to entry or a lack of contestability shows a one-sided focus. Ecosystems operated by incumbents may indeed create barriers to entry and limit contestability, but ecosystems operated by challengers may in fact help them to overcome these limitations to contestability

Marty and Warin (2021), 'Digital Platforms Information Concentration: From Keystone Players to Gatekeepers' CIRANO Working Papers 2020s-70 1; OECD, Ex Ante Regulation and Competition in Digital Markets (OECD 2021).

[111] Case DMA100014, ByteDance, par. 134–141.

[112] See Ibid.

[113] Schweitzer (2021).

and engage in cross-market expansion, thus overcoming entry barriers in certain markets.[114] Second, by maintaining a high burden of proof for gatekeepers to make credible these benefits to competition, the possible pro-competitive effects are at risk of being underassessed. This is understandable in light of the design of the DMA, which aims to speed up enforcement. However, a more pro-active role for the Commission, with a more nuanced and in-depth assessment of challengers and their ecosystems, may be beneficial for competition.

C. Towards a Legal Theory of Challengers: Identifying Relevant Conditions

Distinguishing between a challengers and incumbent is likely complicated in practice. Conceptually, one should be considered a challenger if their entry into competition promotes competition and fairness. Thus, a challenger should compete on the merits, directly or indirectly compete with incumbent gatekeepers, and its presence should lead to benefits for users, at least in the long-term.[115] Where one is not challenging the gatekeeper, be it directly or indirectly, they likely should be considered an incumbent gatekeeper in their market. The absence of indirect competition is hard to establish. After all, it is difficult to establish that a platform operator may not evolve into a competitor of one of the incumbent gatekeepers over time. Here, one could rely on the idea that gatekeeper power and ecosystem power are intrinsically linked by introducing an *a contrario* reasoning. If the firm behaves unfairly itself, by imposing unfair terms and conditions on its users to exploit its userbase or foreclose business users that depend on it, it should likely be considered an incumbent rather than a challenger. After all, if ecosystem power and gatekeeper power are linked, competitive threats through inter-ecosystem competition would also make abuses of gatekeeper power less likely.[116]

Whilst this provides a conceptual framework on when a firm should be considered a challenger or an incumbent, it does not yet provide clear conditions that can be used for a structured assessment by the Commission. On the basis of this reasoning, several conditions can be identified that the Commission can take into account when designating a new gatekeeper. These elements allow the Commission to assess both gatekeeper and ecosystem power and allow them to analyze whether the newly designated entity acts as a challenger that can (become able to) challenge incumbents, or if it is an incumbent in its own right.

1) The status of the platform operator within their platform market

This assessment relates to the gatekeeper power of the platform operator. This assessment already takes place as it is a core part of the designation process. The assessment of gatekeeper power is based on the quantitative presumptions laid out in Art. 3(2) DMA, the qualitative assessment, or in light of the rebuttal of the presumption by gatekeepers. The assessment of gatekeeper power sheds light on behaviour of the firm in relation to its multi-actor ecosystem(s), such as the conditions that it sets for intra-ecosystem competition and its activities in vertical ecosystem competition. Aside from being necessary to establish that the platform constitutes an important gateway, it may also provide necessary indications related to its power in inter-ecosystem competition. As discussed *supra*, abuses of gatekeeper power towards its constituents may also indicate that inter-ecosystem competition is weak, or that users are otherwise dependent on the platform to the point that the platform operator can impose unfair conditions.[117]

[114] See Hornung (2024) on the benefits of ecosystem orchestration.
[115] See also Heidhues et al. (2024), p. 5.
[116] See Van den Boom (2023).
[117] Van den Boom (2023), Lianos and Carballa-Schmichowski (2022).

2) The size of the multi-product ecosystem operated by the challenger

To assess the size of the multi-product ecosystem, the Commission would have to establish in broad terms which platforms, products, and services are included in the multi-product ecosystem, as well as the position of the ecosystem operator in terms of finances and users. This allows the Commission to determine whether the undertaking operates a significant digital conglomerate, with the ability to leverage users and resources from one market to another, or if it is still attempting to develop its multi-product ecosystem on the basis of the platform market for which designation is considered. Whilst having a small or no multi-product ecosystem should not preclude the designation with gatekeeper status, it may be taken into account when deciding whether a designation is appropriate, as well as its relative position assessed in the third step of the assessment.

3) The relative position of the multi-product ecosystem of the challenger compared with the multi-product ecosystem of incumbents

The relative position of the firm's ecosystem refers to its position when compared with other regulated incumbents. Here, the Commission can take into account whether the ecosystem operator is indeed smaller than the ecosystems it competes with. This process serves a similar purpose as the process of market definition in competition law proceedings: to establish whether one has market power, one has to hold at least a significant position in that market. In terms of ecosystem power, it is the question whether a firm that operates an ecosystem that is nowhere near the size or vastness of one or more incumbent ecosystem operators would actually have the ability to exert its power over its users, or if it has the power to leverage its position across markets in a meaningful way. After all, if the incumbent ecosystem operators are better positioned to leverage their products and services into the markets that the challenging firm wishes to enter, the latter would likely have to compete on the merits or by offering disruptive innovations.

4) Whether the challenger can be considered an actual or potential, direct or indirect, threat to the business models of incumbents

Here, the Commission can take into account whether the firm that is raising the 'challenger defence' is actually trying to compete directly or indirectly with the incumbent ecosystem operators. It could be assessed how the challenger's ecosystem is evolving and whether the changes in the ecosystem are attempts to enter into competition with the incumbents or to escape competition from incumbents. In both instances, it reflects an interaction between the relevant ecosystems. The purpose of such an assessment would be to determine whether the challenger brings a threat of entry into one of the core markets of the incumbent, or the threat of disruption of their business models through (disruptive) innovation. In deciding whether the challenger is attempting to enter into competition with a certain gatekeeper, assessing the type of platforms that it operates may be helpful, but not necessarily decisive.

In the TikTok designation decision, the question whether TikTok is a social media or video-sharing platform is a point of contention. How the platform is categorized could be indicative as to who the firm raising the challenger defence is competing with. However, in light of the adaptive nature of ecosystems and platform business models, it is hard to establish not only what the platform is now, but also what it will become in the (near) future.

The Commission could look at whether the incumbent ecosystem operators are trying to leverage their ecosystem power in competition with the entrant, for instance through emulation, by steering users away from the platforms of the challengers, or by engaging in other unfair behaviour. If the challenging firm has had to adapt its business model to threats by incumbents as to escape their competition, or if they have had to pivot after being pushed out of certain markets, this would indicate that they need to evolve to escape competition with or dependency

on the incumbent ecosystem operator. This could mean that they—at least at some point—where viewed as a threat by the incumbent gatekeeper and thus a potential challenger. Again, this requires a complex assessment, as the business model may have changed to the point where the firm that is to be designated no longer competing with the incumbent ecosystem but is in fact entrenched in its own niche platform market(s). The outcome of these assessments must ultimately be determined on a case-by-case basis.

Of course, there are many other factors that could be considered, the descriptions with each condition should only be seen as examples. The purpose of the conditions identified here is to provide some tools to create structure in the assessment of multi-actor and multi-purpose ecosystems, ecosystem competition, and the role of a firm as a challenger or incumbent. How these conditions are applied in practice, and the details of these categories, should be developed on a case-by-case basis. Assessing ecosystem competition is complex, and it is hard to develop hard rules related to a multimodal concept of power.[118] As a principle, the inclusion of this assessment should not hinder the effective enforcement of the DMA. Thus, this article suggests that the aim of the assessment should be to establish the functioning and competitive dynamics of the different ecosystems beyond a reasonable doubt, or even with high levels of certainty. Instead, it should lead to a faithful assessment of the possibility that there is competition on the merits at the inter-ecosystem level, and at the least address arguments brought forward by gatekeepers to be in this respect. Section 5 elaborates on how to include the assessment of ecosystem power in practice.

D. Assessing Ecosystem Competition in the DMA—Towards a Structured Approach

Identifying the relevant conditions as to determine whether an ecosystem operator should be considered a challenger or incumbent helps to create a more comprehensive overview of the competitive pressures they assert. Moreover, it helps to provide structure in using the ecosystem concept in the DMA. As noted *supra*, the term ecosystem is used inconsistently by the Commission across and within decisions. This is true for both competition law decisions and the designation decisions in the DMA. This section highlights how the Commission has used the ecosystem concept across designation decisions, why the inconsistent use of this concept leads to unpredictable outcomes, and why this may lead to suboptimal results in promoting contestability and fairness.

This section first looks at three other relevant designation decisions published after ByteDance's designation decision: *Samsung (Internet Browser)*[119] and *Microsoft (Bing, Edge & Ads)*,[120] and *Apple iPad OS*.[121] From this analysis, it is concluded that the Commission does look at the platform within the context of its ecosystem. However, it does so in an idiosyncratic way and without looking at whether the firm in question could exhibit competitive pressures on incumbents through inter-ecosystem competition. After briefly summarizing the three aforementioned decisions, the section discusses how the Commission's assessment of ecosystem competition could be completed by revisiting the ByteDance case.

In the *Samsung* case, the Commission decides not to designate Samsung's as a gatekeeper for its web browser. Whilst Samsung does meet the quantitative thresholds, the Commission finds that they have convincingly argued that they should not be designated in line with Art. 3(5) DMA. There are three relevant considerations: Samsung's internet browser (SIB) does not have scale, its total web traffic is very small when compared with competitors (3.67%

[118] See Lianos and Carballa-Schmichowski (2022).
[119] CASE DMA.100038 Samsung—Web Browser, C(2023) 6103 final, Decision of September 5, 2023.
[120] Cases DMA.100015, 100028, 100034, Microsoft Online Search Engines, Web Browsers, Online Advertising Services, Decision of February 12, 2024.
[121] CASE DMA.100047—Apple—iPadOS, C(2023) 6076 final, Decision of April 29, 2024.

versus Chrome's 60% and Safari's 20%), and—whilst recognizing that Samsung has a leading position in producing Android-based handhelds—the Commission considers that the 'specific circumstances of Samsung's ecosystem of services do not indicate that SIB would constitute an important gateway for business users to reach end users'.[122] With this phrasing, it seems that the prominence of a gatekeeper's ecosystem could be seen as an aggravating circumstance—to support the finding of being a gatekeeper—but that the undertaking may still escape designation if their position in the core platform service is weak (relative to other competitors).

This idea is affirmed in the *Microsoft* designation decisions published on February 2, 2024, several months after Samsung. Here, Microsoft argues that it does not categorize its collection of services as an ecosystem, and notes that it has not submitted anything related to such a term.[123] However, the Commission does explore Microsoft's ecosystem further, noting that Microsoft's collection of platforms (including CPS), products and services does in fact create a comprehensive ecosystem.[124] In this light, it mentions that the position of Microsoft Edge is strengthened through pre-installation and default pinning to the taskbar, and that Edge is strategic for directing traffic to the Bing Search engine.[125] The Commission also explores how Microsoft's ecosystem helps it to collect data, which may be relevant for its advertising business.[126] However, in spite of the existence of this elaborate ecosystem, the Commission still finds that Microsoft's position in the relevant gatekeeper markets is too small as to consider them important gateways. It appears that the existence of the ecosystem does not create 'significant advantages' in these areas.[127]

The ecosystem concept is most important in the designation decision *Apple (iPadOS),* issued on April 29 2024. Here, the Commission uses the existence of the Apple ecosystem to justify designation, even though the quantitative thresholds were not met. Whilst iPadOS had sufficient market capitalization and business users to meet the thresholds, it apparently had too few end-users to meet the third criterion. It is unclear how many end-users iPadOS is calculated to have, but it must still be a significant number looking at the iPad's success.[128] However, as the quantitative thresholds are not decisive the Commission looks at other indicators. Here, the Commission notes amongst other things that Apple appears to benefit from strong network effects derived from iPadOS as a part of Apple's ecosystem. As 'Apple's business model is built on an ecosystem of its operating systems and services which aims at connecting and integrating different categories of Apple devices to create a seamless end user experience.'[129] Related to this, Apple's ecosystem displays lock-in features, because users that wish to switch away from the iPadOS to another ecosystem will incur significant obstacles due to the linkages between products.[130] Finally, the conglomerate structure and vertical integration of Apple's business provides for opportunities for cross-subsidization, which support the position of its independent products.[131] In light of these ecosystem elements, consisting of complementarities combined with the scale of operations of iPadOS and the scope effects produced by Apple's ecosystem, the Commission observes that the cost of developing and maintaining iPadOS appears to be dependent only to a limited extent on the number of specific end and business

[122] CASE DMA.100038 Samsung, par. 33–35, 38–44.
[123] Cases DMA.100015, 100,028, 100,034, Microsoft, par. 19.
[124] Ibid., par. 61.
[125] Ibid., par.61–65.
[126] Ibid., par. 92–96.
[127] Ibid., par. 37, 68, 96.
[128] Curry and Statistics (2024), Business of Apps, February 20, 2024, online: https://www.businessofapps.com/data/apple-statistics/ reports that 61 million iPads have been sold in 2022 alone.
[129] CASE DMA.100047—Apple, par. 8.
[130] Ibid., par. 10.
[131] Ibid., par. 11.

users who use it, and can be spread over the large amount of devices sold and services provided by Apple.[132]

These three decisions highlight that there is a role for the ecosystem concept in assessing whether an undertaking should be designated despite not meeting the quantitative thresholds or despite the absence of scale. ByteDance on the other hand indicates that if the investigated entity's position within a single core platform service is strong and there is scale within the CPS, the absence of an ecosystem does not justify different treatment. From the viewpoint of consistency in analyzing cases, this distinction is remarkable. After all, it implies that the presence of a strong ecosystem is a relevant dimension of power in one direction (designating on the basis of ecosystem power), but not the other (taking the lack of ecosystem power into account as a justification). Moreover, the references to the positions of Chrome and Safari indicate that—at least within the assessment of the CPS in question—attention is paid to whether the investigated entity is an incumbent or a challenger, as smaller scale relative to competitors is an apparent consideration or justification.

To fully apply the conceptual framework as set out in sec. 3, some changes to the Commission's assessment would be required. At least if there is also the intention to promote the position of challengers on the basis of ecosystem competition. The first step, assessing gatekeeper power within the platform, would be largely the same. Here, the Commission can largely rely on the quantitative thresholds or other indicia collected for the qualitative assessment. The presence of an extensive ecosystem may be one of their considerations. In *iPadOS*, the Commission already reflects on the link between gatekeeper power and ecosystem power, by highlighting the benefits of cross-market network externalities, scope, complementarity, and the existence of lock-in effects. The Commission may still reflect on whether they want to include the absence of an ecosystem as a possible indicator of the absence of gatekeeper power.[133]

In terms of the second step, establishing the strength and position of the multi-product ecosystem, the Commission still takes a relatively narrow view. It looks at whether the ecosystem strengthens the position in the CPS market, but not how the position of the ecosystem as a whole impacts the entrenchment of the gatekeeper across its services. Consequently, gatekeepers with a large position in the gatekeeper market may not be as entrenched as the quantitative thresholds would indicate, especially if they are facing competitive threats from more entrenched or elaborate incumbents. Operators of a large ecosystem may use leveraging and ecosystem linkages to foreclose competitors operating at the fringes of the incumbent's multi-product ecosystem and likely allows them to foreclose potential threats.[134] It may therefore be the case that the ability to contest an incumbent is in fact dependent on the size of the multi-product ecosystem of the challenger: only ecosystems of equal size can compete on equal footing. This may be true for competition between specific platforms and their multi-actor ecosystems, as well as multi-product ecosystems. Newcomers such as Zoom or Slack, and even more established players such as Snapchat, have largely lost relevance despite their initial momentum in capturing a platform market and creating their multi-actor ecosystem.[135] Their functionalities have been emulated

[132] Ibid. par. 9.
[133] Case DMA.100047, Apple, par. 8–11.
[134] See Ch. 3; Van den Boom (2023), Ch 8; Ariel and Ezrachi (2023).
[135] Hoover (n.d.), The End of the Zoom Boom (Wired, February 8, 2023), online: https://www.wired.com/story/zoom-layoffs-future/.

and in large part replaced by Meta for the latter,[136] and Microsoft for the first undertakings.[137] I argue that one purpose of ex-ante regulation should be to protect these newcomers, exactly so that they can capture one of the relevant platform markets and develop their multi-product ecosystem. The DMA could embrace such a purpose through a more thorough assessment of ecosystems and competition between them.

In terms of the third step, establishing the relative position of the ecosystems of the challenger vis-à-vis the gatekeeper, the Commission could look more normatively if the investigated entity should be viewed as an incumbent or gatekeeper. If there are no challengers within the CPS, this would indicate that the investigated entity is an incumbent. After all, they are not challenging anyone. If the CPS is occupied by two or more gatekeepers, the Commission could assess the relative strength of these gatekeepers in their CPS, as well as their ecosystems, to determine whether one entity is challenging the incumbency of the other. This would depend on the asymmetry of their competitive positions in terms of occupied markets, access to finances, access to data, and other indicia.

Finally, the Commission could include the fourth proposed step in the analysis, determining whether the challenger is an actual or potential threat to the business model of the incumbent. This step seems to be missing currently. This article argues that in order to properly assess the nature of a platform, it may be very useful to consider to which incumbents the challenger may constitute a threat, and how it may do so. In its assessment, the Commission explains why it is possible to consider TikTok a social media platform, but it does not pay any attention to how it competes with Meta as the incumbent (although this is a relevant metric for the assessment, considering that the Commission relies on the fact that TikTok has half the users of Meta). If it is identified how the challenger competes with another incumbent in the same category of CPS, it can be decided whether the presence of the challenger leads to actual competition or whether two gatekeepers are operating in parallel. Moreover, it may provide an insight into how designating or not designating this entity impacts contestability. This also gives a clear argument as to why an undertaking is considered to be a video-sharing platform or a social media platform: if it poses a credible competitive threat to the first, it falls in the first category, if it poses a threat to the second, it falls in the latter. If it poses a competitive threat to both, the assessment as conducted by the Commission may lead to the decision on how to categorize it, but then at least the competitive dynamics are clarified. This may also be a reason not to designate the entity, as designating the entity as one type of platform may harm its chances to contest an incumbent in the other type of platform service (or both services).

The analysis and suggestions hereinabove suggest that the Commission does take into account three out of four steps of the conceptual framework provided in this article: it looks at the absolute position of the gatekeeper in its core platform market (quantitative thresholds and supporting indicia), it does consider the size and relevance of the multi-product ecosystem with respect to the investigated CPS, and it looks at the relative position of the gatekeeper vis-à-vis other gatekeepers. One may still wonder if the framing or scope of these investigations does justice to the actual competitive dynamics of ecosystem competition. The analysis conducted here suggests that a more elaborate view of the relevance of multi-product ecosystems could help the DMA better promote its objectives of fairness and especially contestability.

The fourth step does not yet seem present in the analysis. The analysis focuses on whether the investigated entity is still to be considered a gatekeeper, not whether it is able to challenge more entrenched incumbents. Especially not from the perspective of competition between

[136] Kantrowitz (n.d.), Snapchat was 'an existential threat' to Facebook—until an 18-year-old developer convinced Mark Zuckerberg to invest in Instagram Stories (Business Insider, April 7, 2024), online: https://www.businessinsider.com/how-developer-mark-zuckerberg-invented-instagram-stories-copied-snapchat-2020-4?international=true&r=US&IR=T.

[137] European Commission, Slack Files EU Competition Complaint Against Microsoft (2020), online: https://slack.com/blog/news/slack-files-eu-competition-complaint-against-microsoft.

ecosystems broadly, rather than competition *for* a platform market through contestation by a direct competitor. This is exemplified by the considerations surrounding web browsers: the Commission looks at the relatively small scale of SIB and Edge v. Chrome and Safari, the focus lies on the percentage of web traffic per browser, not about competitions between the ecosystems of products as a whole and possible indirect contestation.[138] Including this step in the assessment would also allow the Commission to look into the likelihood of contestation *for* a CPS indirectly, as a result of competition between ecosystems as a whole.[139]

This article argues that the four steps of the assessment can be included by expanding the assessments that already take place by looking at the multi-product ecosystem of the undertaking that is to be designated as well as their relative position towards other incumbents. Whilst it is true that such an assessment requires significantly more efforts from the Commission, the stage of designation is the best time to enter into such an in-depth assessment.

V. WAYS FORWARD TO INCLUDE THE DIMENSION OF ECOSYSTEM COMPETITION IN PRACTICE

This section highlights several outcomes, findings and recommendations with respect to the implementation and enforcement of the DMA. The section first discusses why the assessment as to whether an undertaking should be considered is best placed at the stage of designation. Subsequently, it is discussed *how* the Commission can take the ecosystem dimension into account, and the second section discusses what the effects could be of a finding that an entity is a 'challenger'.

A. Assessing Ecosystem Power at the Designation Stage—Striking a Balance between Accuracy and Speed

The DMA has explicitly stepped away from an effects-based case-by-case analysis regarding the behaviour of undertakings and the application of substantive obligations in articles 5, 6 and 7 DMA. Moreover, it has stepped away from our traditional understanding of market dominance and market definition as used in competition law. With this new approach, the DMA is no longer categorized as competition law. However, it can still be categorized as competition policy.[140]

A result of the unique nature of the DMA is that it is not bound by standards and thresholds developed through case law and laid down in soft law documents by the Commission. This facilitates the easy enforcement of the DMA and allows us to adopt new standards, such as a lower threshold for the finding of 'power' (in this case gatekeeper power rather than market power). However, this does not mean that application of the DMA should forego any kind of economic assessment, nor does it mean that standards developed in case law may still provide insights into pro- and anti-competitive behaviour. A purely quantitative presumption for a gatekeeper position is a bold move; thresholds in terms of turnover or market capitalization may be easily passed if the platform is held by a large parent company, and the presence of a large number of users may indicate network effects but does not necessarily indicate a lack of competitive discipline.[141]

[138] See note 102–107.

[139] See Van den Boom (2023); it would also give meaning to the concept of challenger. For instance, in the recent designation of Booking.com, it would be difficult to argue that Booking.com is a challenger towards any other regulated gatekeepers, as they arguably have incumbency within their niche: intermediating travel, see European Commission (n.d.), Commission Designates Booking as a gatekeeper and opens a market investigation into X, Press Release of May 13, 2024, online: https://ec.europa.eu/commission/presscorner/detail/fen/ip_24_2561. This situation differs from the designation of ByteDance, where competition between TikTok and other services, such as Meta's Instagram and Alphabet's YouTube, can be easily identified.

[140] Schweitzer (2021), p. 12, 17–19.

[141] Schweitzer (2021), p. 19.

The reliance on complicated economic assessments in competition law proceedings leads to lengthy and drawn-out procedures, which may have contributed to the (perceived) under-deterrence of competition law regarding unfair practices.[142] Economic assessment in the DMA should not be limited to merely checking whether the quantitative thresholds have been met, yet the role of economics should not be as extensive as in competition law proceedings.[143]

There is still an important role for economic assessments in the enforcement of the DMA. Economic thinking and analysis remain at the heart of the objectives of the DMA, whilst the design reflects a deliberate and reasonable intention to ensure clarity, speed, administrability, and enforceability.[144] Despite the role of economics in shaping the design of the DMA, the role of economics going forward in enforcing it are less obvious.[145]

There is therefore room in the DMA to conduct an economic assessment when designating a gatekeeper on the basis of qualitative assessments, in relation to the qualitative elements of gatekeeper power as defined in Art. 3(1) DMA, to determine in what type of core platform service the designated platform is and to determine which designated entities operate in the same core platform market.[146] The analysis of designation decisions in the previous section reflects that the Commission does take into account qualitative aspects and the role of ecosystems in the firms' rebuttal regarding the designation.[147] An assessment of ecosystem competition and ecosystem power could therefore be included, allowing the Commission to determine whether an undertaking is a challenger or incumbent.

Here, the existence of large incumbent ecosystem operators that compete with the challenger and indications that the incumbent firm engages in behaviour that may create barriers to entry with respect to the challenger, may lead to the conclusion that the position of the challenger is not entrenched, but that it is in fact engaging in inter-ecosystem competition. In fact, if the entrant is engaged in dynamic competition by innovating, expanding and offering new products in order to challenge the incumbent, this could lead to benefits for end users and innovation. Similarly, if users of the platform can use the services offered by other ecosystem operators as an alternative to those offered by the gatekeeper but choose not to due to price or quality differences, this may mean that the gateway is desirable but not necessarily as important as other gateways for users. In other words, establishing that the designated entity has weak ecosystem power may also indicate that they have limited ability to abuse their gatekeeper power.

Following recital 23, there is room for the Commission to assess the importance of the gateway platform and the *overall activities* of the digital undertaking. Such an analysis could include mapping or estimating the size of the multi-product ecosystem, at least to determine in broad lines whether the undertaking operates an extensive multi-product ecosystem and what the role of the core platform service is within that ecosystem.

The analysis of the nature of the core platform service, and how it is distinct from other platforms in the same category, may allow the Commission to get some sense on how the challenger will compete with incumbents and whether their entry constitutes an actual or potential threat to the business models of incumbents. If there is no direct competition, and the entry of the firm that is considered a potential gatekeeper does not provide clear indicators of an indirect competitive threat to an already regulated gatekeeper, it may be more easily justified to regulate the platform as they are not a direct challenger to an existing gatekeeper.

[142] Ibid., p. 4–9.
[143] Ibid., p. 9.
[144] Fletcher A., Crémer J., Heidhues P., Kimmelman G., Monti G., Podszun R., Schnitzer M., Scott Morton F. and De Streel A., The Effective use of Economics in the EU Digital Markets Act, *Journal of Competition Law & Economics* (2024), pp. 00, 1–19.
[145] Ibid., p. 3.
[146] Ibid., p. 9–11.
[147] Ibid., p. 9–11.

After all, neither the users of the platform or competition are served by leaving the platform unregulated. On the contrary, if the entry of the platform constitutes an actual or potential threat to incumbent ecosystem operators, both users and competition may be served by leaving the platform unregulated (or even protecting it from unfair practices by incumbent operators).[148] Whilst these reflections are rudimentary and theoretical, it does support the idea that there is nothing in the DMA that precludes the Commission from taking into account dimensions of inter-ecosystem competition in their economic assessment related to the designation of a new firm with gatekeeper status under the DMA. The upcoming subsection discusses that the Commission does assess the relevance of multi-product ecosystems in their designation decisions, to include dimensions of inter-ecosystem competition would then be a logical extension of this analysis.

Whilst this may require more efforts from the Commission in the process of designating undertakings, taking this effort may help to justify the overall design of the DMA. As intended with the DMA—there does not need to be a complex economic assessment in enforcing the self-executing obligations of the DMA. Here, clarity, speed of enforcement, administrability and enforceability should indeed receive priority.[149] After all, drawn out procedures would defeat the very purpose of the DMA. However, by taking more time for economic assessment in the designation phase, the Commission can be ensured that they are targeting the right entities with these interventions. Schweitzer has discussed the desirability of an efficiency defence.[150] The absence of such a defence, as well as the high standards used for requesting exemptions to these obligations, may be better justified if the Commission makes an extra effort in ensuring the correctness of their designation decisions and motivating why the designation is necessary and how it contributes to achieving the objectives of fairness and contestability.

B. How to Include an Assessment of Ecosystem Power in the Designation Procedure?

The Commission's focus on gatekeeper power, whilst ecosystem power plays an ancillary role, is a result of the design of the DMA, which relies on quantitative thresholds and a narrow scope of gatekeeper power to ease the complexity of analysis and enhance the speed of enforcement.[151] Assessing the effects on inter-ecosystem competition, and particularly (abuses of) ecosystem power, can be incredibly complex. If a requirement is imposed on the Commission to conduct an in-depth analysis into the size, positioning and competitive dynamics of all designated ecosystems, this may reduce the speed of enforcement.

There are several factors contributing to this complexity. Firstly, it requires a forward-looking assessment by the Commission on potential outcomes of competition. This is a difficult exercise and estimating competitive outcomes in dynamic markets may be particularly complex. As such, it is difficult to develop a solid case surrounding such scenarios, let alone to conduct an economic assessment that reflects such potential outcomes. Secondly, both the sources and effects of inter-ecosystem competition and ecosystem power are not limited to one single market. Instead, the Commission would have to consider a wide array of linked platform and product markets and try to discern the role these markets play in promoting or diminishing competition. It is hard to map all the relevant products, let alone theorize on their impact on competition between multiple expansive ecosystems. Thirdly, the multi-product ecosystem continually changes by adding new products or removing products from the ecosystem. Different products and platforms

[148] For an in-depth analysis of different phases and impacts of ecosystem competition, see Van den Boom (2023), Ch. 6–9

[149] Fletcher et al. (2024) for instance argue that economic assessment related to the self-executing obligations should be focused on ensuring proportionality and ensuring effective compliance to the obligations.

[150] Schweitzer (2021), p. 30.

[151] Podszun (2024), p. 69.

may be more or less connected with one another, and userbases may change their preferences. As platforms and digital products tend to change, a full assessment of such an ecosystem is unlikely to reflect realities, let alone over a longer period of time. An economic assessment of such a type would be akin to—and likely exceed—the complexity of economic assessments relied on in enforcing competition law. Thus, whilst the use of a full economic analysis of the existing ecosystems and competition between them would greatly enhance our understanding of competition between digital undertakings, it is likely unpractical.

There is however the possibility to include simpler assessments. A second manner to include the dimension is for the Commission to engage critically with arguments brought forward by the relevant parties, without dismissing their arguments on ecosystem power and ecosystem competition. This way the Commission can at least include some intuitions or arguments in their assessment *how* different incumbents compete with one another, what the effects of entry of one undertaking is on the position of incumbents (i.e. is there a competitive threat or not) and to explain why the size of the ecosystem of a designated undertaking is relevant or not in this assessment.

With this approach, the Commission does not have to develop scenarios on potential competitive threats and the ability and incentive of the incumbent to foreclose competition, but it can at least pay credence to TikTok's potential to increase competitive pressure on incumbents if it is able to enter and expand into the markets for social media and online advertising. It can also engage more faithfully in their assessment on how multihoming and the existence of a competitor impact consumer choice in the social media oligopoly. Finally, and most importantly, it can provide some indication as to how contestability is supposed to be helped or hindered by designating these undertakings. It should be relatively easy for the Commission to argue as to why incumbents should be considered durably entrenched, even if they attempt to bring forward the 'challenger defence' in an attempt to escape designation. For challengers however, there should be room to explain how their ecosystem contributes in terms of user benefits, innovation, and ultimately contestability. If it is clear that their presence enables competition and choice, rather than prevent it, this should be paid credence in the Commission's assessment. In extension of this, arguments by the challenger on how designation prevents them from creating these benefits should also be assessed seriously.

The final possibility is to use regulatory presumptions, such as used in sec. 19a of the German Competition Act (Gesetz gegen Wettbewerbsbeschränkungen; GWB). Under sec. 19a GWB, which enriches the German competition law toolbox, an undertaking can only be considered to have paramount significance across markets if it is dominant in two or more markets.[152] As a result, TikTok would presumably fall outside of the scope of sec. 19a GWB whilst it can still capture the other designated entities. It is however debatable if the introduction of such a condition in the DMA is useful and desirable. Section 19a GWB is focused specifically on ecosystem power and paramount significance across markets. The DMA on the other hand aims to regulate gatekeeper power. As such, requiring the existence of a multi-product ecosystem to designate an entity may cause entities with gatekeeper power to escape the scope of the regulation. As such, unfair behaviour towards professional end-users may remain unregulated. This article has argued that—rather than relying on predetermined thresholds—the DMA could best serve to promote its objectives if it operates on the basis of an actual understanding of the competitive dynamics of digital markets. The existence of ecosystem power can contribute

[152] Dominance in two or more markets is one of five conditions, the other four are related to its financial strength or its access to other resources, its vertical integration and its activities on otherwise related markets, its access to data relevant for competition, the relevance of its activities for third party access to supply and sales markets and its related influence on the business activities of third parties. However, the condition to be dominant in at least two markets is relevant here as a minimum threshold to fall within the scope as an ecosystem operator.

to gatekeeper power and vice versa. This does however not mean that gatekeeper power cannot exist absent ecosystem power. It remains possible for a platform operator to act unfairly towards its users, especially if it does not face significant competitive threats in their area of activity.[153] Thus, the use of a criterion related to operating multiple platforms may thus block sensible applications of the DMA.

C. What Should be the Impact of Establishing that the Designated Entity Is a 'Challenger'?

This article has theorized on what ecosystem power is, how it can be taken into account and why this is relevant for contestability. The question that remains is then what the Commission can do to give effect to the outcomes of such an assessment. In other words: what should be considered a challenger mean for the designated entity to be?

The most straightforward consequence would be to not designate the entity as a gatekeeper. If the Commission accepts the idea that contestability is (at least in part) driven by the existence of growing multi-product ecosystems, it may have to withhold from regulating an entity which is capturing its first platform market(s). In a way, this aligns with the rationale underlying the criteria that an undertaking must be entrenched by meeting the quantitative requirements for at least three years. This temporal delay would allow the gatekeeper to expand its position and challenge the incumbent before it becomes regulated, so that the competitive advantage enjoyed by the incumbent gatekeeper is mitigated and competition happens on a 'level playing field'. The difference is that the level playing field becomes related to inter-ecosystem competition, rather than competition on or for the platform market. A downside of such an expansion of the scope is that it may take significantly longer before an entity becomes designated as a gatekeeper, thereby leaving potential unfair behaviour towards its users unchecked.

Another way forward would be to impose a layered regulatory approach, where challengers are regulated differently from incumbent gatekeepers. Facilitating such an approach would require a substantive change to the Digital Markets Act. Whilst this is unlikely to happen in the short term, it may be something that can be considered in future reviews or revisions. In a layered regulatory approach, regulatory burdens could differ for undertakings depending on the size of their multi-product ecosystems, impose and more and heavier burdens on the largest undertakings, whilst imposing less—and possibly tailor-made—regulatory obligations on medium-sized ecosystems.[154] One could consider that for challengers, it is more suitable to have a smaller set of rules, governing principles or a code of conduct. Here, the challengers would have to commit to not harm their end-users or professional users unduly. The ability of principle-based regulation and tailor-made behavioural rules, as well as the use of codes of conducts, can be studied in the implementation of the Digital Markets, Consumers & Competition Act in the United Kingdom. An approach which includes more heavy-handed regulation for incumbents and a lighter regulatory burden for challengers strikes a balance between the protection of users and promoting contestability, as well as the concept of fairness in relation to contestability as discussed in chapter 4.

Finally, one practical way in which the nature of challenger could be taken into account is in granting exemptions to challengers or in assessing whether the designated entities comply with the obligations. For instance, the Commission could accept that if the challenger minimizes its

[153] One example of where gatekeeper power may persist because there are no credible competing ecosystems can be found in highly complex and technical platform markets where there is a risk of vendor lock-in. For instance, once an enterprise relies on one type of data architecture and cloud service, it may be difficult to switch providers without incurring significant costs. This is a commonly observed problem in computer sciences, see for instance Beslic *et al.* n.d., Towards a Solution avoiding Vendor Lock-in to Enable Migration Between Cloud Platforms, MDHPCL@MoDELS.

[154] Van den Boom (2023), Ch. 9, discusses the idea of—and principles for—a layered regulatory approach at length.

harms to end-users and professional users whilst protecting its competitive position in inter-ecosystem competition, effectively complies with the obligations imposed upon it. Following Art. 8 DMA, the gatekeeper must ensure and demonstrate compliance with the obligations laid down in articles 5, 6 and 7 DMA. According to the wording of Art. 8(1) DMA, the gatekeeper must ensure that the compliance will be 'effective in achieving the objectives of this Regulation', fairness and contestability. A textual interpretation of the DMA suggests that there is room for the gatekeeper to comply in a manner by which it grants protection to its end-users, with respect to its gatekeeper power, whilst also taking measures that its position in inter-ecosystem competition is not unduly undermined. This could mean, for instance, that the gatekeeper reserves certain privileges in terms of access, fair conditions, information, choice or flexibility where it concerns inter-ecosystem competition with other gatekeepers.[155] Per example, this could mean that a challenger facilitates interoperability with non-regulated entities, whilst not opening up to regulated incumbents. The designated gatekeepers are currently developing their compliance mechanisms, which will allow for further studies on how gatekeepers intend to comply and what constitutes effective compliance. Follow up research in this area may shed light on the possibility for differentiation in what constitutes effective compliance for incumbents and challengers. It seems that this option is closest to what has happened in practice following ByteDance's designation. ByteDance argued in its compliance report that it was already compliant in most instances, or that provisions did not apply to them. To justify the latter, ByteDance often referred to the fact that it only operates one core platform service.[156]

Another more exceptional possibility to differentiate between gatekeepers and challengers may exist in the application of Art. 9 DMA, which allows the Commission to suspend the application of obligations to gatekeepers following exceptional circumstances. It remains the question whether being a challenger to a larger incumbent could qualify as such an exceptional circumstance. There is no inference to how realistic such a request is considered to be here. However, looking at Art. 9(4) DMA, an argument could be made that if a challenger faces higher compliance costs and the same regulatory burdens as incumbents, this may threaten their economic viability. Similar arguments have been raised by TikTok in their notification.[157] Art. 9(4) DMA states that the Commission should look at the economic viability of 'the operation of the gatekeeper in the Union as well as on third parties, in particular SMEs and consumers'. As such, these exemption grounds provide opportunities for the weighing of different interests and studying the effects of providing such exemptions. Art. 9(2) DMA requires the Commission to review this exemption every year, so this could be an argument in favour of granting temporary exemptions as to allow the challenger to grow its position whilst being subjected to fewer obligations than incumbents. In short, there may be role within the DMA to take the role as challenger into account in providing exemptions, and there may be the mechanisms to do so in a well-informed manner.

VI. CONCLUSIONS

This article has discussed the difference between gatekeeper power and ecosystem power in light of the designation of TikTok as a regulated core platform service under the DMA. The article has argued that the difference in arguments brought forward by ByteDance and the Commission

[155] These dimensions of effective compliance are identified in Carugati (2023), Compliance principles for the Digital Markets Act, Bruegel.

[156] ByteDance has published the non-confidential summary of its compliance report on its official website: https://www.tiktok.com/transparency/en/dma-transparency-2023/; ByteDance has made significantly less changes than larger gatekeepers such as Alphabet or Apple. However, it is not yet clear if the Commission actually agrees with ByteDance that it has complied with its obligations under the DMA. The only indicator is that—so far—ByteDance has escaped the scope of the first non-compliance investigations. This does however not provide any guarantees.

[157] DMA 100014, ByteDance, par. 115.

relate to the focus on ecosystem power of the first, and the focus on gatekeeper power of the latter. The article has argued that whilst the focus on gatekeeper power by the Commission is an intentional choice in the design of the DMA—and that the Commission has not erred in law by dismissing ByteDance's arguments—there is room in the DMA to explore arguments related to inter-ecosystem competition and ecosystem power. This article has argued that taking such arguments into account could have several benefits. Firstly, it would help to promote the objectives of fairness and contestability by exploring whether the designation decision may harm the ability of newly designated entity to compete with the incumbents. Secondly, it may help to prevent overregulation and unintended side-effects. Thirdly, it may further our understanding of competition between digital ecosystems. Fourthly, it may help us to develop metric for successful contestability.

The article identifies four elements that the Commission can take into account in its assessment. First, the position of the gatekeeper within their platform market. Second, the size of the multi-product ecosystem of the undertaking in question. Third, the relative size of the ecosystem(s) of the undertaking in question compared with other regulated incumbents. Fourth, whether the undertaking in question poses an actual or potential threat to incumbents. The article argues that the Commission currently limits its assessment to the first dimension, the role of the gatekeeper in its platform market. The Commission can strengthen its assessment by taking into account—to a greater or lesser extent—the other dimensions as well.

The article has concluded by setting out ways forward as to how the Commission can include the ecosystem dimension in their assessment procedurally and how this can impact the applicable obligations. With respect to how the assessment can be included, the article has recommended to take this into account when engaging with the arguments brought forward by designated entities. In designating TikTok, the Commission often avoids discussion on these topics. By engaging in this discussion, the Commission can take into account the relevant dimensions of ecosystem competition in a relatively quick way. Other options, such as a full assessment or the use of presumptions, may have undue side-effects. In terms of how the findings should impact applicable obligations, the article has discussed foregoing the designation of gatekeeper, introducing layered regulation, or taking this into account in granting exemptions. Here, the article sets out benefits and drawbacks of each approach. It concludes by arguing that there may be space in the DMA to provide exemptions on the basis of 'being a challenger'. A layered regulatory approach could be desirable but would require legislative changes. Not regulating a challenger at all may mean that a gatekeeper escapes regulation for a long period of time for the sake of inter-ecosystem competition.

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