Competition Law Enforcement and Regulation for Digital Platforms and Ecosystems: Understanding the Issues, Facing the Challenges and Moving Forward

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Platforms

"(….) platforms can be described as digital resources that **enable efficient interactions between external producers, content providers, developers, and consumers that lead to value creation from (online or even offline) trade** (Parker et al, 2016; Constantinides 2018).

To do that,

i) they **adopt open digital infrastructures** that allow multiple stakeholders to orchestrate their service and content needs;

ii) they **establish governance rules** and invest in governance enforcement mechanisms that **seek to balance platform control with the necessary incentives for platform participants to engage with the platform and generate value for one another** (Constantinides et al, 2018).

Platforms need to have in place an effective and fair dispute resolution system that corrects trade distortions in a timely manner".

(GEOFFREY PARKER, GEORGIOS PETROPOULOS AND MARSHALL VAN ALSTYNE, DIGITAL PLATFORMS AND ANTITRUST, Bruegel, Working paper Issue 6, November 2020)

The "inverted firm" structure of platforms

The **value creation** of a platform can be **internal**, **external**, or **some combination of the two**

"**Internal value creation is achieved through platforms' own production of output (products and services) that is directly valuable to their users**" (1). Example: "LinkedIn's initial core interaction was users creating a profile page. Once it was identified that more was needed to encourage active usage, discussion groups were added, followed by recruitment and advertising functions, and finally the ability for thought leaders – and then any user – to publish content, effectively turning LinkedIn into a publishing platform".

"**External value creation refers to external contributors such as app developers and external producers who can increase the user's benefit from participation in the platform"**.

"**Value creation is defined as the total value that a platform can bring to its online ecosystem** (the sum of platform's benefit, surplus to supply side users and app developers, and consumers surplus)".

1) **Geoffrey Parker, Geogios Petropoulos and Marshall Van Alstyne, Digital Platforms and Antitrust, Bruegel**

The inverted firm structure of platforms

Platforms which rely on external value creation select external service providers (complementors) to ensure that the combination and the quality of the services offered on the platform will maximize the value of the platform.

- **ex Apple chooses external applications downloadable on the Apple store which will increase the value of its ecosystem which icludes terminals and the apps which can be donwnloaded on the terminals through the Apple store;**

- **Google chooses to distribute on Google play stores applications which will be complementary to its own services (for example Google Search) and will enhance the value creation of the Android platform.**

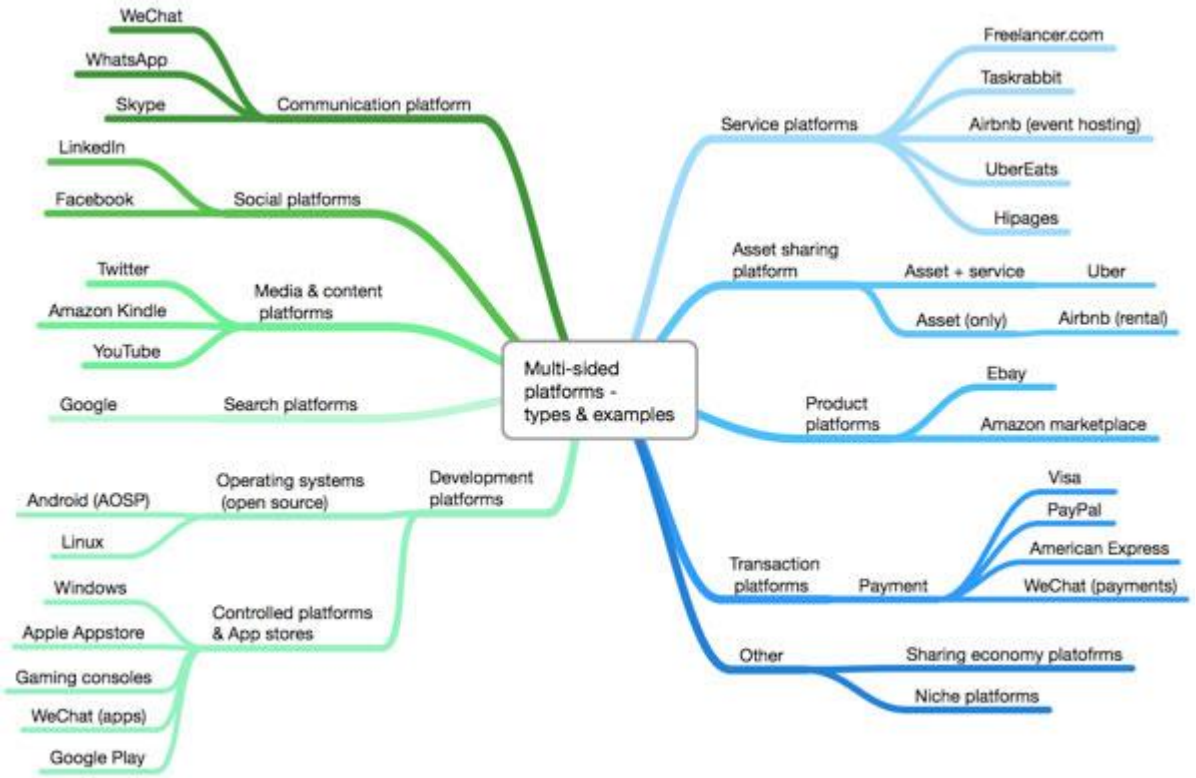
The **platform will monitor the quality and the compatibility with its identity of the services offered by app developers who want to be distributed on the platform**

The importance of external contributors to the value creation of some platforms

Figure 1: Market capitalisation and employment for selected platforms and other firms

Firm	Start year	Employees	Mkt Cap ($B)
BMW	1916	134,682	42.446
Uber	2009	22,263	62.791
Marriott	1927	176,000	46.35
Airbnb	2008	12,736*	38***
Walt Disney	1923	201,000	244.829
Facebook	2004	44,942**	598.041
IBM	1911	350,600	122.217
Salesforce	1999	35,000**	163.603
New York Times	1851	4,320	5.319
Twitter	2006	4,600*	25.604

Different types of digital platforms



Economics of platforms

Ultimately, in a digital network business, **the employees don't deliver the product or service—they just design and oversee an automated, algorithm-driven operation**.

Lasting competitive advantage hinges more on the interplay between the platform and the network it orchestrates and less on internal, firm-level factors.

In other words, in the digitally connected economy the **long-term success of a product or service depends heavily on the health, defensibility, and dominance of the ecosystem in which it operates**.

Feng Zhu and Marco Iansiti "Why Some Platforms Thrive and Others Don't", Harvard Business Review, January February 2019

Different types of digital platforms

Aggregators: platforms that **provide some valuable service to their users in addition to their interaction with external producers that they facilitate**. For example:

Search engines provide information in addition to access to advertisers.
Knowledge platforms like StackOverflow, Quora, and Yahoo! Answers.
Social media platforms like Facebook, Twitter, Instagram, and LinkedIn provide social interaction and access to advertisers
Media sharing platforms

Business model: **the service is often offered for free to users and the revenue comes from advertisers; in some cases there is a charge for the service** (ex Spotify premium)

Market places are platforms that have as **a primary objective to create efficient matches between consumers and suppliers of goods :**

Platforms like eBay, Uber, AirBnb, Amazon

Business model : Commission on the transactions or interactions.

Scale economies

The cost of production of digital services rises much less rapidly than the number of users of the service.

There are **high up-front investment and fixed costs of creating a valued service** (say, for example, a search engine or a music streaming service) but the **marginal cost of servicing additional users is very low or null.**

In the non digital part of the economy the scope for economies of scale is constrained by **geographical considerations** (location and transport costs). But such considerations are **largely irrelevant to digital markets** which explains the fact that platforms experience extreme scale economies when they are very large (have many users).

Scale economies allow the efficient production of digital services but promote concentration and act as a barrier to entry on digital service markets.

Economies of scope

There are also features of digital markets that mean costs can be reduced, or service quality can be increased, by operating simultaneously across multiple adjacent markets.

These **economies of scope can be derived through use of existing customer and supplier relationships, branding, sharing of technical expertise, and possibly most importantly, the sharing and merging of consumer data.**

These strong economies of scope are one reason why the same small number of large digital companies have successfully built ecosystems across several adjacent markets.

Economies of scope on data

Platforms have an advantage over traditional firms because they benefit from economies of scope in data collection and use.

Traditional firms can only collect information about their own behaviour and the relationship with their own clients. Platforms can collect data and aggregate them across all firms and consumers on the platform. The aggregated information has more value than the individual datasets that users can observe. Larger datasets are more efficient than smaller sets, up to the point where diminishing returns become zero or even negative.

This birds' eye view of markets turns platforms into more efficient matchmakers between users compared to individual firms. This explains why traditional firms worry about data driven competition from online platforms.

Bertin Martens: "An Economic Policy Perspective on Online Platforms", INSTITUTE FOR PROSPECTIVE TECHNOLOGICAL STUDIES DIGITAL ECONOMY WORKING PAPER 2016/05

Economies of scope and machine learning

Economies of scope also apply to machine learning and to mergers and transactions between firms that own machine learning algorithms. Recently, machines have been programmed to learn by means of self-improving algorithms that are good at discovering complex patterns in relatively unstructured large datasets . Machines can discover patterns in very large datasets that are beyond the cognitive capacity of humans to handle, though the machines often need human support to discover these patterns.

The algorithms learned from one dataset may in some case be transposed to other datasets. Learning obtained in a smaller dataset can be extended to expanded versions of the dataset. Extension to adjacent data areas can also generate economies of scope.

For example, machine learning applied to mobile phone location data can generate mobility patterns, for individuals and groups. The **phone data** can be overlaid with **maps** and with **shops & restaurants data**; applying the same algorithms and building on the observed patterns in phone data can produce even more insightful patterns, on top of those already observed in the phone data. Combining it with pay data in shops & restaurants adds further insights, etc. **Applying machine learning algorithms separately to each of these datasets may be more costly and would not produce the same complexity of insights.**

Bertin Martens: "An Economic Policy Perspective on Online Platforms", INSTITUTE FOR PROSPECTIVE TECHNOLOGICAL STUDIES DIGITAL ECONOMY WORKING PAPER 2016/05

The economic effect of economies of scope

From a societal perspective**, economies of scope are a source of economic benefits because they generate cost savings (in data collection & analysis), reduce search costs for platform users and enable new types of transactions – and thereby boost innovation**.

However, they also lead to **policy dilemmas**. **Economies of scope lend support to the view that more data integration is better.** Mergers between firms with non-overlapping datasets can be economically beneficial. Similarly, data trade may be potentially beneficial to firms and consumers. The use of data for other purposes than those originally intended can generate efficiency gains too. More data collection about a consumer enables a firm to better respond to search requests and other online services.

The regulatory instruments with regard to data protection and competition indicate that there may be limits to more integration and that it could be harmful.

Policy makers are walking a thin line in crafting a balance in this equation.

Bertin Martens: "An Economic Policy Perspective on Online Platforms", INSTITUTE FOR PROSPECTIVE TECHNOLOGICAL STUDIES DIGITAL ECONOMY WORKING PAPER 2016/05

Network effects

The aggregation of small consumption externalities can allow platforms to benefits from network effects. **The value of the service rendered by the platform to each user increases with the participation of other users in the platform**

Network effects charaterize both aggregators and market places

Ex Facebook enjoy **same-side ("direct") network effects**: The more Facebook friends you have in your network, the more likely you are to attract additional friends through your friends' connections. Facebook also leverages cross-side ("indirect") network effects, in which two different groups of participants—users and app developers—attract each other.

The value of the services of the Amazon Marketplace increases as more users—both sellers and buyers—engage with the platform **(cross-side (" indirect") network effects)**.

Indirect network effects can be unidirectional or multidirectional

Unidirectional

The value of the platform for advertisers increases with the number of users of the platform but the value of the platform for the users does not necessarily increase with the number of advertisers

Multidirectional

Ex: For example, in the Android ecosystem, the more users there are, the more attractive the platform is for app developers and advertisers. The more apps the more attractive Android is for users.

A platform can strenghten its network effects

It is possible for firms to design features that strengthen network effects.

Amazon, for example, has built multiple types of effects into its business model over the years.

In the beginning, Amazon's review systems generated same-side effects: As the number of product reviews on the site increased, users became more likely to visit Amazon to read the reviews as well as write them.

Later, Amazon's marketplace, which allows third parties to sell products to Amazon users, generated cross-side network effects, in which buyers and third-party sellers attracted each other.

Meanwhile**, Amazon's recommendation system**, which suggests products on the basis of past purchase behavior, **amplified the impact of the company's scale by continually learning about consumers' preferences**. The more consumers used the site, the more accurate the recommendations Amazon could provide them. While not usually recognized as a network effect per se, learning effects operate a lot like same-side effects and can increase barriers to entry.

Feng Zhu and Marco Iansiti "Why Some Platforms Thrive and Others Don't", Harvard Business Review, January February 2019

The strength of the network effect matters

The *strength* of network effects can vary dramatically and can shape both value creation and capture. When network effects are strong, the value provided by a platform continues to rise sharply with the number of participants.

For example, as the number of users on Facebook increases, so does the amount and variety of interesting and relevant content.

Video game consoles, however, exhibit only weak network effects, as we discovered in a research study.

This is **because video games are a hit-driven business, and a platform needs relatively few hits to be successful**. The total number of game titles available isn't as important in console sales as having a few of the right games. Indeed, even an entrant with only a small technical advantage (and a good business development team) can steal significant market share from incumbents. **That explains why in 2001 Microsoft's new Xbox posed such a threat to Sony's then-dominant PlayStation 2, and why each console has gone up and down in market share, alternately taking the lead, over the years**.

Feng Zhu and Marco Iansiti "Why Some Platforms Thrive and Others Don't", Harvard Business Review, January February 2019

The strength of the network effect can change over time

Even more critically, the **strength of network effects can change over time**.

Windows is a classic example. During the heyday of personal computers in the 1990s, most PC applications were "client based," meaning they actually lived on the computers. Back then, **the software's network effects were strong**: The value of Windows increased dramatically as the number of developers writing apps for it climbed, topping 6 million at the peak of its popularity. **By the late 1990s Windows seemed entrenched as the leading platform.**

However, **as internet-based apps, which worked across different operating systems, took off, the network effects of Windows diminished and barriers to entry fell, allowing Android, Chrome, and iOS operating systems to gain strength on PCs and tablets. Mac shipments had also begun to rise in the mid-2000s, increasing more than five-fold by the end of the decade.**

This turn of events illustrates that **when an incumbent's network effects weaken, so does its market position**.

Feng Zhu and Marco Iansiti "Why Some Platforms Thrive and Others Don't", Harvard Business Review, January February 2019

Building a user base

The acquisition of a large set of participants (users, businesses, app developers etc…) serves two purposes for platforms.

First, increasing the number of users **contributes to increasing the direct and/or indirect network effects which may make the platform attractive and successful**. As the number of users increases, the platform becomes more attractive to potential users if there are direct network effects, but also to businesses or app developers if there are indirect network effects , and the more businesses and ad developers are attracted to the platform, the more the platforms will become attractive to users (feedback loop): Ex **Amazon's review systems** generates same-side effects. Amazon's marketplace creates cross side network effects)

Second, **acquiring a large set of users allows platforms to train artificial intelligence algorithms on very large** (and, if they are growing, increasingly large) **sets of users data** to personalize their offerings which increases the relevance of the services for the participants and therefore the value of the platform to them. This creates something akin to a learning by doing effect: Ex Netflix uses artificial intelligence programs on this large data base to make recommendation to its users and to monitor their reactions to its recommendations. Thus, through its system of recommendation **Netflix** can **generate better decisions about programming, content development and subscriber preferences than its competitors, HBO or Hulu**.

Building a user base and offering free services

One strategy available to platforms to grow their base when there are cross side network effects is to **subsidize users on one side of the platform** (in general the consumers of the service or in some cases the providers of a service) by **granting large discounts to users on this side** in the hope of enticing participants on the other side(s) of the platform.

Hence the provision of "free" services (services delivered without the beneficiary of the service having to pay a sum of money to use the service) is **one possible business strategy which can be (and is widely) used by platforms to grow their user base.**

Provision of complementary services

The **algorithm that platforms develop to create the interaction necessary for their core service can often be adapted to provide other complementary services between the same parties which increase the value to users of all the services offered by the platform** and reinforce network effects. Platforms can thus both leverage their technology and their user base to enter adjacent markets.

Example: **Uber went from a ride hailing platform to prepared food delivery and is considering expanding into grocery delivery service, car hire, self-driving cars** etc….

Uber diversification into the food delivery service benefited, on the one hand, from the massive number of brand-loyal users of the Uber ride hailing service and, on the other hand, from the fact that **Uber was better equipped to invest in the prepared food delivery service than other delivery apps** thanks to its **huge past investment in research and development on optimal logistics and routing algorithms**.

Closed and Open Architectures

As platforms add complementary services to their core offer they may develop those new services internally or through complementors. They want to offer the right type, the right number and the right quality of complementary services for their business model.

Platforms can choose either an open or a closed architecture for their ecosystems allowing more or less access to the resources of their platform.

To ensure service quality, platform security or to guard against congestion a platform may choose to impose strict standards on its complementors and/or to limit the number of complementary services

Apple which derives most of its revenues from the sale of expensive iPhones may reject applications for technical reasons (ex: lack of respect the very strict privacy policy of Apple or substantive reasons (ex if the app lacks valuable content, if it has a poor user interface etc….)

Google, which derives most of its revenue from advertising and which is present on Android phones which are cheaper than Apple iPhones and much more widely distributed, does not aim at the same level of app qualities; its approval process is not as exacting as the Apple process and the Google Play store does contain some low-quality apps.

Single Homing and Multihoming

The most obvious example of multihoming is in the ride hailing industry where many drivers and customers are affiliated to several competing services (which explains the severity of competition in this service).

Multihoming on one side of a platform may not be as threatening to the profitability of the platform if users on the other side(s) of the platform single home. Indeed if on one side of a platform participants single home, the platform can monetize its gatekeeper power with respect to its single home participants.

Attempts to **reduce multihoming on one side** of the platform (for example by imposing an exclusivity clause on participants on this side of the platform) **may backfire** and increase multihoming on the other side(s) of the platform (by making the services offered by competing platforms more complementary).

One of the ways for a platform to guard against the risks of multihoming or to reduce its impact is to incentivize platform participants to remain highly active on the platform.

Increasing the quality or the variety of services that platform participants have access to as a function of their level of activity on the platform can be one way to achieve such a result.

Offering financial incentives conditional on the user's level of activity on the platform is another way**. Example Uber and Lyft give bonuses for many different services to users who have achieved a certain number of trips**.

Disintermediation

Platforms have used various mechanisms to deter disintermediation, such as **creating terms of service that prohibit users from conducting transactions off the platform, and blocking users from exchanging contact information**. **Airbnb, for example, withholds hosts' exact locations and phone numbers until payments are made.** Such strategies aren't always effective, though. Anything that makes a platform more cumbersome to use can make it vulnerable to a competitor offering a streamlined experience.

Some platforms try to avoid disintermediation by **enhancing the value of conducting business on them**. They may facilitate transactions by **providing insurance, payment escrow, or communication tools; resolve disputes; or monitor activities**.

But **those services become less valuable once trust develops among platform users**—and the strategies can backfire as the need for the platform decreases.

Feng Zhu and Marco Iansiti "Why Some Platforms Thrive and Others Don't", Harvard Business Review, January February 2019

Data

Digital technologies offer **unparalleled possibilities for platforms with data access to develop insights on individual customers and help firms develop products or services that are customized to customer preferences**.

Access to data and use of data thus may become a strategic asset for digital firms to increase their value proposition. Data collection and usage is thus becoming central to many digital platforms.

This data can be used by the platform to keep users engaged or to develop in adjacent markets (thanks to the exploitation of the data's economies of scope) or to preempt competition (for example by allowing the platform to monitor the success of the services offered by complementors on the platform) or to enhance the effectiveness of the digital advertising through which the ecosystems finance themselves. It can also be sold to third parties.

Data as barriers to entry

First, access to data, data analytics and processing can help digital platforms better understand their customers. The algorithms which analyze the data are all the more effective when they are trained on a large number of data. Thus, a platform with more users and more data points should be be better able to target its ads or its services to users than a platform with fewer users. This gives a **qualitative advantage to large platforms over smaller platforms and can lead to markets tipping in favor of the largest platforms.**

Second, access to data is seen by some analysts as a **significant barrier to entry into digital markets**, as newcomers are supposed to be incapable of surpassing currently successful firms that base their business model on the analysis of its collected data.

However there are numerous examples of entrant platforms which have developed even though they did not originally have access to data. **For example, Twitter and Instagram started with almost no data but became successful by attracting and keeping users thanks to the technical quality and ease of use of the services they offered**. **For the same reason Facebook was able to overtake MySpace in social networking and Google was able to overtake Yahoo**.

Data as barriers to entry

Third, in some instances, the **abundance of the data for a particular platform is the result** of its success in the provision of specific services but the result **of a deliberate monopolization of the relevant data to prevent competition in the provision of the same services.**

The most obvious example is that of connected cars.

Altogether, as Eliana Garces and Daniel Fanaras state (1) : " **, whether data represents a barrier to entry in a particular market necessarily is a case specific analysis. This analysis must examine the relevance of the data for the quality and success of the service provided, the alternative sources of data and the alternative types of data that could be used to enhance a comparable service to the same effect, as well as consumer behavior in terms of switching and multi-homing**".

(1) Eliana Garces and Daniel Fanaras, "ANTITRUST, PRIVACY,AND DIGITAL PLATFORMS' USE OF BIG DATA: A BRIEF OVERVIEW", The Journal of the Antitrust, Unfair Competition and Provacy Law Section of the California Lawyers Association, Vol 28, n°1, Fall 2018

Privacy as an element of performance

"The review of the empirical work on privacy reveals various insights.

First, it confirms the principal theme arising from the theoretical literature: **empirical evidence exists both for scenarios in which the protection of privacy slows innovation or decreases economic growth, and scenarios in which the opposite is the case**.

A second insight highlights **consumers' inability to make informed decisions about their privacy, due to their being often in a position of imperfect information** regarding when their data is collected, with what purposes, and with what consequences.

A third insight relates **to heuristics that can profoundly influence privacy decision-making**, since privacy trade-offs are intertemporal in nature and often uncertain".

Acquisti, Alessandro and Taylor, Curtis R. and Wagman, Liad, The Economics of Privacy (March 8, 2016). Journal of Economic Literature, Vol. 52, No. 2, 2016, Sloan Foundation Economics Research Paper No. 2580411, Available at SSRN: https://ssrn.com/abstract=2580411 or http://dx.doi.org/10.2139/ssrn.2580411

Personalized pricing and price discrimination

“ In economic models with two periods, in which customers reveal with their buying decisions their willingness-to-pay in a first period, this information (buying history) can be used for personalised pricing in the second period.

In such settings economists can show that **it depends on a number of conditions whether this additional information leads to higher or lower profits of firms, and harms or even benefits consumers**.

If the customers are not aware that the firms use the buying history ("naive" customers) and the firms have a monopoly, then this information increases profits by appropriating more (and theoretically all) consumer rents.

However, **under competitive conditions the same information can lead to more competition between firms for the different customers and therefore lower profits and lower prices**. As a consequence, having more information about the customers is not always beneficial for the firms”

Wolfgang Kerber, “Digital markets, data, and privacy: Competition law, consumer law, and data protection”

Data Portability

Data portability could in some cases both facilitate entry by competitors and lower switching costs for consumers. However, there are cases where data portability will have little impact on competition (for example **if the portability of the data imposes a cost on users of the platform or if the provision of the services offered by the platform is highly concentrated and consumers have difficulties in finding a competing service to switch to**.

Similarly, **if the economies of scale or scope from the data are strong or if the network effects are strong in the provision of the service, data portability may be insufficient to promote competition** either because potential competitors will only get a limited amount of data since only few users of the dominant service might be willing to port their data to the new service.

In addition, **if data portability obligations are imposed on all platforms, it may allow the dominant platform to induce users of the competing services to switch to its own service and reinforce its dominance**.

At a practical level, data portability does not seem to have had a major effect on competition where it has been adopted or imposed. (Examples : Facebook, retail banking sector in the UK)

(1) James Mancini, Data portability, interoperability and digital platform competition, Background Note by the Secretariat, OECD Competition Committee, 9-11 June 2021

Interoperability

The lack of horizontal interoperability (for example, the impossibility of a messaging service to send messages to services run by other companies) **may lock in consumers with a platform as they will lose the network**.

The lack of vertical interoperability can prevent users from combining different complementary products from different platforms or allow an ecosystem to prevent the access to a platform by a third party provider competing with a service offered by the core platform of the ecosystem.

Interoperability measures could help prevent a market from tipping into monopoly.

The **use of uniform standards and interfaces of interoperability** may limit the possibilities of firms to develop their own specific products and services because they have to comply with these standards and interoperability requirements. This **may limit innovation and product differentiation to the detriment of consumers**

"Even among the proponents of greater interoperability, there is a broad consensus that (1) interoperability is not an aim in itself, (2) **there are both benefits and costs of interoperability,** and (3) **due to the ensuing trade-offs, the optimal degree and design of interoperability will be context-specific** and will depend on the specific economic and technological conditions in a market".

Wolfgang Kerber and Heike Schweitzer: "Interoperability in the Digital Economy", Journal of Intellectual Property, Information Technology and E-Commerce Law, JIPITEC 8 (1) 2017

Competition for the market instead of competition in the market

Dominant platform can easily be overturned by an entrant or rival with **better technology**, **higher quality**, or a **different business model**.

Ex **MySpace displaced by Facebook as the dominant social media platform.**

With respect to Web browsers Netscape was crushed by Microsoft's Internet Explorer which was eventually crushed by Google Chrome;

With respect to operating systems MS-DOS disappeared and was replaced by Windows

With respect to mobile operating systems Blackberry and Nokia lo disappeared and were replaced by Android and iOS

The Schumpeterian process of innovation is how competition occurs, particularly in technology markets through disruptive technological entry

Definition of relevant product or service markets are of little relevance to assess competition

Because of their modularity, the economies of scope associated with the technology (algorithms) or data use, platforms can easily move from one market to vertically related or adjacent markets. They are by design present on a variety or complementary markets. **The combination of services they offer changes over time as well as their business models because they explore new technological or service complementarities** .

Disruptive innovations threatening existing platforms routinely come from platforms which are not present on the same service markets as the platforms they disrupt.

Thus, **the delimitation of the relevant markets on which platforms are present is a poor predictor of their market power or of the potential competition they could face.**

The competition analysis must consider the platform in the context of a large set of actual or potential complementary markets (upstream downstream and adjacent markets) or technologies.

Business models matter for competition analysis

One major source of differentiation we need to take on board is **distinctions in the business models the various ecosystems operate, and how these different strategies for monetising the surplus created by their platforms influence their incentives** (Caffarra 2019). Unlike, for instance, telecoms operators that were subjected to industry regulation that applied fairly uniformly because they all operated roughly the same business model, **digital tech giants operate a spectrum of business models**.

At one end we have device-funded ecosystems like Apple's (or, similarly, license fee or subscription funded ecosystems like Microsoft's), whose value is generated by the presence of a desirable set of complementary services (e.g. Apple's App Store or the ecosystem of applications around Microsoft's OS and cloud products) but which are **primarily monetised via consumer-side 'access fees' (whether this be device prices or subscriptions).**

At the other end, there **are ad-funded 'aggregators' who provide 'free' services to consumers and monetise through ads or data collection**. Google and Facebook are the leading examples in this category, with services (Social Networking, Search, Gmail, YouTube) provided at a zero price to consumers and monetised via advertising, or by gathering data which can be used and monetised elsewhere.

Business models matter for competition analysis

Ex 1= A device-funded platform is likely to internalise the benefit of an ecosystem that consumers value more highly because it can monetise that ecosystem directly by charging a higher price for its devices.

By contrast, the **degree of 'internalisation' by an ad-funded platform is likely to be different**.Under this business model **the platform cannot directly alter the price of devices and so cannot as easily alter the 'access fee' for the platform in response to changes in the quality of the overall ecosystem. This means that its revenues and profits are less closely tied to the quality of the ecosystem**: a higher-quality ecosystem is helpful of course, insomuch as it leads to more users. But the increase in value per user cannot be as easily extracted with advertising. **This difference will tend to push the ad-funded ecosystem towards fostering cheaper devices which bring in more users rather than a high-quality ecosystem that can be monetised via higher-end prices**.

Business models matter for competition analysis

Ex 2= The 'incidence' of a commission on sales of third-party apps is likely to be very different for a product-funded ecosystem (which might be incentivised by such a revenue stream to set lower prices for its main products relative to a counterfactual with no commissions) **versus an ad-funded operator (where pass-through will tend to be more diffuse).**

For example in the case of Amazon's, sales by third-party sellers are monetised via commissions while Amazon's own retail business sells potentially the same products – thus monetising via direct sales to consumers**. If Amazon sets the commissions on third-party sales at a level that maximises its own profits, it will then decide to enter as a direct retailer only if its efficiency relative to alternative sellers in terms of logistics and marketing will lead to prices that are lower enough to increase aggregate consumer welfare**.

The incentive is very different than would be the case for an ad-funded business. **In that case self-preferencing will emerge much more naturally.**

Dynamic efficiency benefits must be weighed against the cost of dominant platforms

Digital MSPs do co-ordinate exchanges that could not otherwise have occurred, such as better and faster matching of supply and demand, increased variety and discovery benefits (especially with experience goods like music and books), and more intensive usage of idle assets (cars, accommodation).

These benefits imply that, even if platforms grow to a large scale and appear dominant with some potentially adverse dynamic efficiency consequences, there is significant economic welfare to be weighed against any potential abuse (Coyle, 2018).

Indeed, **the larger the platform, the larger these economic welfare gains are likely to be**.

Yet there is **no settled approach either in the economic literature or competition practice to weighing static efficiency against the potentially much larger dynamic efficiency gains or losses**. "Although we know that innovation is critical to economic growth, the theoretical literature relating to competition and innovation remains insufficient to instill any great confidence in our ability to determine what antitrust policies will encourage innovation and result in net consumer welfare gains." (Manne and Wright, 2010, p166).

Diane Coyle, "Practical competition policy implications of digital platforms", Bennett Institute for Public Policy working paper no: 01/2018, Cambridge University, 2018

Challenges to merger control in the digital sector

The Past is a poor predictor of the future

As the EU Commission states (1):

"(…) in acquisitions of nascent competitors, **the current reality may be a poor proxy for the situation absent the merger, given the high potential of the young target and dynamic nature of the markets**. **Hence, in addition to the situation post-merger, the Commission has to predict also the likely evolution of the target absent the merger** (e.g. whether the target's novel pipeline products/services will succeed, whether it will pivot to another area to directly compete with the acquirer, etc**.). While merger control is by definition a forward-looking exercise, making an accurate prediction as to the future of a nascent, fast-growing company in a dynamic market is particularly challenging**".

(1) Start-ups, killer acquisitions and merger control – Note by the European Union, OECD Competition Committee, 11 June 2020

Challenges to merger control in the digital sector

Assessing potential competition

One can question whether US Justice department and US courts and the EU Commission and European courts have taken such a narrow view of the conditions under which a merger could be blocked because it restricts potential competition as to make this potential competition restriction approach unworkable in the digital sector where the targets are often not yet in the relevant markets (particularly but not exclusively the advertising market), where, at the time of the merger, they have a negligible market share compared to that of the acquiring platform for the services offered by the platform (or offer services for free to users who can multihome which makes any attempt to measure their market share problematic) and where there are usually a number of other potential competitors in various adjacent markets that could conceivably diversify their offer to compete with the large platforms.

Challenges to merger control in the digital sector

- **Dominant firms like MySpace can be displaced in a few years,**
-a comparatively small platform like Instagram can develop very rapidly and compete with the most established social media networks thanks to a shift in the pattern of consumption of users;
-a unicorn like TiK Tok can develop an innovative technology to produce and exchange videos, which even the more successful social media cannot emulate, and capture a large segment of the social media market in just a few years.

To assess whether the target firm in a digital merger is a potential competitor of the acquiring platform or whether other potential entrants could materialize competition authorities have to look beyond the characteristics or structure of the digital markets at the time of the merger and evaluate the dynamics of the ecosystems and platforms.

Challenges to merger control in the digital sector

Formulating Remedies

Given the difficulties in understanding the dynamics of the digital sector, given the fact that new or different business models are constantly appearing, and given the fact that the behavior of users of digital services is not always well understood or anticipated, it is very difficult for competition authorities to formulate behavioral remedies in digital merger cases.

"We should strengthen the ex-post evaluation of merger analysis for big platforms to better understand the validity of analysis at the time of the merger and whether the proposed remedies are the appropriate ones. Mistakes in this analysis should receive a particular attention and have a didactic function when the same big platform comes forward with a notification of its next merger.
We should be ready to impose remedies that are contingent on specific future outcomes. If it becomes clear that the remedies attached to the past approval of a merger do not have the desired effects, there should be flexibility such that remedies could be modified accordingly. It would be helpful if remedies are periodically reviewed to assess whether they have the desired effect and are then revised or updated. The specific targets in terms of the welfare impact of a merger as well as authorities' concerns should be clearly communicated at the time of the approval of the merger. Remedies should be flexible to change in order to ensure that the specific targets are reached, if needed".

Geoffrey Parker, Georgios Petropoulos, Marshall Van Alstyne "Platform Mergers and Antitrust" January 10, dat2021, SSRN accessed on January 23 2021 at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3763513

The EU Digital Market Act Proposal

Issues of contestability and unfair practices (…) appear to be particularly strong when the core platform service is operated by a gatekeeper. Providers of core platform providers can be deemed to be gatekeepers if they:

(i) have a significant impact on the internal market,

(ii) operate one or more important gateways to customers and

(iii) enjoy or are expected to enjoy an entrenched and durable position in their operations.

The identified gatekeeper-related problems are currently not (or not effectively) addressed by existing EU legislation or national laws of Member States. Although legislative initiatives have been taken or are under consideration in several Member States, these will not be sufficient to address the problems.

Self-executing obligations for gatekeepers

In respect of each of its core platform services identified pursuant to Article 3(7), a gatekeeper shall:

(a) **refrain from combining personal data sourced from these core platform services with personal data from any other services offered by the gatekeeper** or with personal data from third-party services, and from signing in end users to other services of the gatekeeper in order to combine personal data, unless the end user has been presented with the specific choice and provided consent in the sense of Regulation (EU) 2016/679. ;

(b) **allow business users to offer the same products or services to end users through third party online intermediation services at prices or conditions that are different** from those offered through the online intermediation services of the gatekeeper;

(c) **allow business users to promote offers to end users acquired via the core platform service, and to conclude contracts with these end users regardless of whether for that purpose they use the core platform services of the gatekeeper or not**, and allow end users to access and use, through the core platform services of the gatekeeper, content, subscriptions, features or other items by using the software application of a business user, where these items have been acquired by the end users from the relevant business user without using the core platform services of the gatekeeper;

Self-executing obligations for gatekeepers

In respect of each of its core platform services identified pursuant to Article 3(7), a gatekeeper shall:

(d) **refrain from preventing or restricting business users from raising issues with any relevant public authority relating to any practice of gatekeepers**;

(e) **refrain from requiring business users to use, offer or interoperate with an identification service of the gatekeeper in the context of services offered by the business users using the core platform services of that gatekeeper**;

(f) **refrain from requiring business users or end users to subscribe to or register with any other core platform services** identified pursuant to Article 3 or which meets the thresholds in Article 3(2)(b) **as a condition to access, sign up or register to any of their core platform services identified pursuant to that Article**;

(g) **provide advertisers and publishers** to which it supplies advertising services, upon their request, **with information concerning the price paid by the advertiser and publisher, as well as the amount or remuneration paid to the publisher, for the publishing of a given ad and for each of the relevant advertising services provided by the gatekeeper**.

Obligations for gatekeepers susceptible of being further specified

Article 6

1. In respect of each of its core platform services identified pursuant to Article 3(7), a gatekeeper shall:

(a) **refrain from using, in competition with business users, any data not publicly available, which is generated through activities by those business users,** including by the end users of these business users, of its core platform services or provided by those business users of its core platform services or by the end users of these business users;

(b) allow end users to un-install any pre-installed software applications on its core platform service without prejudice to the possibility for a gatekeeper to restrict such un-installation in relation to software applications that are essential for the functioning of the operating system or of the device and which cannot technically be offered on a standalone basis by third-parties;

(c) **allow the installation and effective use of third party software applications or software application stores using, or interoperating with, operating systems of that gatekeeper and allow these software applications or software application stores to be accessed by means other than the core platform services of that gatekeeper.** The gatekeeper shall not be prevented from taking proportionate measures to ensure that third party software applications or software application stores do not endanger

Obligations for gatekeepers susceptible of being further specified

Article 6

1. In respect of each of its core platform services identified pursuant to Article 3(7), a gatekeeper shall:

(d) refrain from treating more favourably in ranking services and products offered by the gatekeeper itself or by any third party belonging to the same undertaking compared to similar services or products of third party and apply fair and non-discriminatory conditions to such ranking;

(e) refrain from technically restricting the ability of end users to switch between and subscribe to different software applications and services to be accessed using the operating system of the gatekeeper, including as regards the choice of Internet access provider for end users;

(f) allow business users and providers of ancillary services access to and interoperability with the same operating system, hardware or software features that are available or used in the provision by the gatekeeper of any ancillary services;

Obligations for gatekeepers susceptible of being further specified

Article 6

1. In respect of each of its core platform services identified pursuant to Article 3(7), a gatekeeper shall:

(g) provide advertisers and publishers, upon their request and free of charge, with access to the performance measuring tools of the gatekeeper and the information necessary for advertisers and publishers to carry out their own independent verification of the ad inventory;

(h) provide effective portability of data generated through the activity of a business user or end user and shall, in particular, provide tools for end users to facilitate the exercise of data portability, in line with Regulation EU 2016/679, including by the provision of continuous and real-time access ;

(i) **provide business users, or third parties authorised by a business user, free of charge, with effective, high-quality, continuous and real-time access and use of aggregated or non-aggregated data, that is provided for or generated in the context of the use of the relevant core platform services** by those business users and the end users engaging with the products or services provided by those business users; for personal data, provide access and use only where directly connected with the use effectuated by the end user in respect of the products or services offered by the relevant business user through the relevant core platform service, and

Obligations for gatekeepers susceptible of being further specified

Article 6

1. In respect of each of its core platform services identified pursuant to Article 3(7), a gatekeeper shall:

(j) provide to any third party providers of online search engines, upon their request, with **access on fair, reasonable and non-discriminatory terms to ranking, query, click and view data in relation to free and paid search generated by end users on online search engines of the gatekeeper, subject to anonymisation for the query**, click and view data that constitutes personal data;

(k) apply fair and non-discriminatory general conditions of access for business users to its software application store designated pursuant to Article 3 of this Regulation

The DMA is different from infrastructure regulation?

While **some of the DMA rules might also feature in a common carrier approach** (no discrimination, no self-preferencing, access rights), the **main animating principle is not so much to control the power of a monopoly infrastructure**—e.g., setting access terms, but much more **to prohibit or discourage conduct that has either the intent or effect of preventing entry of a rival (or raising its cost) where entry would otherwise be possible**.

A second purpose is to **enforce fairness, a strong pillar of the European ordoliberal tradition, by prohibiting conduct that exploits and weakens counterparties that depend on the platform**.

Removing obstacles to entry, and fairness in the relationship with dependents, are the two goals of the law.

Its method is "pro-competitive regulations" that seek to tame market power by enabling new competitors, rather than choosing price or quality levels. (The Stigler Report recommended just this approach.)

Caffara and Scott Morton How Will the Digital Markets Act Regulate Big Tech? The Stigler Center, January 11, 2021

Which firm qualify as a gatekeeper in the DMA?

The **criteria** for the designation of a gatekeeper are **quantitative**:

- Annual EEA turnover above EUR 6.5 billion in the last three years;
- Average market capitalization or equivalent fair market value above EUR 65 billion in the last year, active in at least three Member States;
- Over 45 million monthly active end users in the Union and over 10 000 yearly active business users in the last year.

Back-of-envelope calculations suggest that these criteria will capture not only (obviously) the core businesses of the largest players (GAFAM), but perhaps also a few others: **Oracle and SAP for instance would appear to meet the thresholds, as would AWS and Microsoft Azure**.

Conversely, Twitter, Airbnb, Bing, Linkedin, Xbox Netflix, Zoom, and Expedia do not appear to meet the thresholds at present, **and Booking.com, Spotify, Uber, Bytedance/TikTok, Salesforce, Google Cloud, and IBM Cloud appear to meet some but not others at this point.**

Caffarra and Scott Morton

Where do the obligations come from ?

(…) the list of obligations outlined in the DMA seems to **be a catalog derived from past and current antitrust cases involving the usual set of Big Tech platforms, where the particular remedy has been generalized to apply to all gatekeepers, but without an explanation as to how and why that would work**.

Translating these dicta into actionable rules that people and companies can understand likely will require clearer organizing principles around business models.

Caffara and Scott Morton,January 11, 2021

A set of (questionable) rigid obligations

So how can these lists be made operational**? Some organizing principles around business models would have been more useful, even if one does not want to get too "close and personal" and name individual companies**.

A fixed set of rules—covering all kinds of business models—applying to any platform that is designated a gatekeeper is the contrary of "flexible."

What is more, **the separation between the designation of a gatekeeper first, and the application of the obligation second, is artificial because it is through the evaluation of conduct and its impact that an agency would identify a gatekeeper and understand what particular rules would ameliorate the problems that have been identified.**

As discussed further below, the UK seems to be taking this combined approach.

Caffara and Scott Morton

Is regulation the best way forward ?

“(…) App makers will suffer from the ripple effects this legislation will have on the whole ecosystem, making it more difficult to reach consumers and compete against big brands."said Mike Sax, chairperson and founder of ACT

The Commission's commitment to preserving competition is commendable but **responding to potential problems without evidence of actual harm is the wrong approach.**

The creation of a list of prohibited practices (blacklist) and obligations (whitelist) for large online platforms is concerning. **The white-, gray-, and blacklists only address a snapshot of the current economy. They will be outdated a few months from now**.

For example, **forcing multiple app stores on devices would only fragment the market and increase costs, especially for smaller app makers with limited resources. We prefer a model like the core principles in the E-Commerce Directive, defining what's truly important and what should guide competition policy moving forward**.
Rather than taking an ex-ante approach that tries to anticipate problems, **the App Association believes the best way to safeguard competition is to continuously look for evidence of actual harm and put mechanisms in place that can address it with swift remedies.**

App Association,Dec 15, 2020, 14:34 ET BRUSSELS, Dec. 15, 2020

A system of rebuttable presumptions would be better

"Because of the innovative and dynamic nature of the digital world, and because its economics are not yet completely understood, it is extremely difficult to estimate consumer welfare effects of specific practices. … our insights into possible countervailing efficiencies are still evolving". Given the concentration tendencies of platforms, and the high barriers to entry in some of the markets they dominate, a finding that they restrict the ability of other firms to compete either on the platform or for the market in a way which is not clearly competition on the merits should trigger a rebuttable presumption of anti-competitiveness. It should be the dominant platform's responsibility to show that the practice at stake brings sufficient compensatory efficiency gains.

Given the breadth of the presumption, and the fact that our insights into possible countervailing efficiencies are still evolving, such efficiency defences should be fully explored by competition agencies and courts.

Jacques Crémer, Yves-Alexandre de Montjoye, Heike Schweitzer, Competition policy for the digital era, European Commission

Anti-competitive effects and efficiency gains

We consider that **one of the main challenges in the implementation of the DMA is how to separate the positive efficiency and welfare gains that platforms generate through (data-driven) network effects from negative anti-competitive and welfare-reducing platform behaviour.**

Pro-competitive remedies should not undermine the efficiency gains of platforms.

How can we preserve the wider societal benefits of network externalities while avoiding abuse of gatekeeper dominance?

A related challenge is how to narrow the information gap between regulators and gatekeepers, so that regulators can more accurately distinguish between pro- and anti-competitive gatekeeper behaviour.

Cabral, Haucap, Parker, Petropoulos, Valletti, Van Alstyne , "The EU Digital Markets Act: A Report from a Panel of Economic Experts », European Commission 2021

Anti-competitive effects and efficiency gains

For example, **Article 6 states that one should allow business users to bypass app stores**. While we agree that this often corresponds to an abuse of dominant position, **we can also envision efficiencies emanating from centralised control. As such, we would include these behaviours in our grey list that lets the platform make its case that efficiencies justify a closed system.**

Similarly, **Article 5 would bar platforms from requiring its users to employ the platform's own identification system**. Again, we would include these behaviours in our grey list, as **there are reasonable theories of value creation that justify this type of restrictions. Again, the regulated platforms would need to justify why those restrictions are necessary though.**

(…) Finally, we **suggest that the efficiency defence needs to fulfil the same standard of proof as in merger control and horizontal and vertical agreements that restrict competition**

Cabral, Haucap, Parker, Petropoulos, Valletti, Van Alstyne , "The EU Digital Markets Act: A Report from a Panel of Economic Experts », European Commission 2021

Tying and bundling can increase consumer surplus

Notwithstanding a long history of abuse of dominant position by means of tying and bundling, we also recognise **that in some cases consumers benefit when firms bundle key services**.

For example, **Google requires users of their location-based services to also use a Google approved version of Android.** Hardware manufacturers who wish to use Google apps are required to join the Open Handset Alliance which obligates members to use only Google approved Android versions.

In this way, even though Android is open source, Google's control prevents fragmentation of the code base. In this sense, **one may argue that Google provides a benefit that stems from some level of standardisation**.

The **downside** is that **potential operating system innovations are not interoperable with Google data services and Google may be able to charge higher prices for those services.**

The **offsetting benefit** is that **app developers and hardware manufacturers have to contend with fewer variants of the Android operating system than they otherwise would and are thus able to ensure interoperability**.

The challenge, of course, is to know whether the potential harm is larger than the benefits.

Cabral, Haucap, Parker, Petropoulos, Valletti, Van Alstyne , "The EU Digital Markets Act: A Report from a Panel of Economic Experts », European Commission 2021

Tying and bundling can increase consumer surplus

Bundling also occurs when platforms absorb functions that were previously provided by ecosystem partners into the core system. This can happen for numerous reasons.

One **anticompetitive explanation is that a platform might fear that a complement provided by an external party could become indispensable.** For example, **Apple invested in its own mapping functionality for the iOS system after Google launched the Android operating system and became a more direct competitor. It dropped Google's mapping app and bundled its own app into the base system as shipped to consumers.**

Article 6 of the DMA includes tying and bundling in the list of prohibited gatekeeper practices "susceptible of being further specified." **Recognising the anticompetitive effects but also the possible efficiencies from bundling, we recommend that tying and related practices be presumed anti-competitive and grey-listed, and that the burden of proving pro-competitive effects be placed on the gatekeepers.** The presumption of anticompetitive effects, especially when the practice is initiated by a firm with market power, is important because of the fast pace at which digital markets evolve.

Cabral, Haucap, Parker, Petropoulos, Valletti, Van Alstyne , "The EU Digital Markets Act: A Report from a Panel of Economic Experts », European Commission 2021

The business obligations should be tailored to the business model of the platform considered

The DMA could encourage numerous business users to choose a “remedy taker” business model, foregoing independent innovation in favour of Commission enforced access to platform interfaces and resources. But this would effectively make them mere resellers, not rivals. The results of telecom regulation suggest that potential rivals would focus less on disrupting digital incumbents and growing the digital pie, instead of the zero-sum “regulated access” game of lobbying for a bigger piece of value created elsewhere.

The DMA also ignores that platform operators already have an incentive to facilitate innovation from business users in their ecosystem, because it attracts more users. But they also have to optimise across a range of different ecosystem players to maximize total system value.

The right balance has evolved separately for different business models and in different industry contexts. The DMA would impose a one-size-fits-all straightjacket to this dynamic evolution across the entire digital economy.

Legislators will have to decide, should the DMA obligations be flexibly tailored to specific business models and industry contexts in order to maximise innovation, or should platforms be prohibited from dynamically responding to evolving market developments?

KAY JEBELLI ,The EU Digital Markets Act: Five Questions of Principle, FEBRUARY 9, 2021

The DMA establishes a preference for suppliers at the expense of consumers

But **under the DMA, the Commission must "ensure a fair balance" in the commercial relationship between the platform operator and its business users regardless of the effect on consumers (see Article 10). As proposed, the DMA will set in stone a policy preference for suppliers at the expense of consumers.**

Legislators will have to decide, **should the DMA put the consumer interest first, allowing companies to justify their product design decisions as pro-competitive or pro-consumer, or should the Commission's primary prerogative be protecting competitors interests, regardless of how that may harm consumers**?

KAY JEBELLI ,The EU Digital Markets Act: Five Questions of Principle, FEBRUARY 9, 2021

The DMA does not promote competition between platforms

Concentration of power is not sufficiently contested

(The DMA) **seems to focus on creating the condition for competition at the business users' level, rather than on creating the conditions for more platforms to enter the market**. In other words, the DMA proposal cares about protecting business users from, for example, self-preferencing behaviours of vertically integrated platforms; the imposition of most-favoured-nation clauses; and the mandatory use of certain platforms' services in their relationships with end-users. But **it does little to create the conditions for competition to be restored at the platforms' level.**

An extremely meaningful example is Article 6 (i)(f) of the DMA proposal, which requires gatekeepers to provide access and interoperability only with regards to business users or ancillary services. Rather than fostering the emergence of new platforms, this provision has the potential to increase the systemic dependence of business users and ancillary services' providers from the core platform, whose position remains uncontested and secured in the upper market.

EU: More ambitious DMA needs to shape digital markets of our future, Article 19, POSTED ON MARCH 11, 2021 DIGITAL 19 MIN READ

What regulation if we need regulation?

If we think that there is a need for regulation, and given the complexities resulting both from the diversity of possible business models for platforms and from the large number of complex economic trade-offs between elements of performance of digital platforms, **it is advisable to ensure that the regulation includes sufficient flexibility to allow the regulator a degree of freedom to tailor the obligations imposed on the platforms to their specific circumstances**.

Competition authorities will just keep crashing if they never take their eyes off the rear view mirror

Conclusions: areas for research

1) Use the insights of the business literature on platforms and ecosystems to adapt the conceptual framework of competition law enforcement to the digital sector. Get an integrated view of competition between platforms and competition within platforms (between the platform and third parties business users).

2) What are the various trade-offs between the welfare of consumers, the fairness of the treatment of third parties by large platforms, the reduction of barriers to entry, the intensity of competition among platforms and the production of innovation. This consideration should inform the formulation a few high level principles on competition in the digital sector which will be the basis either for competition law enforcement or the design of a regulation.

3) How to adapt the competition law instruments (such as the market shares, concentration ratios, HHI indexes, Lerner index etc~~....~~ …) to the reality of platform competition and develop some new instruments.

4) If privacy is to be considered as a quality dimension of services offered by platforms, **is there any pragmatic way to assess the value that consumers place on this dimension of quality when there are trade-offs between the protection of privacy and the other dimensions of quality of the services rendered by platforms**? Is there any pragmatic way to assess how this value varies with the particular trade-off considered?

Conclusions: areas for research

5) Under which circumstances and through which mechanism does the accumulation of data by a platform constitute a barrier to entry for its competitors? Should we make a difference between the cases where access to a platform's data is a necessary condition for competitors to provide a competing service (where the data is an essential facility) and cases where the accumulation of data by the platform does not prevent competing platforms from offering a similar service but allows the platform to have a competitive advantage by offering a higher quality service than its competitors? How should we treat cases where the accumulated data of a platform gives it a competitive advantage in the provision of high quality services to users but that this information, because it is specific to what the platform needs to improve its services, would be of little or no use to platforms offering competing but differentiated services?

6) How can we measure the welfare implications of the fact that in a number of cases access to more data which comes with size of the platform user base) also allows **the platform to offer more targeted services to consumers.**

7) Do mergers in the digital sector require a different approach to the assessment of potential competition than mergers in non digital markets ?