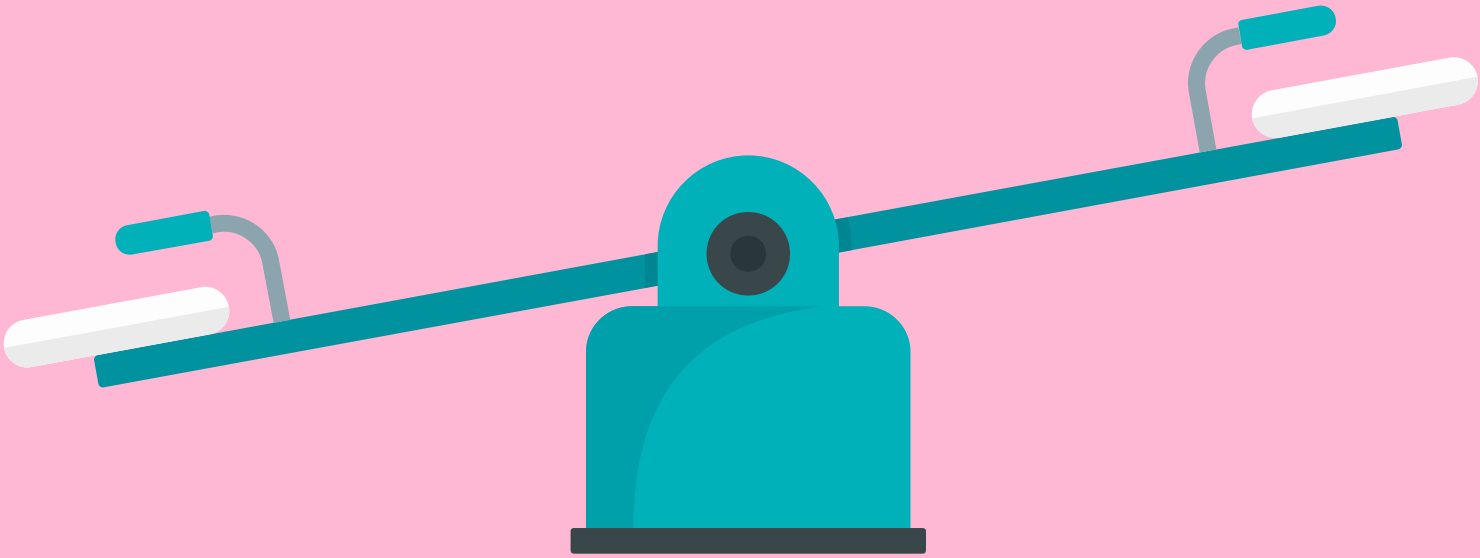
VALUE IN DIGITAL PLATFORMS: THE CHOICE OF TRADEOFFS IN THE DIGITAL MARKETS ACT



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1 Copenhagen Business School & SDA Bocconi School of Management / IE University, respectively. The subject we cover in this article is highly controversial, can be approached from different analytical angles as well as viewpoints depending on the vested interests one would consider, so that the ones we take here and the conclusions we arrive at can easily run counter to commonly held opinions. We are very wary of the difficulties of the task at hand; and we have no presumption that our approach and logic is superior to the alternatives, let alone that our conclusions are correct. We are only confident of one thing: the problem we are engaging with has not been sufficiently recognized and is such that requires deep engagement from multiple viewpoints to develop knowledge about.

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VALUE IN DIGITAL PLATFORMS: THE CHOICE OF TRADEOFFS IN THE DIGITAL MARKETS ACT

By Carmelo Cennamo & Juan Santaló

The Digital Markets Act makes clear choices about important tradeoffs in value to constrain the arbitrary power and dominance of gatekeepers over digital markets and guarantee a more equitable distribution of value with business users. We argue that the extent those objectives will be realized depend largely on the nature of competition, both the type of competition (within vs. across platforms) and the competition dynamics (Winner-Take-All vs. differentiation). We anticipate that the choices about the tradeoffs in value taken in the DMA will prevent gatekeepers to monopolize the focal market but in very limited cases. This is because the DMA seems to protect specific competitors (some large business users against gatekeepers) rather than competition, as well as protecting only one type of competition (*within* platform) instead of also, and the more salient for contestability in digital markets, *cross* platform competition. We discuss these tradeoffs and the implications for competition, value distribution and welfare.

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I. INTRODUCTION

The Digital Markets Act ("DMA") introduces new regulations to limit business strategy discretion of "gatekeepers" – i.e. large, dominant digital platforms acting as intermediaries of core digital services that control main gateways to markets[2] – with the aim of guaranteeing more equitable distribution of value between the gatekeeper and its business users - to what the DMA refers to as "fairness." Also, a number of obligations are introduced to avoid that gatekeepers block potential direct competition from business users, which would then limit market contestability in the digital space.

Broadly, we can group the most relevant obligations in three categories. First, the DMA introduces obligations for gatekeepers with regards to data sharing. Specifically, the DMA requires both user data portability and free of charge access to gatekeeper data linked to business users. Second, another set of obligations revolve around the issue of privacy and data aggregation. The DMA requires explicit consent by end users to combine personal data from different services offered by and via the gatekeeper's platform. Finally, a number of obligations are set to counter power imbalance of business users with the gatekeeper and establish "fairness" in digital markets. Among other things, the DMA forbids favoring the gatekeeper's own products over those of business users in the ranking services; forbids the so-called price coherence (also known as "most favored nation") clause according to which the platform provider requires third parties not to sell their products in other channels at a price below the one set on the digital platform; it forces transparency in advertising conditions and it does not allow gatekeepers to use data not publicly available to compete with business users in its platform marketplace; and it also forbids the enforcement of in app payment systems as unique way to handle the transaction with the end user.

The long and detailed list of prescriptions and prohibitions would suggest that regulators drafting the DMA have performed a careful analysis of the kind of tradeoffs between guaranteeing greater creation of value for end users (and overall for the digital economy) and more equitable distribution of value between gatekeepers and business users, and selected accordingly the aspects to prioritize. This choice, and the overall regulatory architecture is argued to be set for the greater good, benefiting business users at large by rebalancing the power asymmetry with the platform provider, and elevating competition and innovation in digital markets. In fact, as also emerging from related debate around the drafting of the DMA, many would advance that there are no tradeoffs; in the long term, (the expected greater) dynamic competition will bring benefits that compensate for any potential loss in efficiencies in the short term that these restrictions might cause. Eventually, this logic goes, end users, because of the new competitive context, are also expected to benefit in terms of more, innovative, and better services.

Will this be a natural course of events? How will platform providers' incentives be affected by this regulatory-induced shift in value creation-distribution dynamics? What are the ripple effects on the overall ecosystem of business users relying on platforms' services to produce their own offerings? While the DMA puts business users all in one bucket, there is ample heterogeneity among them: the specific choice of settling the value tradeoffs in the DMA will likely produce positive outcomes for *some* business users but can also disrupt the value creation or competitiveness capacity of other business users, as well as the capacity of some of the current gatekeepers to challenge other gatekeepers' dominant position in a core service on the ground of a different business model and platform core service design.[3] The latter, that is, *cross*-platform competition, is the most vibrant form of competition in digital markets that can establish some contestability of gatekeepers' dominant position. Yet, the DMA largely ignores this type of competition and rather focuses on *within* platform competition, that is, competition among business users on the platform and among business users and the gatekeeper itself.

We believe that this choice does set important tradeoffs in terms of competition and value that the DMA can help attain, which can not only potentially produce unintended consequences in terms of value loss for some business users; it can also determine by design winners and losers. If competition policy should not be about protecting some competitors against others but about competition itself and overall welfare, then the value tradeoffs' choices taken in the DMA might set the law on a wrong path. Assessing more systematically these tradeoffs and their implications is thus important particularly for the implementation criteria of the DMA to avoid introducing *de jure* distortions on the market based upon a normative stance against few specific, albeit powerful companies in the market.

We propose two key dimensions for determining the nature of these tradeoffs as well as the identity of winners and losers. The first

2 See article 3 of the Digital Markets Act, "designation of gatekeepers" recital.

3 Large platforms often expand their core service activity into adjacent markets by adding additional features and ancillary services, a practice called "platform envelopment," which challenges the competitive position of smaller planforms specializing in that market vertical (see Eisenmann T., Parker G., Van Alstyne M. (2011). "Platform envelopment," Strategic Management Journal 32: 1270-1285). Visnjic and Cennamo document how, over the years, Amazon, Apple, Google and Meta have engaged in multiple envelopment and counter-envelopment moves, which led to greater market overlap and competition among these players in ever redefining competitive landscape, a new context which they refer to as "supra-platform market" competition (Visnjic, I., Cennamo, C. (2013). "The Gang of Four: Acquaintances, Friends or Foes? Towards an Integrated Perspective on Platform Competition." ESADE Business School Research Paper No. 245, Available at SSRN: https://ssrn.com/abstract=2264869.

dimension refers to the competition type: whether the relevant type of competition is *within* the platform market versus competition *across* platform markets. The second dimension refers to the underlying nature of network effects that determine the competition dynamics: whether the market follows *winner-take-all ("WTA")* competitive dynamics, or whether it allows for the coexistence of competing platforms that compete for users (business- and end-users) based on distinctiveness, i.e. differentiated platform technology design and market structuring and positioning (*differentiation*).[4]

II. TRADE-OFFS IN THE DMA

We identify three relevant trade-offs that implicitly or explicitly the DMA's provisions summarized above map into:

A. Data Sharing and Interoperability vs. Platform Innovation.

Companies are able to use data to better personalize their services and better target distinct consumer segments creating new bundles of products or services. However, there is a non-negligible cost of collecting and processing the data into the appropriate format needed to generate knowledge that inspires these new services and products. Although raw digital records can be stored at very little cost, data accumulation only leads to new products or services when companies invest substantial resources in formatting these records into inputs that can create new insights and knowledge. Data sharing and portability requirements means that competitors can benefit from the same data-generated knowledge without incurring the data creation and processing costs. This automatically creates a free riding problem that diminishes firm incentives to invest in the creation and processing of the data needed to sustain business users' activity and potentially innovation from the gatekeeper (to the extent it cannot properly appropriate value from this innovation).

How big a problem this can be depends on the relevant competition type and dynamics. Generating, accessing and processing data are in fact vital activities to improve existing interactions (i.e. simple business transactions), but also create new interactions either by unlocking latent interactions (i.e. facilitated by demand aggregation) or by enabling novel interactions (i.e. searching or ratings).[5] Particularly for the enabling of novel interactions, the design of the platform digital infrastructure and tools for generating, aggregating and processing data in specific ways become a relevant area of innovation as well as differentiation of the digital platform and the benefits and customer experience it provides.

Accordingly, in the case in which competition *across* platforms is based on differentiation rather than WTA, a platform's infrastructures for data structuring and processing are critical levers to create differentiation and compete for different customer journey and experience based on different interactions. Imposing data sharing and interoperability across platforms would be bad in the case of markets in which platforms compete on the basis of differentiation since it will reduce this critical source of differentiation and kill the incentives (if not the capacity) for cross-platform competition. Data being created will become increasingly a shared asset and public good, with the usual incentives' problems for high-quality and innovation contribution these triggers; overall innovation and quality might degrade.[6]

A similar point is made elsewhere,[7] whereby the authors make the distinction between vertical (within platform in our parlance) vs. horizontal (cross platforms in our parlance) interoperability, with the latter having the downside of reduced possibilities of differentiation, hence limiting the incentives to invest in differentiated core services to compete *for the* market. As a result, despite data interoperability, we might have a context of ossified cross-platform competition, whereby the large, dominant platform may remain the default option for end users for the core service, and thus retain its dominant position.

When considering the tradeoff from the within platform competition perspective though, data sharing and interoperability between the platform provider and business users can likely stimulate innovation spillovers as well as more (within platform) competition. The platform provider can indirectly capture value from this greater share of activity/interactions within the digital platform. Therefore, incentives for upgrading the infrastructure for data creation and sharing can be preserved, within platform competition boosted, and novel interactions and innovation enhanced eventually. A win-win situation might emerge.

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4 An analysis of such competition dynamics and the related platform market cases is offered in Cennamo C. "Competing in digital markets: A platform-based perspective." (2021) Academy of Management Perspectives 35(2): 265-291. Also available at https://ssrn.com/abstract=3410982.

5 See Cennamo C., Kretschmer T., "Business model agnostic? An innovation-centric view of the DMA." Working paper.

6 See e.g. Cennamo C., & Santaló J. "Generativity tension and value creation in platform ecosystems" (2019) Organization Science 30(3): 617-641. https://doi.org/10.1287/orsc.2018.1270.

7 Bourreau M., Kramer J., Buiten M. (2022). "Interoperability in digital markets." CERRE report: https://cerre.eu/publications/interoperability-in-digital-markets/.

B. Privacy vs. Competition

The more companies have access to detailed individual data, the more companies can offer targeted/personalized services generating value and vibrant within platform competition at the cost of privacy risks. Regulatory constraints on data usage designed to preserve privacy may thus imply less intense competition in the marketplace.

When considering *within* platform competition, more privacy implies a higher burden for smaller providers in accessing relevant data and information about users, which are critical not only to target them but also to build customized offerings. End users tend to trust large providers[8] when it comes to give their consent to use and combine data about their profile and activities. Accordingly, smaller providers with relatively less established brand compared to large providers are penalized. To the extent that access to end user data is instrumental to product/service design and value proposition, smaller and novel providers will be at competitive disadvantage. This implies a competitive asymmetry and a reduced overall competition activity level within platform, which will likely result in greater concentration among large players within platforms. Privacy enforcement might thus risk of being anticompetitive for within platform market competition, and, in fact, unfair to the extent that affects negatively smaller versus larger business users.

When considering competition across platforms, the effect can be positive (i.e. pro-competitive) to the extent that platforms compete for the same core service and competition is of the WTA type but with an asymmetric size (i.e. a smaller platform challenging the big one). In these conditions, absent the privacy restraint, the large platform may enjoy a data advantage from combining end user data across multiple services and leverage it to outcompete the smaller platform. If the big platform cannot use and combine data from the multiple services it offers unless granted consent by the end user, then smaller, specialized platforms offering just the core service will not suffer a "data disadvantage" and can potentially challenge the big platform on the merit of the quality of the service. There is a proviso though, as shown by studies on the effects of GDPR: end users may do grant consent to the bigger but not the smaller, less known platform. The pro-competitive effect of the privacy obligation will thus be greatly diluted.

In the case though that competition is not WTA but based on differentiation, restriction on privacy would likely reduce competition *across* platforms by constraining the opportunities for differentiation based on distinct ways of offering personalized services. Also, when degrees of freedom are allowed on whether and how platforms can handle user data for their offerings, to the extent this is made transparent to end users and thus can enter as an additional element in their decisional choice set, the differentiation nature of competition would also imply a possible competitive equilibrium of differentiation based upon privacy provision, whereby one(some) platform(s) may offer maximum privacy protection while another(s) can offer less privacy but cheaper service. This type of differentiation based on end users' preferences about privacy may enhance overall competition in the market across platforms.

C. Business Fairness vs. Consumer Welfare

Business fairness stresses the importance of preserving (*within* platform) competition per se, regardless of its effects on consumer surplus. Ex-ante obligations in the DMA to guarantee business fairness would inevitably apply uniformly to different digital platform cases and contexts independently of whether the targeted practice has benefits for consumers. We might then have cases in which this standardized treatment towards any product and service from platform's business users may lead to decreases in consumer welfare either through decreases in value creation capacity at the platform ecosystem level or through increases in transaction costs (i.e. decreases in selection and transaction efficiencies of the platform).

Consider the case of self-preferencing, the restraint imposed on gatekeepers to promote and favor their own products and services on their platform infrastructures (against third-party providers). Though the DMA connotates self-preferencing almost in and by itself as a theory of harm to business and end users, many of these activities are implemented not just for the gatekeeper to capture greater value (against business users) but to unlock value and benefits for end-users. Self-preferencing may bring benefits in terms of efficiency gains proceeding either from reduced transaction costs for the end user and/or from enhanced competition for services among business users (to the extent that business users can compete on equal foot with the platform provider).[9] For instance, Amazon Prime increases the benefits from the existing interactions for the end-user who can experience lower transaction costs from engaging in the relationship with an Amazon Prime business user than with

8 See e.g. recent work by Peukert C., Bechtold S., Batikas M. & Kretschmer T. "Regulatory spillovers and data governance: Evidence from the GDPR" (2022) Marketing Science, forthcoming. https://pubsonline.informs.org/doi/10.1287/mksc.2021.1339.

9 See e.g. Hagiu A., Teh T-H. & Wright J. "Should Platforms Be Allowed to Sell on Their Own Marketplaces?" (2020) RAND Journal of Economics forthcoming, Available at https://ssrn.com/abstract=3606055.

business users that are not part of the Amazon Prime program. Similarly, an ancillary service such as Apple Pay adds to existing interactions between business users and end users using Apple platforms by further reducing the transaction costs related to the interaction.[10] In such cases, *within* platform competition might in fact increase,[11] unlocking greater efficiencies and heterogeneity of offerings, both of which enhance consumer welfare.

Business fairness may indeed go hand in hand with enhanced consumer surplus when the fairness restrictions prevent a WTA result in which the gatekeeper gets to dominate a new market. Hence, in those cases, business fairness prevents monopolization that may decrease consumer surplus. However, for non-WTA markets, the tradeoff between fair competition and consumer surplus may indeed become relevant. If the gatekeeper is the most efficient competitor, fair competition measures may decrease consumer surplus at the benefit of less efficient competitors.

Consider again the case of Amazon Prime (and the potential self-preferencing effect). If the logistic and fulfillment services offered by Amazon to Prime sellers is a way to improve market interactions and consumption experience, and by its means differentiate the core service from other platform marketplaces (such as e.g. eBay), promoting Prime sellers is the way for Amazon to deliver on its key value proposition. While this might be perceived as anticompetitive from a *within* market competition perspective between prime sellers vs. non-prime sellers, it is pro-competitive from a cross market competition perspective as it allows greater service differentiation and the creation of novel and different type of market interactions between end and business users.

The legal constraints on data sharing imposed to Google acquisition of Fitbit in 2020 and its implications on the recent launch of the new Google Pixel watch also illustrate this point clearly. As a result of the 2020 agreement with the European Commission, Fitbit and Google data must remain private and separate[12]. This implies that any health data collected on the new Pixel Watch will remain under Fitbit's control, separate from Google's. Hence, it seems Pixel users will need to keep two different accounts, one for their general watch and one for the fitness component. This lack of integration harms user experience and more generally consumer welfare. Furthermore, although this measure may indeed help Pixel competitors like Samsung, Garmin or Xiaomi to compete against Google Pixel, it may severely hamper the competitive stand against the Apple watch that indeed offers a full integration between health data and the rest. Competition across platforms can be thus hampered as a result.

III. WINNERS AND LOSERS OF THE DMA CHOICES

A. Amazon Winning Over the Shopify-Meta duo (Alternative Platform Market)

We can identify some likely winners and losers of the DMA choices in relation to the tradeoffs discussed above. Paradoxically, given how this regulation has been publicized as against Big Tech, Amazon can be the real winner of these DMA choices, specifically in relation to the first and second tradeoff (though its business might suffer negative repercussions from the third tradeoff). This can be better understood if we take the perspective of competition *across* platforms rather than competition within platforms. From this perspective, small and medium size businesses that want to use ecommerce to sell their offerings have two broad choices. They can use the Amazon platform to reach a massive worldwide audience, using Amazon's search algorithm to gain relatively good consumer exposure or advertise within the Amazon marketplace itself. Alternatively, small and medium size enterprises, SMEs, could use the standardized ecommerce tools provided by Shopify to establish direct-to-consumer online business and sell directly through their own webpage. The benefit of this second option is that they avoid the commoditization generated by the Amazon search algorithm. The cons are that SMEs face the challenge of building an audience for their product offerings.

Companies using the direct route and bypassing Amazon have often built this audience resorting to the (relatively cheap) targeted advertisement service provided by Meta's Facebook platform. With a high level of efficacy, Meta advertisement has allowed SMEs to get in touch with a worldwide audience potentially interested in small niche products. Hence, even if Amazon and Shopify do not seem to overlap in any product market or service, and thus compete for a core service, when we consider the big go-to-market choices of SMEs, then the Shopify/Meta tandem is an Amazon's competitor indeed, being it a viable alternative to the Amazon marketplace. The recent experience of the App Tracking Transparency, ATT, implemented by Apple in September 2020, has proven how privacy driven restrictions in the way consumer data can be tracked and shared across multiple apps has benefited the Amazon ecosystem at the expense of the Shopify-Meta ecosystem, diluting the latter's capacity to compete with Amazon.

10 See Cennamo, Kretschmer, Constantinides, Alaimo & Santaló (2022), cited supra, for a comprehensive analysis of the contingent positive and negative effects of self-preferencing.

11 Hagiu, Teh & Wright (2020), cited *supra.*

12 https://www.theverge.com/2022/5/11/23064072/google-pixel-watch-fitbit-io-2022.

Consumers massively choosing not to be tracked because of the ATT final implementation have disrupted the results of all companies that relied on targeted advertising to reach consumer audiences[13]. Meta estimates a cost of $10 billion in lost revenue entirely driven by Apple ATT.[14] Shopify's stock market value recently crashed 15 percent when disclosing first quarter losses of $1 billion.[15] Snap suffered a drop of more than 25 percent in its stock market value after reporting lower growth expectation as a result of the Apple ATT rules.[16] On the winning side, Amazon disclosed for the first time it obtains $9.7 billion revenue in advertising.[17] Due to the lack of past disclosure data, we cannot assess whether there has been any increase driven by Apple ATT rules, but it looks premonitory that just now, in the middle of these seismic changes in online advertising, Amazon has chosen for the first time to disclose separately its advertising revenue.

B. Large Content Fortresses Winning at the Expense of Companies with Smaller User Base

As the ATT has also shown, these explicit tradeoff choices in the DMA benefit companies that have direct access to user data without the need to port or aggregate any data coming from a variety of sources. Other than Amazon, companies like Apple or Netflix can use this so-called content fortress to sell advertising with a return on investment, ROI, that can be unmatched by companies with a smaller user base. In other words, since ATT *de facto* implies consumer behavior cannot be tracked across apps, apps that have a larger user base can indeed better monitor consumer behavior and offer targeted advertising with a higher ROI than apps with a smaller user base. Overall, this generates asymmetric effects of competition reinforcing the competitive advantage of big players (with direct access to consumer's data) at the expense of smaller ones. This may, in fact, ossify cross-platform competition by consolidating the dominant position of established platforms in their own verticals instead of making digital markets more contestable.

C. Traditional Advertising Winning at the Expense of Targeted Advertising

Given how the efficacy of targeted advertising could be diminished by the DMA's data restrictions, other unexpected winners of the DMA are going to be all suppliers of more traditional mass advertising like TV stations and newspapers that should experience a surge in demand of this type of advertising that comes from (large) advertisers abandoning targeted advertising channels. More generally, large companies that have the scale to invest in massive advertising are going to benefit from the DMA inserting sticks in the wheels on the efficacy of targeted advertising at the expense of small business users that will have to increase marketing costs (and duplicate it for each vertical channel) to reach out to the same audience. In fact, small direct-to-consumer companies can experience important increases in marketing costs.

IV. CLOSING REMARKS

The DMA is making clear choices about important tradeoffs in value. While the intended objectives are to constrain the arbitrary power and dominance over digital markets of gatekeepers and guarantee a more equitable distribution of value with business users, the extent those objectives will be realized depend largely on the nature of competition, both the type (within vs. across) and dynamics (WTA vs. differentiation). The DMA seems to be agnostic about both dimensions, implicitly assuming that competition dynamics are always of the WTA type in all digital markets, and focusing only on within platform market competition. We are afraid this is too a restrictive focus, one which fails to account for important potential negative consequences that the current restrictions may have for fostering competition across platforms and enhancing not just the variety of services being offered via the platform but the innovation in and variety of alternative digital marketplaces (and customer journey) for such services.

We anticipate that the choices about the tradeoffs in value taken in the DMA will prevent gatekeepers to monopolize the focal market but in very limited cases. This is because the DMA seems to protect specific competitors (some large business users against gatekeepers) rather than competition, as well as protecting only one type of competition (*within* platform) instead of also, and the more salient for contestability in digital markets, *cross* platform competition.

13 For details and analysis of the potential anticompetitive effects of Apple's ATT practice see e.g. Sokol D., Zhu F. "Harming competition and consumers under the guise of protecting privacy: An analysis of Apple's iOS 14 policy updates" (2021) Working Paper available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3852744.

14 See Newman D. "Apple, Meta and the $10 billion impact of privacy changes" (2022), Forbes.com: https://www.forbes.com/sites/danielnewman/2022/02/10/apple-meta-and-the-ten-billion-dollar-impact-of-privacy-changes/.

15 See Kindig B. "Shopify stock hit by plethora of headwinds in Q1" (2022), Forbes.com: https://www.forbes.com/sites/bethkindig/2022/05/05/shopify-stock-hit-by-plethora-of-headwinds-in-q1/.

16 See Dang S. "Snap shares plunge 25% as Apple privacy changes hit ads business," (2021) Reuters.com: https://www.reuters.com/technology/snap-revenue-falls-short-apple-privacy-changes-hurt-ads-business-2021-10-21/.

17 See Exchnage4media.com (Feb 4, 2022), "Amazon's advertising services grew 32% YoY to $9.7 billion." https://www.exchange4media.com/digital-news/amazon-reports-94-per-cent-hike-in-revenue-at-1374-billion-118253.html.

Be that as it may, the DMA is largely agnostic about the implications for the benefits that end users are expected to have from the specific obligations that gatekeepers are subject to, other than the general hope of expected benefits from greater within-market competition and from preventing monopolization in the focal markets. However, in many cases competition in and for the focal market does not follow a WTA course; in such cases, much more relevant is fostering competition *across* platforms via differentiation (rather than standardization) to reduce monopolization, and facilitate greater innovation by gatekeepers as well as business users that will preserve the capacity of these economic structures and business models to bring large benefits to end users and society at large.

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