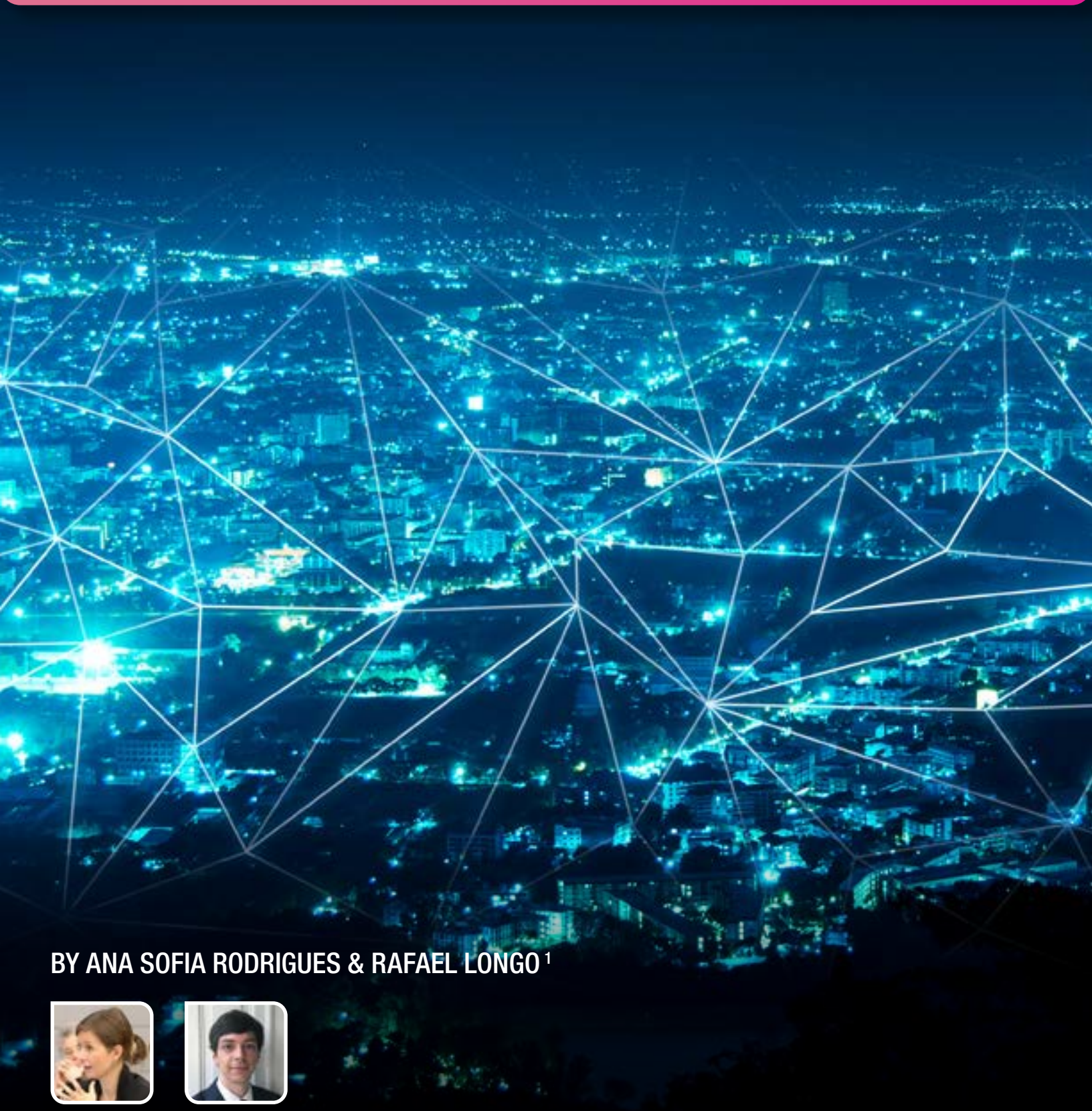
DATA, PRIVACY, AND COMPETITION: THEORIES OF HARM AND DATA MOBILITY



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1 Autoridade da Concorrência ("AdC") – Portuguese Competition Authority. The views expressed in this paper are those of the authors and do not necessarily represent the views of the institution.

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Data, Privacy, and Competition: Theories of Harm and Data Mobility

By Ana Sofia Rodrigues & Rafael Longo

The dynamics of competition in data-powered ecosystems are motivated by user-related network effects and centered around users. Incumbent platforms thus have incentives to build strategies to protect their market, aimed at shielding their user base from contestability by rivals. This includes users from related markets, which may serve as an entry point to the core market of the ecosystem, especially when related markets are data rich. Fostering contestability in ecosystems protected by data-driven network effects and switching costs is intrinsically linked to data portability and interoperability. In implementing such measures, there is scope to learn from past experience in financial services, as incumbents may have incentives to compromise the effectiveness of data mobility regulations.

I. INTRODUCTION

The dynamics of competition in data-powered ecosystems are motivated by user-related network effects and centered around users.

Incumbent platforms thus have incentives to build strategies to protect their market, aimed at shielding their user base from contestability by rivals. This includes users from related markets, which may serve as an entry point to the core market of the ecosystem, especially when related markets are data rich.

Fostering contestability in ecosystems protected by data-driven network effects and switching costs is intrinsically linked to data portability and interoperability. In implementing such measures, there is scope to learn from past experience in financial services, as incumbents may have incentives to compromise the effectiveness of data mobility regulations.

II. DATA AS A SOURCE OF COMPETITIVE ADVANTAGE

Data is the key input for digital ecosystems and has become the driving engine of the digital economy. The ability to collect large and varied datasets and to extract insights from data is pivotal for digital platforms to gain a competitive advantage vis-à-vis their competitors.

However, data may also be a source of barriers to entry and expansion in the market. Using data carries costs and may not be easily replicable by other firms. There are several reasons for this, including the need for processing power, storage capabilities, large networks, access to users, data science expertise, and specific investments in the development of algorithms, often through trial error.

Access to users stands out as one of the most important data-related barriers in digital markets, as a source of strong network effects. Large and varied datasets allow platforms to build better products, which in turn attracts more users resulting in even more and better data.

The most valuable data is generated by the users themselves and either volunteered (e.g. user registrations) or user activity observed by the platforms. To the extent that digital platforms are competing for user attention, or there is rivalry in the consumption of the services provided by the platform, the data collected by one platform is not replicable by competing platforms.

In such cases, users are regarded by digital platforms as an asset – they form a data farm that must be managed – and it is paramount for platforms to build an environment to attract and keep users, and an infrastructure to collect data about them.

III. STRATEGIES BY DIGITAL PLATFORMS IN THE FACE OF DATA-DRIVEN ADVANTAGES

The number of active users in a platform/ecosystem, how often they use it (e.g. the total number of messages or time spent and other proxies for attention) are thus relevant dimensions of competition. This is because of both data-driven network effects and due to more standard network effects, such a user wishing to interact with family or friends.

Competing on users and on users' attention means that digital players have incentives to (i) attract and keep users in the ecosystem; (ii) prevent any user leakages to competing ecosystems; and (iii) bar competitor ecosystems access to users.

Digital markets may have many entry points. The direct route is perhaps the most challenging for entrants, as it can be difficult to surpass the incumbents' built-in advantages. However, digital products may have significant synergies with each other.

Synergies depend on the structural characteristics of the products and emerge depending on market innovations (e.g. smartphone). They may be either economies of scope or synergies of consumption, such as network effects across products. Sharing data between products in a digital ecosystem is perhaps the most important way these synergies materialize.

Digital synergies multiply the number of entry points to the market and make indirect routes potentially viable strategies for entrants. An entrant may seek, first, to build a competitive advantage in one adjacent market and then go for the target market where the incumbent is established.

Incumbents are, of course, well aware of this, and they may have incentives to close off the entry points to their core markets. If the market is relatively new, they may do so through what may boil down to an effective race to grab the market by quickly building user bases and network effects. If the market has already stabilized, incumbents may try to acquire their rivals or raise barriers to entrants' entry and expansion.

Internal documents disclosed by the Federal Trade Commission and the British Parliament make these incentives very clear for the case of Facebook.

Before acquiring Instagram, Facebook was concerned about Instagram rapidly gaining users and establishing its own independent user base. In internal messages, they worried that *"it seems like they double every couple of months or so," that "if they grow to a large scale they could be very disruptive to us."*[2]

Facebook also highlighted it was leaking users to Instagram: *"one concern trend is that a huge number of people are using Instagram every day (…) and they're only uploading some of their photos to FB."*[3]

At the time, there was a race for mobile. This was an emerging market and new entry point for digital platforms. Losing the race for mobile could threaten the position these platforms had on PCs. Facebook, in particular, feared that Instagram could beat Facebook in the race for mobile, or that Google bought Instagram, so that *"they could easily add pieces of their service that copy what we're doing now."*[4]

Facebook had similar concerns regarding WhatsApp. Facebook worried that messaging apps were *"using messages as a springboard to build more general mobile social networks,"* and feared that WhatsApp could be bought by firms like Google.[5]

Facebook also monitored its messaging app competitors closely, through the VPN service Onavo it acquired in 2013. Users were attracted to this VPN because it promised to reduce mobile data usage. As a catch, it allowed Facebook to monitor how their Internet usage on their phones. Facebook monitored WhatsApp this way prior to acquiring it, and also Snapchat.[6]

In addition, users are prone to inertia, and digital platforms are well aware of this. Inertia can be leveraged through the introduction of technical switching costs for users. Forcing users to rebuild lists of contacts and to re-upload their photos, or making it impossible for users to access their history of conversations and comments, are examples of such technical switching costs.

These are discussed internally by Facebook as possible ways on how they *"can make switching costs very high for users"* and that *"it will be very tough for a user to switch if they can't take those photos and associated data/comments with them."*[7]

The strategy in markets with these characteristics may thus be to rely on network effects to attract users, in a snowball effect, but then use switching costs to discourage them from leaving.

IV. DATA PORTABILITY AND INTEROPERABILITY AS A SOLUTION, AND SOME PRINCIPLES

Data portability – the right to transfer data – and interoperability – the technical ability to transfer data – may reduce barriers to entry. If there are significant data-driven network effects, data portability and interoperability may allow businesses to share network effects, preventing them from being siloed in closed ecosystems.

Data portability and interoperability may also facilitate switching and multi-homing by consumers.

There are already some data portability and interoperability practices in place. Digital players created these tools themselves, namely

2 See https://www.ftc.gov/system/files/documents/cases/ecf_75-1_ftc_v_facebook_public_redacted_fac.pdf, pp. 29.

3 *Idem.*

4 *Idem.* pp. 26-34.

5 *Idem.* pp. 35-42.

6 *Idem.* pp. 12-15.

7 *Idem.* pp. 26-34.

to link their services with third-party complements through APIs (e.g. Facebook's Graph API or Google Maps API). In general, however, these tools increase the value of incumbent platforms and do not give room for competitive threats to emerge, strengthening the incumbent's position.

Portability tools for non-complements also exist. Google and Facebook, for example, allow users to download their data in a readable format. Apple, Facebook, Google, Microsoft and Twitter contribute to the Data Transfer Project for API interoperability.

However, these tools are either still in their early stage or geared towards tech-savvy users who wish to back up their data. Most importantly, they seem to be unreliable for entrants to build a business model around them.

To have effective data access, there have been several legislative proposals, including the Digital Markets Act ("DMA") in the European Union, the new German competition rules for digital gatekeepers and the Digital Markets Unit in the United Kingdom.

The DMA includes several obligations on data portability and interoperability, to the benefit of both consumers and businesses, that aim at curtailing strategies by digital gatekeepers that may have a negative impact on competition. These include provisions imposing data silos within gatekeeper platforms; interoperability for ancillary services (e.g. payment services); limitations for dual role platforms on the use of business users' data to compete against them; real-time data portability tools, amongst others.

However, an effective implementation of these provisions hinges on ensuring that gatekeepers do not have the degrees of freedom to circumvent these obligations.

In Europe, we have already some experience on data access for payment services, with the implementation of the Second Payments Services Directive ("PSD2"), alongside with secondary legislation. This legislation aimed at promoting entry, competition and innovation via data mobility, but for payment services only. In order to provide their services to consumers, new market players should be granted access to account data.

The EU Directive imposes that banks must provide access to payment account data and infrastructure to new payment providers, through Regulatory Technical Standards ("RTS") that safeguard security while imposing data access and system interoperability.

Even though the PSD2 is only applicable to a narrow set of services and the data it concerns is well structure and defined, there are important lessons to learn regarding the frictions incumbents could introduce to thwart data mobility.

Chiefly, incumbents could take advantage of consumer biases. Often introducing mere inconvenience for consumers is enough to prevent competitors from ever becoming a threat. These strategies may include, for example, creating unnecessary hurdles in the customer journey for consent to use data in order to induce high consumer dropout rates.

The need to ensure that incumbents have to provide a seamless customer journey for consent, as well as API interoperability, fall back mechanisms and testing sandboxes was envisaged in the PSD2, in the RTS. However, the AdC identified at the time risks of delay and difficulties in implementing the Directive in Portugal. The AdC also put forward a recommendation in 2018[8] on the need to reduce incumbents' degrees of freedom, in secondary legislation to be drafted, with regards as to how data access tools for FinTech services are designed.

More recently, in 2020, the AdC conducted a survey to FinTech firms,[9] which reported several difficulties in accessing bank data in Portugal. For example, difficulties associated with poor API performance, lack of support from the API provider and unjustified obstacles to a seamless user experience, resulting in high drop-out rates. These problems can hinder FinTechs time-to-market and their ability to attract new users.

Accounting for potential frictions in any data access obligations is key to ensure effective interoperability and data portability. On this, the bespoke and periodic revision envisaged in the DMA is key for future proofing. The complexity of digital markets and the different types and uses of data mean that enforcers still need to go through a learning process. Because of this, it is important to have the sufficient degrees of freedom to adjust the tools to ensure that obligations work.

Nonetheless, we should not expect these policy instruments to be necessarily a panacea. Network effects unrelated to data and con-

8 See The AdC identifies barriers to entry of new FinTech firms and recommends measures to promote choice for consumers and companies in financial services in Portugal | Autoridade da Concorrência (concorrencia.pt).

9 See https://www.concorrencia.pt/en/articles/adcs-sector-inquiry-fintech-74-companies-operating-portugal-consider-there-are-barriers.

sumer inertia are common features in these markets. They may be enough to limit the reach of portability solutions in some markets. Rather, these tools must be seen as integrated and used in tandem with other policy instruments, namely merger policy and antitrust enforcement.

V. COMPETITION AND PRIVACY

There is a widespread perception of weak privacy practices in the digital economy. One key question is understanding to what extent the lack of competition in the digital economy has contributed to this situation.

There are multiple non-mutually exclusive perspectives regarding the relationship between privacy and competition. Privacy both shapes competition and is shaped by competition.

A. Privacy Shaping Competition

Emphasizing how privacy shapes competition means looking at privacy as setting the action space over which competition takes place, namely privacy regulations, enforcement and policies.

Privacy rules and enforcement determinate what data-driven strategies are legally available to digital players. Collecting and extracting insights from data are some of the most important dimensions of competition in digital players, such that there may be ever-present incentives for digital firms to push privacy rules and enforcement to their limit.

Changes to privacy rules and enforcement, therefore, change the incentives and the ability for firms to collect data, as well as the data-driven competitive advantages they may gain. This may have an effect on the dynamics of competition (e.g. how aggressively firms protect entry points to the market) and on market outcomes (e.g. market concentration, consumer welfare).

In addition, changes to privacy rules and enforcement shape the incentives and the ability to collect data, as well.

Likewise, digital gatekeepers often organize and determine a significant part of the activity in digital markets. Their privacy policies may, therefore, shape how competition plays out in these markets. In such cases, competition authorities must be mindful of the risk of privacy washing as a cover for self-preferencing, since gatekeepers are usually digital ecosystems as well.

B. Competition Shaping Privacy

User privacy may also be shaped by how competition is played out in the market, and by how competitive the market is. In such cases, privacy becomes intertwined with competition, as a dimension of competition.

The most straightforward case is to acknowledge that consumers see privacy as a good in itself and note that many products, such as messaging apps or search engines, differentiate themselves on privacy. In competitive assessments, privacy can therefore be taken as a dimension of quality.

Such an approach would mean that in merger analysis, for example, competition authorities must assess whether the target firm differentiates on privacy. If, following the merger, there would be a reduction of privacy as a result of eliminating choice and competitive pressure in the market, there may be harm to consumers. This is especially the case if there is a reversal of a long-standing strategy of a strong privacy protection policy of the target firm.

The most prevalent theory of harm in data related mergers, however, is the combination of datasets or data collection capabilities. In these cases, the focus is on how the target firm could use its data advantage as a leapfrog to put competitive pressure on the incumbent's core business, and not on privacy per se. Nonetheless, privacy and competition are invariably intertwined. The combination of datasets from different sources may have direct effects on the degree of privacy for users but, at the same time, may serve as an entry-deterrence mechanism for the incumbent, aimed at protecting its digital ecosystem or its core product.

Since data is a very broad term, heterogeneous and may sustain different business models, the main challenge in terms of competitive assessment in such cases is to anticipate how and what data might be combined and for what purposes. These difficulties are compounded if competition authorities have to ponder the effects of the merger for products that are yet to be developed.

Ultimately, this means the effects of combining data on consumer welfare are not straightforward. Of course, joining datasets may generate efficiencies for consumers. For example, a music recommendation algorithm may make better suggestions or a search algorithm may find more relevant results.

However, not all data combinations are born equal and there are different use cases for data. In addition to the potential of being instrumental to raise barriers to entrants, especially in adjacent markets, data combinations may result in efficiencies that are not passed down to consumers. It may also enhance firms' ability to extract consumer surplus. This is not just about price discrimination but all forms of discrimination towards consumers, namely price steering. Using data to distort choice and steer consumers to more expensive products may harm competition and consumers.[10]

VI. CONCLUSION

Regulatory developments in digital markets are currently still a moving train. The DMA is yet to be approved, as we wait for the negotiation between the Council, in representation of Member States, and the Parliament, on the proposal put forward by the Commission. Some of the key provisions, including those on the black and grey lists and the definition of a gatekeeper, are still under discussion. Once consensus is reached, implementation challenges will take central stage.

On data and privacy related theories of harm, there are still few cases. Insights produced by the existing decision, the ongoing debate and research provide a useful roadmap. Given that there are very diverse use cases for data, with very different competition implications, the decisional practice may yet fall short from providing a complete mapping of the potential theories of harm.

Decisions in the years to come, in the different jurisdictions, will certainly bring further insights. And in this regard, cooperation between the European Commission and national competition authorities is of particular added value

10 See Digital Ecosystems, Big Data and Algorithms, p. 57, published by the AdC in 2019.

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