

DIGITAL REGULATION PROJECT

Fairness and Contestability in the Digital Markets Act

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FAIRNESS AND CONTESTABILITY IN THE DIGITAL MARKETS ACT¹

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Abstract

We analyze the use of the concepts of fairness and contestability in the Digital Markets Act (DMA) and propose formal definitions rooted in the economic analysis of digital markets as well as the goals of the proposed law. We discuss the implication of these concepts for innovation in digital markets.

¹ This is the third in a series of papers prepared by a collection of economists and policy experts in the United States, the UK, and the European Union, who have studied, and are committed to the improvement of, competition in digital markets. Previous papers addressed consumer protection in online markets and regulating the market for general search services.

² Authors' full titles and conflict disclosures can be found in Appendix 1.

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Introduction

According to the managerial strategy literature, a, if not the, key to large profits is the creation of “moats” that protect firms from competition. Firms with market power create moats to maintain that power, and there exist strong incentives to develop new technologies that allow for broader and deeper moats. On the other hand, from a broader societal perspective, and particularly from the perspective of consumers, these moats often are harmful: they surround customers and deny them the opportunity to purchase from competitors. As a result, consumers suffer from the high prices and/or low quality imposed by the incumbent firm, whose incentives to provide the amount and type of innovation desired by consumers are decreased.

Although the development of the digital sector in the last forty or so years has brought enormous benefits, it – as is well known and will also be clear from our analysis below – also creates natural moats and facilitates the creation of artificial ones. Therefore, all over the world, researchers and policy makers are discussing possible novel government interventions to promote the competitiveness of the economy. One of the most prominent recent examples is the proposal of a new European regulation, the Digital Markets Act, or DMA. It is a complex piece of legislation that would lead to a new set of obligations on a small number of the largest firms in the digital sector.⁴

The two key and repeatedly stressed concepts underlying the DMA are those of “fairness” and “contestability.” It is therefore important to explore in depth the way in which fairness and contestability should be understood in the implementation of the DMA, particularly from an economic perspective. This clarification and explanation of the underlying economic foundations will be helpful in several ways. First, it will help with the interpretation of the obligations that the gatekeepers must fulfill, described in Articles 5 and 6 of the proposal. The DMA obligations are neither always perfectly well defined, nor does it seem possible to define them ahead of time with sufficient precision and for every possible future application. A better understanding of the concepts underpinning them may thus guide the Commission and the gatekeeper firms in their discussions about how to apply the obligations. It might also help the courts when, at some point or the other, a firm accused by the Commission of breaching its obligations under the DMA seeks judicial redress. Second, the DMA provides a specification process (Article 7) for ensuring that the obligations laid down in Article 6 “are effective in achieving the objectives of the relevant obligation,” while Article 10 provides procedures for updating obligations when the Commission “has identified the need for new obligations addressing practices that limit the contestability of core platform services or are unfair.” These processes will be more predictable when the basic concepts on which they rest are better understood.

Third, Article 17 provides a procedure through which new obligations should be added to the current list:

The Commission may conduct a market investigation with the purpose of examining whether one or more services within the digital sector should be added to the list of core platform services or to detect types of practices that may limit the contestability of core

⁴ The text of the DMA can be found at https://ec.europa.eu/info/sites/default/files/proposal-regulation-single-market-digital-services-digital-services-act_en.pdf (“Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on contestable and fair markets in the digital sector (Digital Markets Act)”).

platform services or may be unfair and which are not effectively addressed by this Regulation.

A better economic understanding of the concepts of fairness and contestability is likely to help choose the appropriate practices in question.

The analysis we conduct will allow us to develop some policy prescriptions, which we summarize below in Box 1. We will briefly discuss them as we go along and return to a more extended discussion in the conclusion.

BOX 1

FOUR POLICY PRESCRIPTIONS

- ***The text of the DMA should include definitions of contestability and fairness.***
- ***The implementation of the DMA should focus on encouraging competition in the market and not just competition for the market.***
- ***The platform economy leads to “unfair” outcomes where users are not rewarded for their contribution to the success of the platform. Regulation should aim at correcting this distortion.***
- ***If well implemented, regulations based on the concepts of fairness and contestability can be favorable to innovation.***

Before beginning our discussion, we should state a few preliminaries:

- All the authors of this document believe that some form of regulatory response to the challenges posed by the digital economy is warranted. They may not, however, be in full agreement on the form that this response should take. Some of them believe that the creation of the Digital Markets Unit in the United Kingdom and the new German competition law provide attractive alternative models. We all believe, however, that a well implemented DMA is a step in the right direction – especially if the concepts of contestability and fairness are interpreted appropriately. This document takes as granted that something along the lines of the present DMA proposal will be enacted and our discussion is aimed at helping improve its text and its implementation.
- All authors also believe that some form of dialog between the Commission and the gatekeepers on how to exactly interpret the obligations that the DMA imposes on individual gatekeepers will be important – how and whether this dialog will take place is, at this point, still unclear. The resources that, at the time of this writing, the Commission is planning to put into enforcing the DMA seem vastly insufficient; whether and how this will be corrected is also unclear. On this point and quite a few others, we hope that the

Commission’s proposal will be made more precise and improved. Below, we repeatedly caution the reader that our conclusions depend on the quality of the implementation of the DMA, and it should be remembered at all times that whether the goals of the regulation can be achieved depends critically on its implementation.

- Our analysis is predicated on the assumption that the DMA will be applied to the handful of largest digital platforms.⁵ Some regulations would be unwise if applied generally, but have, we believe, positive consequences when applied to this select group. In particular, the extent of “unintended consequences” is likely to be lessened for this group.⁶

1 FAIRNESS AND CONTESTABILITY IN THE DMA

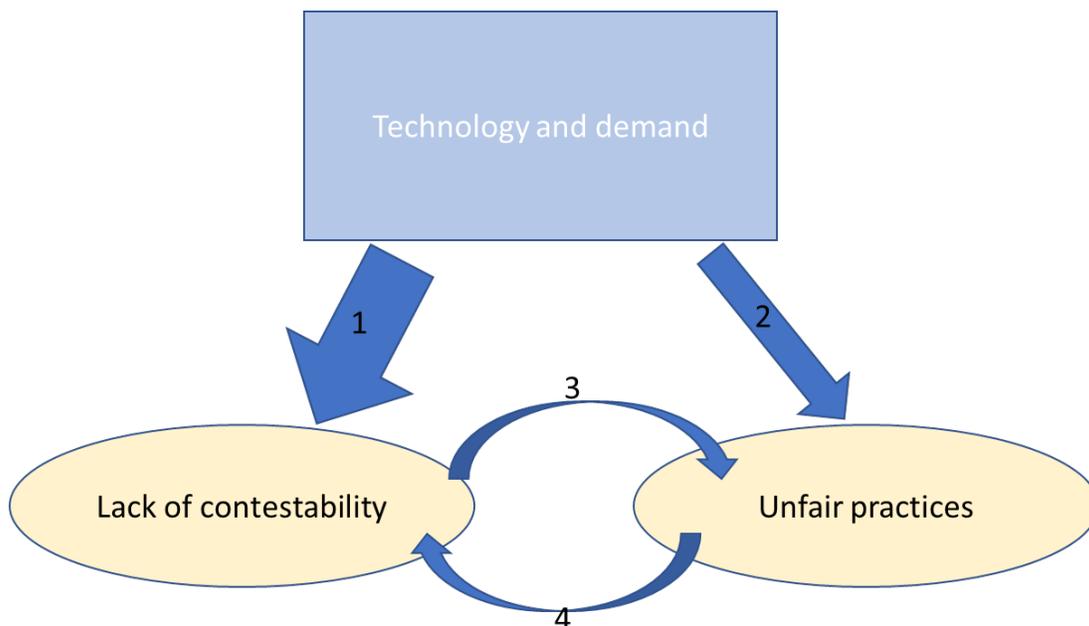
The terms fairness and contestability (or their variants) appear in the title of the proposed DMA⁷ and are used very frequently in its text. For instance, the recitals go from page 1 to 33 and in only one of these pages do the words “fair” or “unfair” not appear! And, although they would seem to refer to different phenomena, the DMA draft uses fairness and contestability nearly exclusively in conjunction. They are never explicitly distinguished for analytical purposes, but one can find traces of a “model” of their relationships in the recitals. This model is schematically represented in Figure 1.

⁵ This expectation is based on the Draft Report on the Digital Markets Act, Committee on Internal Market and Consumer Protection of the European Parliament, presented by Rapporteur Andreas Schwab, which proposes to impose the DMA regulations on a smaller set of larger firms than the Commission proposed. *See* https://www.europarl.europa.eu/doceo/document/IMCO-PR-692792_EN.pdf.

⁶ “Unintended consequences,” as used by economists, refers to undesirable or counter-productive consequences of laws or regulations that were not considered at the time of enactment. For instance, an unintended consequence of too strict a quality standard might be to increase production costs sufficiently that the product is no longer available to part of the population. Many of the regulations in the DMA are aimed at preventing the gatekeepers from building a moat around their consumers. Often, small platforms need to create a small moat to ensure viability and they should be allowed to do so. Only in very exceptional circumstances would the harm created by the enlargement of a moat by large gatekeepers be justified by compensating benefits.

⁷ The full title reads: “Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on *contestable and fair markets* in the digital sector (Digital Markets Act)” (emphasis added). *See supra*, note 4.

FIGURE 1



Let us start with Recital (12), where the Commission argues that the efficiency of having very large firms (increasing returns to scale) and the conditions of demand (network effects) make it impossible to have more than a very few providers of some services:

Weak contestability and unfair practices in the digital sector are more frequent and pronounced for certain digital services than for others. This is the case in particular for widespread and commonly used digital services that mostly directly intermediate between business users and end users and where features such as extreme scale economies, very strong network effects, an ability to connect many business users with many end users through the multi-sidedness of these services, lock-in effects, a lack of multi-homing or vertical integration are the most prevalent. Often, there is only one or very few large providers of those digital services.

These relationships are represented by arrows 1 and 2 in Figure 1. Arrow 1 is wider than arrow 2: the main effect of the technology and demand conditions is to directly limit competition and contestability. But they also enable firms to implement “unfair” practices, such as unnecessarily restricting interoperability or multihoming.

The second step of the reasoning is represented by arrow 3. Because the markets are not contestable, the few providers are able to set terms that are unfavorable to their users: they take advantage of their market power. Again, from Recital (12), and on the model represented by arrow 3:

These providers of core platform services have emerged most frequently as gatekeepers for business users and end users with far-reaching impacts, gaining the ability to easily set commercial conditions and terms in a unilateral and detrimental manner for their business users and end users.

The situation, however, is a bit more complicated. Recital (16) states that the Commission should give priority in its enforcement efforts to Core Platform Services (CPS) “*where unfair conduct weakening contestability is most prevalent and impactful.*” We understand this to mean that the Commission believes that lack of contestability can also be caused by “unfair” practices of gatekeepers. This is represented by arrow 4 on the figure.

With the correct interpretation of contestability and fairness, this model, implied by the text of the DMA, is consistent with economic theory and what economists know about the economics of platforms. (We caution, however, that inappropriate definitions of contestability and fairness will lead to misguided policy conclusions.)

To choose well-targeted policies, it is important to distinguish between the lack of contestability that is due to the fundamentals of the technology and demand and the lack of contestability that is caused by the behavior of the platforms. For instance, lack of multi-homing can be due to the fact that users prefer to concentrate their activities on one platform, but it can also be due to contractual or technical characteristics chosen by the incumbent platform with the explicit aim of reducing competition. When it is the nature of the technology and demand that limit contestability, the regulator can promulgate pro-competitive interventions such as mandated interoperability (the topic of a forthcoming paper); the regulator also can forbid “unfair” practices – but that requires a clarification of what the regulator considers fair and unfair. Our analysis of “fairness with respect to surplus sharing” in 2.1 will explain why this might lead to an expanded definition of something akin to “abuse of dominant position.” Intermediate situations can occur, where explicitly pro-competitive actions by the regulator are required to increase contestability: this can be, for instance, requiring data sharing, imposing interoperability, or changing choice architecture. We hope that our discussion below will help in this regard, as well as on the economic analysis and proper interpretation of contestability.

2 FAIRNESS

We present our definition of fairness in Box 2 and discuss its consequences in the following pages. We will show that, interpreted in this way, fairness is a useful concept that can guide policy in the right direction.

BOX 2

Fairness is the organization of economic activity to the benefit of users in such ways that they reap the just rewards for their contributions to economic and social welfare and that business users are not restricted in their ability to compete.

Before embarking on our discussion, we want to stress two points. First, the DMA stresses fairness to business users, but we feel that it can also be a useful concept when applied to individual consumers. Therefore, “consumers” or “end users” will refer to individuals who purchase goods or services for their own consumption, while “business users” will refer to individuals or entities who purchase them as inputs for some economic activity.⁸ Second, we intentionally exclude from our definition of fairness more general issues of income redistribution or fair access to public services. These are very important issues, but the redistribution we cover in this paper concerns only digital platforms and their relationships with business users and end users.⁹

2.1 FAIRNESS WITH RESPECT TO SURPLUS SHARING

The text of the DMA does not propose a general definition of contestability or of fairness. However, in a discussion of access to software application stores Recital (57) explains:

*Pricing or other general access conditions should be considered unfair if they lead to an imbalance of rights and obligations imposed on business users or confer an advantage on the gatekeeper which is disproportionate to the service provided by the gatekeeper to business users or lead to a disadvantage for business users in providing the same or similar services as the gatekeeper*¹⁰

One could be tempted to argue that the rights and obligations are not imposed on the users who freely join platforms, in the same way price and quality are not imposed on firms that choose to buy this or that piece of machinery or consumers who choose this or that piece of clothing. But this presupposes that users have a realistic choice. It is worth considering the specificities of the economics that underlie the core digital services that the DMA aims to affect. These services exhibit strong network effects as well as (partly data driven) strong economies of scale. In markets with strong network effects, the benefit to users is determined by the product the firm offers as well as the number of other users adopting it. This is true independently of whether the

⁸ In fact, there is a continuum between end and business users: the smallest business users are presumably very similar to consumers in their limited ability to understand data confidentiality clauses, to find sufficient resources to investigate alternative services or goods, etc.

⁹ We realize that this is an oversimplification. For instance, fair access to public services might require regulation of digital platforms. Although these are important societal issues, they are better treated elsewhere.

¹⁰ The Recital goes on to explain a court could make a quantitative estimate of what is fair by giving various kinds of benchmarks.

The following benchmarks can serve as a yardstick to determine the fairness of general access conditions: prices charged or conditions imposed for the same or similar services by other providers of software application stores; prices charged or conditions imposed by the provider of the software application store for different related or similar services or to different types of end users; prices charged or conditions imposed by the provider of the software application store for the same service in different geographic regions; prices charged or conditions imposed by the provider of the software application store for the same service the gatekeeper offers to itself.

Notice that without some clearer definition, one is left with little guidance on the ways these statistics should be interpreted.

network effects are one- or two-sided. In the case of app stores to which Recital (57) refers, business users are attracted by the presence of end users and have only one means to reach them when there is a unique app store with single-homing end users.

Network effects, especially when coupled with strong economies of scale, severely limit competition: each type of platform service will tend to be provided by one firm, or, if with enough product differentiation, by a few firms. Network effects and economies of scale shield these dominant firms from competition, enabling them to extract a significant proportion of the surplus that their presence in the market generates. This contrasts with traditional markets with no (or only small) network effects in which firms can only extract surplus to the extent that they offer a better product than their rivals; otherwise, consumers will have an incentive to purchase from their competitors.

Although much of the economic literature has focused on network effects at the level of individual services, in practice “platform services” are usually bundled with or offered alongside other products. Sometimes those are simple complementary products aimed at attracting consumers: for instance, a restaurant reservation platform will also offer an app to manage tables and reservations even if made on other channels. Often, these other products are themselves platform services. There can be large benefits both from the viewpoint of the platforms and from the viewpoint of the users of such “horizontal aggregation”: simplified sign-in, consistent interface, sharing of data, and many others. However, this “gatekeeper effect” also reinforces incumbency advantage.

All these effects change the analysis of whether surplus is shared fairly in a significant way. In traditional markets, innovative firms generate large profits, and these profits are commensurate with the difference in quality between their products and those of their competitors. Public policy tries to ensure that these profits are sufficient to encourage innovation; for instance, patent policy provides a legal monopoly so that these profits are high enough.

The analysis of platforms that we have just sketched, and which is generally accepted by economists, leads to conclusions quite different from those derived from the analysis of traditional markets: a dominant platform can have a stable “monopoly” position and may generate profits far in excess of its contribution to society’s welfare.¹¹

To see this, assume that a new type of services is launched at a time in which there are two nearly identical platforms, with platform A being just slightly better than platform B. Users will, presumably, coordinate¹² on using A. Once they have flocked to A, it becomes much more

¹¹ Indeed, this analysis provided the conceptual framework of several recent, landmark reports about competition in digital markets. See, e.g., *Unlocking digital competition: Report of the Digital Competition Expert Panel* (2019), https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/785547/unlocking_digital_competition_furman_review_web.pdf (Amelia Fletcher OBE, co-author) (the “Furman Report”); Market Structure and Antitrust Subcommittee Report of the Stigler Committee on Digital Platforms: Final Report (2019) at 23-138, <https://www.chicagobooth.edu/-/media/research/stigler/pdfs/digital-platforms---committee-report---stigler-center.pdf> (Fiona Scott Morton, Chair) (the “Stigler Report”); Jacques Crémer et al., *Competition policy for the digital era: final report* (2019), <https://ec.europa.eu/competition/publications/reports/kd0419345enn.pdf> (the “Vestager Report”).

¹² Economists and other scholars have neither a good theory nor good empirical evidence on the way in which users choose to join this or that platform, and in particular on the obstacles that users face in coordinating on the better platform. Our conclusion is reinforced if they mis-coordinate on B.

valuable than B, and A, subject to low competitive pressure, can generate profits much greater than its contribution to the welfare of society. What is happening here is the following: platform A's actual contribution to social welfare should be measured by the difference of quality between the services offered by the two platforms.¹³ Once users have joined A, its value to any individual user is equal to the sum of this difference in quality *and* of the value of belonging to the same platform as the other users. Because this total value is what users are willing to pay and therefore what the platform can "charge," the platform's profits are larger than its own contribution to social welfare, which is the difference of quality.^{14,15}

We can rephrase this analysis in the following way. Users choose a platform in part because of the quality of the service, but also, and often mainly, because of the presence of other users. A large part of the value is therefore created by the users themselves. If they could coordinate their actions, they might be able to bargain with the platform and obtain a "fair" share of the surplus. In practice, however, they cannot, and the platform can impose conditions that reflect not only its own contribution to their welfare, but also those of the other users.

This point is important enough that it bears restating in yet another way. If the value of the platform to individual users increases less than proportionally to the number of users, any individual consumer adds very little value at the margin; similarly, one incremental complementary business user adds very little value to the platform. A single user can ask only for his or her own marginal contribution, while, if consumers banded together, they could ask for their average contribution which exceeds the individual marginal contribution.¹⁶ In reality, consumers cannot coordinate to ask for their fair share of this surplus and the platform will confiscate most of the surplus. The platform does so by choosing terms and conditions that extract not only its own contribution to consumer and user welfare, but also the contributions of the consumers and users themselves.

This analysis has important consequences linked to the notion of fairness:

¹³ One might make a similar argument if A were a monopolist because it had excluded competitor B. In that case, one might quantify A's contribution to welfare as the difference between the quality of A and the quality of a hypothetical platform B that would operate in the market *but for* the anticompetitive conduct.

¹⁴ This point is misunderstood by some critics of regulation. They examine at some length the contributions of platforms to social welfare and argue that they are large. We fully agree on this point but disagree with the next step of their analysis. They assign all these benefits to the activity of the firm that manages the platform, whereas its contribution should be measured as the difference between the welfare generated by the way in which this firm manages the platform and the welfare that would be generated if the platform was managed by another (competent) firm. Clearly, this second measure is much smaller than the first. While making this point, we in no way want to underestimate the magnitude of the technological and business challenges that the largest platforms have overcome. It is a tremendous achievement to serve billions of users over the whole globe!

¹⁵ For simplicity, our analysis has set aside the investment made to set up the platforms. Indeed, if the incumbency advantage is large enough, platforms will compete to be the first to enter the market. If this competition is strong enough, the rents from incumbency advantage will be dissipated in this competition. This does not negate the fact the analysis in the text: the rents that the firms are competing for are, in part, the rents that are created by the users themselves. Redistributing these rents reduces the expenditures on "rent seeking."

¹⁶ To this marginal analysis, one should add the fact that a threat by user of leaving the platform is not credible. This also lowers the bargaining power of the users.

- Classical economic theory teaches us that efficiency requires that firms receive rewards equal to the value of their contribution to the welfare of their clients. The “unfair” ability of platforms to charge more leads to inefficiencies.
- If the acquisition and stability of a dominant position is due to the coordination problem faced by users, charging a price equal to the users’ willingness to pay could be considered as unfair, or, in more technical competition policy terms, an abuse of dominant position.
- One hears sometimes defenses of the right of firms to charge high prices of the type “they built it; they can do whatever they want as long as they are not forcing anyone to use their services or buy their products: high prices or low quality of service raise no fairness concerns in the absence of anti-competitive or other forms of illegal behavior.” With platforms and network effects, this premise is invalid. Our definition of fairness reflects this by stating that users should “reap the just rewards for their contributions to economic and social welfare.” The platform is a co-creation of the platform itself and its users, who should not bear the brunt of their limited bargaining power.
- Finally, arguments for high prices often rest on innovation: not only is it fair to pay firms for their innovations, but it is also indispensable if we want to provide them with incentives to innovate. The argument is reversed in the case of industries with network effects. There is a strong “first-mover advantage” and therefore, if anything, platforms have too much incentive to innovate to enter the market first. They will expend lots of resources in being first on the market. On the flip side, there will be too little incentive to innovate for the business and end users of the platform once users coordinated on a given platform. We discuss the issue of innovation at greater length in section 4.

Many of the services offered by platforms are free in monetary terms, while the discussion above used prices for clarity. When, for some reason or the other, a platform has reached a zero price and cannot charge any lower, it may be expected to extract more surplus by degrading the quality of the service. As an example, think of search in which Google has a dominant position.

Consumers get the search results for free. Yet, comparing search results now and those from 10 years ago, users’ experience is arguably downgraded by the fact that for some searches one sees predominately paid content (different kinds of advertisements).¹⁷ Given the profitability of the search service to Google, one could reasonably argue that degraded search results violate fairness and surplus sharing and justify minimum quality requirements, e.g., that a fair webpage design must have at least 50% organic search results¹⁸ and that these should be not only clearly indicated but also placed at the left top corner in order to create the most benefit for English speaking users and others whose language reads left-to-right and top-to-bottom.¹⁹

¹⁷ See Paul Heidhues, et al., *More Competitive Search Through Regulation*, 2 DIGITAL REGULATION PROJECT (2021) at Appendix 3,

[https://tobin.yale.edu/sites/default/files/pdfs/digital%20regulation%20papers/Digital%20Regulation%20Project%20-%20Search%20-%20Discussion%20Paper%20No%202%20\(1\).pdf](https://tobin.yale.edu/sites/default/files/pdfs/digital%20regulation%20papers/Digital%20Regulation%20Project%20-%20Search%20-%20Discussion%20Paper%20No%202%20(1).pdf).

¹⁸ See *id.* at 27-30.

¹⁹ Many modern languages, by contrast, read right-to-left, including Hebrew, Urdu, Rohingya, and Arabic, a language used by approximately 1.7 billion people. Other languages, including some versions of Chinese and Japanese, can be written left-to-right or top-to-bottom. See *Which Languages Are Written From Left To Right*, WORLDATLAS.COM (2018), <https://www.worldatlas.com/articles/which-languages-are-written-from-right-to-left.html>. Designs of search engine results pages that are intended to give prominence to organic results should take account of these language differences.

2.2 FAIRNESS OF CONTRACTUAL TERMS

The surplus-sharing related fairness objectives, which we have just discussed, contrast with other concepts of fairness used in European law. One concept of fairness, which we will call *fairness of contractual terms*, is defined, through its absence, in Directive 93/13/EEC of the Council of the European Communities,²⁰ which forbids the use of terms in standard contracts that unfairly burden the consumer or are not clearly enough stated or are likely to surprise the consumer. This regulation applies to all firms, whatever the extent of market power as traditionally measured. In totally competitive markets, with totally rational consumers with no cognitive limitations, it would be useless: consumers would read all the terms of the contracts proposed by the different suppliers and would be able to carry out a well-founded cost-benefit analysis among the different offers. In practice, no consumer can do so. By listing a set of conditions that all contracts must satisfy, legal instruments such as the Directive offer contractual guarantees to consumers. When well designed, these types of obligations have efficiency-inducing consequences. First, by reducing the costs for consumers of examining the contractual terms associated with different services or obligations. Second, by handicapping firms that try to compete by misleading or trapping consumers rather than through the quality of their products or services. In this case, “fairness” is the generic term, which has some intuitive meanings for consumers, used to describe general characteristics of legal contracts. Third, as consumers are better able to understand the different offers, they may spend more time comparing the products in the market and in so doing increase its competitiveness and its efficiency.²¹

A striking consequence of the difference between this fairness of contractual terms and the fairness of allocation of surplus discussed above is seen in the fact that fairness of contractual terms is analyzed clause by clause. A contract can be a good bargain for the consumer, but one clause, for instance, limiting the rights of the consumers to take legal action, will not be binding because it is considered “unfair.” On the other hand, the allocation of surplus between consumers and sellers is explicitly excluded from consumer protection law. The European Council Directive 93/13/EEC “on unfair terms in consumer contracts” states in its Article 4.2, “[a]ssessment of the unfair nature of the terms shall relate neither to the definition of the main subject matter of the contract nor to the adequacy of the price and remuneration” Because the regulation targets markets in general, the difference in the concepts of fairness makes economic sense. Absent the special economic features of core platform services, well-functioning competitive markets deliver efficient outcomes and so these general type of unfair contract terms regulations – like regulations against misleading advertisements – aim only to facilitate the functioning of competitive markets through limiting the amount that consumers who do not check details can be exploited.

The general regulations on fairness of contractual terms will of course apply to gatekeepers, but there are two points that we want to highlight. First, these general regulations only apply to the

²⁰ See <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:31993L0013&from=EN>.

²¹ This last point is explored in detail in Paul Heidhues, et al., *Browsing versus Studying: A Pro-Market Case for Regulation*, 88 REVIEW OF ECONOMIC STUDIES (2021) at 708-29. See that paper for an up-to-date discussion of the economic literature on consumer protection. See also M. Armstrong & J. Vickers, *Consumer Protection and Contingent Charges*, 50 JOURNAL OF ECONOMIC LITERATURE (2012) at 477-93 (explaining the economics of regulating contingent charges).

relationship of firms to consumers. Because the imbalance of power between big tech platforms and most business users is similar to that between normal businesses and consumers, similar rules need to apply to gatekeepers in relation to their dealings with business users.²² The economic importance of core platform services and the number of affected users, however, also imply that regulators might want to pay especially close attention to the fairness of terms of their contracts.

2.3 FAIRNESS IN PROCESS AND PRACTICES

A third aspect of fairness, *fairness in process and practices*, is close in spirit to fairness of contractual terms, but is more specifically relevant for gatekeeper platforms. As part of the services that they provide, platforms enact the rules that their users must follow when they interact; as such they have a role as “private rule makers” or “private regulators,” which organize the exchange between large number of users.²³ These private rules affect the efficiency of economic exchange but also the benefits of participation in the platform. Of course, platforms design the interactions on their platform to maximize their own profits, not social surplus. It is true that economic theory and the welfare theorem of general equilibrium theory yield presumptions that the search for private gains lead to efficiency in competitive markets. There is, however, no such presumption for monopolistic platforms and there might exist good reasons for putting regulatory restrictions on the business models that they deploy. Of course, the choice is not between regulation and no regulation: badly designed regulations lead to poor outcomes. The proposed objectives in the DMA go (and economically should go) further than to just limit the unfair treatment of users through terms and conditions.

In the context of competition policy, Crémer *et al.* describe on page 62 the constraints that should be put on the rules of large platforms in this way: “[D]ominant platforms have a responsibility to ensure that the rules that they choose do not impede free, undistorted and vigorous competition without objective justification. The rules and institutions provided by a dominant platform must not anti-competitively exclude or discriminate. A dominant platform that sets up a marketplace must ensure a level playing field on this marketplace and must not use its rule-setting power to determine the outcome of the competition.” We believe that in the regulatory framework of the DMA, the concept of fairness can translate some of these requirements. There should be fairness in the sense of similar treatment of users who use the platform in different ways, and this is particularly important when those differences affect contestability. Hence, we support the following policies, with the important caveats at the end of this section.

- There should be no discrimination between users who multi-home and users who do not multi-home.

²² To the contrary, one could argue that users, and specially consumers, interact repeatedly with the services offered by the gatekeepers, and therefore unexpected conditions, which standard consumer protection regulations try to control, are less likely to occur. This argument is counterbalanced by the fact that this frequency of usage makes the issue more salient for the largest gatekeepers.

²³ See, e.g., G.G. Parker et al., PLATFORM REVOLUTION: HOW NETWORKED MARKETS ARE TRANSFORMING THE ECONOMY AND HOW THEY MAKE THEM WORK FOR YOU (2017) at 159. See also Henri Piffaut, *Platforms, a call for data-based regulation*, CPI ANTITRUST CHRONICLE (May 2018) at 10-17; Jacques Crémer et al., *Competition Policy for the Digital Era*, *supra* note 11 at 60-63 (discussing the implications of this view for competition policy).

- There should be no discrimination between users who compete with the platform in some dimension and those who do not.
- When the platform is also active as a user of the platform – for instance, when it is a seller on the marketplace it manages – it must treat its own activities at arm’s length.

Fairness of processes and practices also implies that the rules of the platforms and the way in which they are designed and enforced are communicated in a transparent, clear, and reasonable way.²⁴ In particular:

- The rules of the platform should be transparent and clear. This should enable users to take more informed decisions and thereby help to make efficient decisions. The platform should provide well defined and easily accessible procedures to mediate disputes between users or to complain about the policies of the platform (for some types of disputes, the Digital Services Act imposes regulations along these lines in its Article 18 – these regulations apply to all platforms). Rules that limit the ability of business users to complain to public authorities when the outcome or process is unfair should be forbidden – see Article 5(d) of the DMA.
- Because of the exceptional importance of the core digital platforms and the inability of either business and/or individual users to avoid them at reasonable cost, users should not be excluded from the platform except under well-defined and restricted conditions and under fair and non-discriminatory procedures.
- Again, subject to our caveats below, because there are few or only imperfect substitutes to the core platform services of the largest gatekeepers, rules that limit the behavior of users outside of the platform (e.g., prohibition of disintermediation or the use of platform most-favored-nation clauses) should not be allowed.

Given the importance of data in the digital economy, the same general concept of fairness should apply to the treatment of data. Business users should automatically have rights over, and access to the data their business generates. Our aim is not to list all possible uses of the concepts of fairness in processes and practices, but to show that, well understood, it leads to reasonable policies. And indeed, some of these policies are present in the DMA or other regulations, such as P2B regulations or consumer protection regulations.²⁵

Our support for the DMA regulations discussed in this section come with two caveats. First, these blanket “fairness” requirements should apply only to very large platforms. As we argue below, we do not think that there is much risk that applying them to the very limited set of gatekeepers targeted by the DMA will lead to major inefficiencies, and indeed, is likely to increase efficiency. Even so, and this is our second point, we recommend that the DMA leave a possibility for operators of core platform services to prove that a challenged practice has positive consequences in terms of fairness and contestability.

²⁴ See Amelia Fletcher et al., *Consumer Protection for Online Markets and Large Digital Platforms*, 1 DIGITAL REGULATION PROJECT (2021) at 27 (proposing that large platforms be required to disclose the methods used for ad targeting); 30 (proposing that large platforms be required to disclose approach to preventing sellers from engaging in illegal sales practices).

²⁵ See generally *id.*

Finally, we should stress that we fully support the aim of the proposed DMA regulation to increase the competitiveness of the digital industries, which we turn to next. However, the technology and the characteristic of demand that underlies many of these markets, including network effects and data-driven scale economies may result in strong market power nonetheless. For this reason, the DMA, in its text and in its implementation, must enforce fairness in the sense of surplus sharing that we explained in section 2.1 and not focus solely on increasing the contestability of digital markets.

3 CONTESTABILITY

Closely related to the principle of fairness is that of contestability, and we will now propose a way to apply it fruitfully for the purposes of the DMA. For doing so, we will argue that contestability should be understood as described in Box 3.

BOX 3

Contestability is the ability for non-dominant firms to overcome barriers to entry and to expansion to the benefit of users.

One of the objectives of the DMA should therefore be understood as making it easier for non-dominant firms, both new entrants and smaller competitors, to compete with the gatekeepers.

Although the term “contestability” has become standard fare in competition policy, it is rarely defined. There is an abundant, if somewhat dated, literature on “(perfectly) contestable markets.” We discuss it in section 3.1 and explain why it does not provide much guidance for a balanced economic theory. We then turn to a detailed analysis of the definition of contestability that we propose and of some of its consequences.

3.1 THE THEORY OF CONTESTABLE MARKETS

It is fair to say that the notion of contestable markets has a bad reputation in a large part of the economic profession. Given the common use of this notion among policy makers and the legal profession, particularly in the US, however, we feel it is worthwhile explaining its original meaning. This will provide some useful background on the way in which economists understand entry in markets and also explain why we felt there was a need to redefine contestability so it can be used in the modern policy context.

3.1.1 CONTESTABLE MARKET AS SEEN BY BAUMOL ET AL.

The theory of contestable market was developed at the end of the 1970s and the beginning of the 1980s by Professor William Baumol and his co-authors. In his very well-known presidential address to the American Economic Association, he summarizes it thus:²⁶

A contestable market is one into which entry is absolutely free, and exit is absolutely costless. We use 'freedom of entry' in Stigler's sense, not to mean that it is costless or easy, but that the entrant suffers no disadvantage in terms of production technique or perceived product quality relative to the incumbent, and that potential entrants find it appropriate to evaluate the profitability of entry in terms of the incumbent firms' pre-entry prices. In short, it is a requirement of contestability that there be no cost discrimination against entrants. Absolute freedom of exit, to us, is one way to guarantee freedom of entry. By this we mean that any firm can leave without impediment, and in the process of departure can recoup any costs incurred in the entry process. If all capital is salable or reusable without loss other than that corresponding to normal user cost and depreciation, then any risk of entry is eliminated. (Pp. 3-4)

If these hypotheses are met, entry should be very easy:

The crucial feature of a contestable market is its vulnerability to hit-and-run entry. Even a very transient profit opportunity need not be neglected by a potential entrant, for he can go in, and, before prices change, collect his gains and then depart without cost, should the climate grow hostile. (P. 4)

As a consequence, any incumbent, even a monopolist, would not be able to use its position to increase its profits by imposing “unfair” conditions on its customers:

First, a contestable market never offers more than a normal rate of profit-its economic profits must be zero or negative, even if it is oligopolistic or monopolistic. (P. 4)

The basic idea of the theory is very simple. Assume that there is space for only one firm in an industry, and that the firm sells at a price that is above cost. Then an entrant could undercut the monopolist while still charging at least a little above cost and thereby conquer all the market (recall the hypotheses in the Baumol quote above: entry is absolutely free; exit absolutely costless). The monopolist might react by decreasing its price. Then the entrant would exit, but – because entry and exit are assumed costless – it would have fully profited from the time in which it has succeeded in supplanting the monopolist. This implies in turn, that the monopolist could not charge supra-competitive prices.

The theory can be expanded with some difficulties to the situation where a small number of firms, but more than one, was necessary to serve the market efficiently. It can also be expanded to the case where there are many products, but the market can still be served by a single multi-product firm. The existence of a “stable” economic equilibrium requires additional, and not

²⁶ See William J. Baumol, *Contestable Markets: An Uprising in the Theory of Industry Structure*, 72 THE AMERICAN ECONOMIC REVIEW No. 1 (1982) at 1-15.

necessarily natural, economic hypotheses. Exploring this issue generated a host of technically challenging questions.

3.1.2 CRITICISMS

The theory of contestable markets was subject to virulent criticism as soon as it appeared. These criticisms focused on the fact that it requires extreme, and totally unrealistic, assumptions for its main results to hold. The interested reader can consult, among many others, the work of Schwartz and Reynolds²⁷ as well as that of Dixit.²⁸ They are summarized by Brock²⁹:

The applied economist must handle it [i.e., the theory of contestable markets] with care, however. Dixit (1982), for example, has argued that the economic conditions that must be present for perfect contestability to exist and hence for price sustainability to be the relevant equilibrium concept are extremely stringent: (i) all producers must have access to the same technology, (ii) this technology may have scale economies such as fixed costs, but must not involve any sunk costs, (iii) incumbents can change prices only with a nonzero time lag, and (iv) consumers must respond to price differences with a shorter lag. Baumol et al. (1982b) argue that iii and iv are not needed if entrants can write firm contracts with consumers for delivery over some fixed period length t . In short, postentry oligopoly is irrelevant and strategic entry deterrence is impossible in a perfectly contestable market. (P. 1057)

We will not try to unpack all this discussion, but the basic idea of all these criticisms is the same. It is never the case that entry is costless, and it is extremely rarely the case that the incumbent monopolist cannot decrease its price nearly instantaneously upon entry by a rival. If this is the case, entrants have no incentives to enter, unless they can recover all the costs that they have incurred to enter – which is, in practice, never the case. Other attempts have been made to salvage the theory: for instance, one could assume that, before even entering, the entrant could make long run contracts with customers so that it could not be undercut by the incumbent.³⁰ There are at best very few cases, if any, where these assumptions are in any way realistic. There is also no empirical evidence that contestable markets provide a good guide to any industry. The early literature argues that the airline industry provides a plausible example, but the post deregulation history of the industry does not bear this out.

It is fair to say that this theory of contestable markets is totally discredited in the modern economics profession. This does not invalidate the use of the term “contestability” in the DMA, however, where it is used in a totally different way. The definition which we provide in Box 3, and which we expand on below, attempts to reflect that usage in a way that has economic meaning.

²⁷ See Marius Schwartz & Robert J. Reynolds, *Contestable Markets: An Uprising in the Theory of Industry Structure: Comment*, 73 THE AMERICAN ECONOMIC REVIEW (1983) at 488-90.

²⁸ See Avinash Dixit, *Recent Developments in Oligopoly Theory*, 72 THE AMERICAN ECONOMIC REVIEW No. 2 (1982) at 12-17 (Papers and Proceedings of the Ninety-Fourth Annual Meeting of the American Economic Association).

²⁹ See William A. Brock, *Contestable Markets and the Theory of Industry Structure: A Review Article*, 91 JOURNAL OF POLITICAL ECONOMY No. 6 (1983) at 1055-66.

³⁰ See William J. Baumol, et al., *Contestable Markets: An Uprising in the Theory of Industry Structure: Reply*, 73 *The American Economic Review* (1983) at 491-96.

3.2 LEARNING BY DOING, DATA, AND CONTESTABILITY

Up to this point, we have used static notions of the advantages that the incumbent platform holds, increasing returns to scale and network effects. Economists have long been also interested in more dynamic notions. Prominent among those is the notion of learning by doing:³¹ as firms produce more, they become more efficient and their cost of production decreases. Therefore, the cost of producing in any year depends not only on the quantity produced during that year, but on the accumulated production of previous years.

The development of the digital industries has introduced another source of dynamic competitive advantage: data. The data that digital firms accumulate allows them to know their customers better and to provide them with better, more targeted, services. In this case, it is not the cost which decreases with past production, but the quality of service that increases.

Obviously, these dynamic elements make the notion of perfectly contestable markets even more of a chimera. Entrants, by the very fact that their past production is nil, face a strong competitive disadvantage and the strategy of rapid entry-exit becomes totally untenable.

3.3 USING THE NOTION OF CONTESTABILITY FOR REGULATORY PURPOSES

As our brief survey of the theory of contestability has shown, there is no hope to gather useful guidelines for public policy from the existing economics literature on contestable markets – its main focus has actually been to identify cases where no specific public policy is needed. We will therefore try to develop a way in which the concept of contestability can be fruitfully used by regulators.

The fact that the original theory of contestable markets has essentially no practical application does not imply that it cannot teach us anything of a conceptual nature. As Massimo Motta³² puts it, “[T]he contestable market theory has had the merit of underlining the role played by potential entry in constraining the market power of incumbents. It is now commonly accepted that a firm is unlikely to exercise such market power if it faces potential rivals that could rapidly and cheaply enter the industry.” A credible *threat* of entry can therefore limit the profits of the incumbents and force them to offer better deals to their users, but the more rapid and cheaper the potential for entry, and the higher quality the entrant, the better. Making this threat more credible and more present will increase the competitiveness of the economy and the welfare of consumers. It will be obviously true in settings where there is entry, and it will also be true when entry is being prepared as the incumbents have incentives to behave in the interest of consumers. The threat of expansion by rivals already in the market can also play a similar role.

Therefore, the analysis of gatekeeper practices should concentrate on (a) prohibiting practices that make entry and/or expansion difficult while at the same time hurting the welfare of users; and (b) proposing proactive pro-competitive interventions that make entry of new platforms and expansion of small ones easier. This is what the definition of contestability that we presented

³¹ See, e.g., Kenneth J. Arrow, *The Economic Implications of Learning by Doing*, READINGS IN THE THEORY OF GROWTH: A SELECTION OF PAPERS FROM THE REVIEW OF ECONOMIC STUDIES (F.H. Hahn, ed. 1971).

³² See Massimo Motta, *COMPETITION POLICY: THEORY AND PRACTICE* (2004) at 75.

above tries to achieve. Forbidding multihoming³³ would in most cases fit this definition. Forbidding investment in providing better services, all else equal, would not. We now turn to the task of showing that this definition of contestability can provide a useful lens to analyze digital platform regulation.

3.4 COMPETITION IN THE MARKET AND COMPETITION FOR THE MARKET

For analytical purposes, it is convenient to distinguish between competition *in* the market and competition *for* the market, although in practice competition between platforms may often be a mixture of these two types of competition.

Competition *in* the market is the traditional form of competition. For instance, car manufacturers compete with each other; they innovate, improve the quality of the cars they produce or decrease the prices at which they sell them in order to increase their market share and their profits. Competition occurs at the margin – typically, from year to year, market shares vary up and down, increasing and decreasing slowly for each firm. Competition in the market can occur either because each consumer buys only one unit of the good, but there are many suppliers (think of houses); or because consumers purchase different brands that are produced by different suppliers (think of breakfast cereals).

Pure competition *for* the market occurs when the extent of returns to scale and the form of the network effects makes it likely that in the medium run the market structure is comprised of one or a very few competitors. Then, platforms compete to be present in the market. Market shares stay constant for a long time, with one firm controlling the market; an entrant can only succeed by attracting all the consumers and the migration of the consumers from one platform to the other will take place quite rapidly.

In our definition of contestability, “barriers to entry” refer to the difficulty of beginning to sell a competing service, what we also label competition for the market. Once entry has occurred, competition becomes competition in the market; “barriers to expansion” refers to the difficulty of attracting and retaining new users.

In the next two sections, we discuss the measurement and the policing of contestability in the extreme cases of pure platform competition for the market and pure platform competition in the market. A discussion of how to apply our analysis follows.

³³ It is always possible to find examples in which an a priori anticompetitive practice has a pro-competitive effect. For instance, Robin Lee showed that when Microsoft entered the game console market where Sony was the incumbent, it benefitted from the fact that it could offer games which were exclusive to its platform: this encouraged players who wanted to play these games to purchase an Xbox. Lee summarizes his main finding thus: “prohibiting exclusive arrangements would have benefitted the incumbent and harmed the smaller entrant platforms.” See Robin Lee, *Vertical Integration and Exclusivity in Platform and Two-Sided Markets*, 103 AMERICAN ECONOMIC REVIEW (2013) at 2960-3000. Notice in this case that it is the entrant that benefitted from exclusivity. We believe that it would be only in very few cases that allowing the incumbent to impose exclusivity would be pro-competitive. On the other hand, the example in this case also shows that the entrant can be itself a large firm; in this case, the standard rule of reason reasoning should be applied.

3.5 CONTESTABILITY AND COMPETITION FOR THE MARKET

3.5.1 THE DIGITAL ECONOMY AND THE THEORY OF CONTESTABLE MARKETS

As we have described it, the theory of perfectly contestable markets was developed by Baumol and his co-authors as a criticism of the widely held opinion among economists that increasing returns to scale was *prima facie* evidence for the need for regulation. The theory of network effects was still in its infancy, and the digital economy, in the modern sense, did not exist. This has not prevented the *language* of contestability to be used extensively in competition policy around the digital economy, but there has been very little research trying to adapt the *analysis* of perfectly contestable markets to situations in which there are network effects.

One such attempt is due to Daniel Spulber.³⁴ In the same vein as the early literature, which argues that increasing returns to scale does not preclude competitive outcome as incumbents will fear entry, he argues that consumers will easily coordinate their migration to a superior entrant platform, and that this will create a fear of entry sufficient to discipline even monopolist platforms. A representative portion of his analysis is provided in the following quote (firms should be understood as platforms):

Consider the possibility that firms have different costs. Suppose that a firm is established in the market and is serving all consumers. Suppose also that it is costless for a consumer to switch to another firm. Then, a firm with a small cost advantage can enter the market and attract all consumers from the incumbent firm. The entrant with lower costs can offer a lower price that cannot be matched by the higher-cost incumbent. Every consumer will want to switch because they anticipate that all other consumers also will want to switch firms. Therefore, consumers know that they will obtain the same benefits from network effects at the new firm. This means that network effects do not provide a defense against a more cost-efficient entrant. Network effects on the demand side create benefits from a single network. However, other things equal, a small cost advantage is sufficient for an entrant to displace an incumbent.

In this quote, the benefit of the entrant is in terms of costs, but Spulber argues that the same conclusions hold for differences in quality, functionalities, and other aspects of competition between platforms. We find the same basic idea in the oft-quoted sentence, “competition is but a click away.”

For our purposes below, it is important to notice the difference between increasing returns to scale and network effects. In the traditional theory of contestable markets, consumers choose between purchasing from the entrant or from the incumbent. Each consumer chooses independently of the way the others choose. With network effects, the benefits that consumers draw from joining a platform depend on the choice of the other consumers. Economic theory

³⁴ See Daniel F. Spulber, *Consumer Coordination in The Small and in The Large: Implications for Antitrust in Markets with Network Effects*, 4 JOURNAL OF COMPETITION LAW & ECONOMICS (2008) at 207-62.

provides us little reason to believe that consumers will be able to solve it, rendering the Spulber analysis irrelevant.³⁵

Economists do not have a good theory of the impediments of migration of consumers to superior platforms or a good theory of the ways in which they could overcome them, but the evidence is clear: market power driven by network effects is stable in the digital economy. The winner-take-all aspect of competition for markets with network effects provides strong incentives for platforms to try to create barriers to entry to consolidate their positions.

3.5.2 USING CONTESTABILITY TO ANALYZE COMPETITION FOR THE MARKET

The competition problem is the following. Consider a type of social network that favors some type of communication between its users with network effects strong enough that they all want to belong to the same platform. An incumbent platform has degraded its quality³⁶ and failed to innovate, and a new platform enters that promise to fix these problems. It faces many difficulties. Probably the most challenging is the chicken and egg problem of attracting consumers. If network effects are very strong, the first consumers to join the new platform must take the bet that the others will also join afterwards.

Under this condition a natural theoretical measure of contestability arises: for platforms which offer free services, it is the difference of quality that the entrant must display to be able to enter and take the market.³⁷ If the platform charges for its services, one would have to take into account the difference in price – for simplicity, we will discard for the most part the role of price in this discussion, as it requires more steps: we would have to add to the value of the difference of quality an estimate of the price discount that the entrant platform offers.

In some cases, competition for the market can be a consequence not only of the underlying technology and demand conditions, but also of the institutional arrangements. For instance, if data are indispensable for developing a service, contestability will be very low if data are unavailable to the entrant. It is in the interest of the incumbent not to share its existing data. In that case the regulator must evaluate the relative benefits of mandating larger access to data, in some cases weighing them against other important societal aims such as privacy protection.

Although measuring contestability in competition for the market is quite difficult, it is not very difficult to identify practices that decrease it. For instance, the entry of new communication platforms is eased by multihoming. To the extent many users are active on the new platform while also being active on the old platform, network effects are not significantly decreased. Thus, practices that restrict or eliminate multihoming on one or more sides of the market will

³⁵ For a recent discussion of this point, see Gary Biglaiser et al., *Should I stay or should I go? Migrating away from an incumbent platform* (2021), <https://ssrn.com/abstract=3557782>. Also see the literature reviewed therein.

³⁶ The quality which is relevant here is the permanent level of quality; that part cannot be easily reversed. An incumbent who has degraded quality by overloading its interface with ads could easily answer the threat of entry by decluttering upon entry, in the same way as we discussed when pointing out that the monopolist could decrease price when criticizing the theory of contestable markets.

³⁷ Platforms that offer free services are generally financed through advertising. A complete analysis would take into account the effect on the advertising market.

reduce contestability when competition is for the market, without significant compensating benefits.

Encouraging competition *for* the market through regulation is potentially valuable, but also difficult for several reasons. It requires extremely good competition enforcement to protect nascent entrants as, by definition, these are small and technological trends are uncertain. Furthermore, it is uncertain when a good moment will arrive for the overthrow of the incumbent dominant platform, as this may depend on a technology or demand shock that does not come as quickly as consumers would like. Finally, even if these transitions do occur regularly and incumbents are defeated, consumers are likely to bear significant switching costs at each transition between monopolists.

3.6 CONTESTABILITY AND COMPETITION IN THE MARKET

Because of the powerful impact of network effects, consumers tend to join larger platforms, leading the market to “tip” to a monopoly. The moment when there are multiple platforms competing for the same set of consumers in the same market is often relatively short for this reason. Contrast this with our car example above: two car manufacturers can be present in the market and produce cars that are quite similar for an indefinite period. It is much more difficult for two platforms offering similar services to co-exist in the presence of network effects, as users will tend to flock to one or the other.

When we see multiple platforms existing at the same time, each with network effects, it is often the case that these platforms are offering something different and not competing head-to-head. For instance, social media platforms such as Twitter, Facebook, TikTok, YouTube, etc., offer different services such as delivery of commercial content, sharing among friends, broadcasting short messages to the public, and so forth. Amazon and eBay compete for the business of some third-party sellers, but Amazon also has a retail function while eBay does not, and a parent selling used Legos from her attic is likely to list them on eBay. Competition may be very asymmetric when network effects are present and take the form of a large dominant firm facing a fringe of far smaller rivals.

A second reason that multiple platforms with network effects can co-exist in the marketplace is because a sufficient number of users multi-home, i.e., users participate in more than one platform. Lyft and Uber compete in ride sharing partially because it is easy for riders to install both apps on their handset and quickly check the price of any given trip on both platforms before choosing one to use for that particular ride. Further, it does not matter to a user in a given neighborhood exactly which other neighbor is a frequent rider; anyone will create the liquidity that generates a positive externality. The same is not true in a social network where the identity of each user is critical.

We know less about the economics of competition between platforms because it is a relatively recent phenomenon and there has not been time to accumulate a large body of economic research. A growing formal literature, however, provides some insights. The consequences of network effects and increasing returns to scale show themselves in the fact that platforms together in the market over time either must be engaging in different activities to both maintain share or must have many users (enough to sustain network effects) engaging in multihoming or

have interoperability. We offer the following tentative thoughts about the way in which the concept of contestability can help think about regulation of competition *in* the market.

Once several platforms are competing, each of them will have strong incentives to prevent the poaching of its users. The incentives to do so are stronger than in traditional industries. When a consumer decides to buy a car from firm B rather than firm A, firm B makes a profit on that sale and firm A does not. This is, of course, still the case in digital markets, but there are other important additional consequences. With network effects, the migration of a user from platform A to platform B makes platform B more attractive to the other users and platform A less attractive – this amplifies the direct profit consequences of the migration. At the same time, platform A loses access to data on user A, and, as several authors have recently stressed, there exist data externalities: access to data on one user helps understand and predict the behavior of other users.³⁸ Therefore, the loss of data at the same time decreases the quality of the service offered to the other users by platform A and reduces its ability to profit from their consumers (with of course the opposite effect for platform B).³⁹

These added costs to migration of consumers raise problems for the contestability of markets, as gatekeepers have strong incentives to make it difficult for their users to leave their platforms (and there is an added incentive when they share information across services). Another issue can be that the few platforms in a market might have incentives to come to agreements, either implicit or explicit, to share the market and to jointly raise barriers to migration back and forth.⁴⁰ The same types of obligations as in the case of competition *for* the market would be called for in this case: regulation should try to minimize the barriers to migration to another platform or to multihoming across multiple platforms. A common tactic used by competing digital platforms is to take control (perhaps by merger) of a tool used by one side of the platform that helps users multi-home.⁴¹ Once under the control of the (perhaps dominant) platform, the platform uses the tool to favor its own platform through greater functionality or interoperability, decreasing demand, liquidity, and quality of the rival.⁴²

A second tool available to a regulator to intensify competition in the market is to impose or encourage interoperability. Market-level interoperability causes network effects to shift from benefiting solely a proprietary platform (e.g., a social networking site) to accruing instead at the

³⁸ To the best of our knowledge, the first paper which made this point in the economic literature is Jay Pil Choi et al., *Privacy and personal data collection with information externalities*, 173 *JOURNAL OF PUBLIC ECONOMICS* (2019) at 113-24.

³⁹ The effects of increasing returns to scale are similar to those described in the text. When there is multihoming, similar effects would arise when a consumer decreases his or her intensity of the use of one platform and increases the intensity of the use of the other.

⁴⁰ We should mention the very interesting and provocative, but we believe ultimately misguided, argument made by Glen Weyl and Alexander White that there is too little consolidation of platforms. See E. Glen Weyl and Alexander White “Let the Right ‘One’ Win: Policy Lessons from the New Economics of Platforms”, *Competition Policy International*, 2014, Vol. 10, No. 2, pp. 29-51.

⁴¹ See generally Fiona M. Scott Morton & Susan Athey, *Platform Annexation* (2021), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3786434 (collecting examples and explaining how platforms have used this tactic to discourage multihoming, thereby protecting themselves from competition).

⁴² See *id.*

market level (e.g., email). Interoperability is a powerful tool that raises important issues, which we will treat in detail elsewhere.⁴³

We already argued that for several reasons encouraging competition *for* the market through regulation is difficult. It requires extremely good competition enforcement to protect nascent entrants; the cadence of replacement of the monopolist is uncertain and risky; and consumers bear significant switching costs at each transition. For these reasons, digital markets enforcement efforts should concentrate on creating or strengthening competition *in* the market. As well as the reasons just provided, in that context a regulator can more easily identify and monitor already active platforms rather than potential entrants, which improves the regulatory and legal environment. One way to interpret several of the DMA rules is that they attempt to do exactly this: transition more Core Platform Services away from competition *for* the market by creating competition *in* the market. Certainly, there is scope for well-designed regulation, such as interoperability, to ease this transformation.⁴⁴

3.7 SOME PRACTICES LIMIT THE CONTESTABILITY OF SEVERAL MARKETS

Our discussion up to now has examined the way in which practices limit the contestability of this or that market. This was done for analytical simplicity. Some practices can limit the contestability of several markets. A full discussion would take us too far afield; we will discuss an example.

In the DMA, Recital (37) provides the background for Article 5(b) which forbids the practice that restricts the ability of business users to offer better terms to their users who have subscribed outside of the platform. This practice is one of the leading issues in the current *Epic v. Apple* lawsuit. To quote the Recital:

Because of their position, gatekeepers might in certain cases restrict the ability of business users of their online intermediation services to offer their goods or services to end users under more favourable conditions, including price, through other online intermediation services. Such restrictions have a significant deterrent effect on the business users of gatekeepers in terms of their use of alternative online intermediation services, limiting inter-platform contestability, which in turn limits choice of alternative online intermediation channels for end users

Recital (38) goes further. It discusses practices that prevent these business users from having a direct contact with their customers. It is quite a common practice for stores and marketplaces to position themselves as a compulsory go-between in any communication between their users. This will become forbidden – the obligation is spelled out in Article 6.1(e).

Some platforms impose and enforce a requirement that business users communicate to their customers only through the channels the platforms have set up. Furthermore, they forbid offering

⁴³ The authors of this paper are participants in the Digital Regulation Project (DRP), a collection of economists and policy experts. DRP participants published two papers prior to this one and plan additional forthcoming papers, including one addressing interoperability as a tool to increase competition in digital markets.

⁴⁴ Encouraging competition in the market might also meet some of the concerns expressed by Weyl and White that network competition excessively limits the variety of platforms.

different terms depending on the acquisition channel. These practices limit competition in several ways. First, they obviously limit the ability of business users to offer complementary services that compete with the platform’s own offerings, in great part because it allows the platform to constrain what the business user can communicate to its customers through the platform.

Second, and this might be not as obvious, they limit competition from other platforms, both in the market and for the market. To see this, consider an end user who uses multiple apps on platform A, which forbids direct communications between business users and end users. Often the business users will be multi-homing while the end users will be single homing. When our end user considers migrating to platform B, which competes with A, the end user has to take into account the fact that she will have to start anew its relationship with the apps that she uses (for instance, information about past orders will be lost as will information about badges earned in a game or information about the news she is interested in). This limits competition in the market, by adding costs of switching between established platforms. By the same token it also limits competition for the market by making entry of new platforms more difficult: business users and their clients on the incumbent platform will find it costly to “re-find” themselves on a competitive platform. For all these reasons, obligations that restrict this behavior seem reasonable, subject to the same caveats we expressed at the end of section 2. This should increase both contestability in the market and for the market.

There exist a substantial number of cases where preventing disintermediation is necessary to the business model of an intermediation platform, and for this reason, a blanket ban on such requirements for all platforms could harm competition and consumers. The DMA, however, will apply only to the very largest platforms whose activities are well entrenched, and, arguably not at risk from the imposition of such a requirement. Nevertheless, some of the authors of this report recommend an approach that allows a platform that shows its ‘no disintermediation’ practice advances fairness and contestability to be considered compliant. (There are many other ways in which platforms can limit contestability by leveraging their dominance in one market into a competitive advantage in other markets, for instance through joint login procedures. We hope that the discussion above is sufficient to give a flavor of the way in which these practices should be treated.)

3.8 DATA REGULATION AND CONTESTABILITY

In this paper, we have for the most part set aside the important issue of data. In 3.2, we showed that the data accumulated by incumbent firms give them a competitive advantage, and that this is another argument for the inapplicability of the theory of contestable markets.

In Recital (61), the Commission points out that the hoarding of data can lead to lack of contestability and argues that data regulation can improve efficiency. It reads in part:

Ensuring an adequate level of transparency of profiling practices employed by gatekeepers facilitates contestability of core platform services, by putting external pressure on gatekeepers to prevent making deep consumer profiling the industry standard, given that potential entrants or start-up providers cannot access data to the same extent and depth, and at a similar scale.

The mechanism that the Commission seems to have in mind is the following. Gatekeepers can generate profits by degrading privacy and using data to target consumers better. In the absence of regulations, entrants accumulate as much data as possible to compete, but will always be disadvantaged on this score. Strong privacy regulations therefore decrease the benefits of incumbency, and there is a form of “double dividend” as more privacy is considered a good thing. As a consequence, the DMA includes strong provisions regulating the use of data by the core platform services of the gatekeepers (5(a), 6.1(a), 6.1(h), 6.1(i) and 6.1(j) directly address data, whereas other provisions do so indirectly).

A full discussion would take us too far afield, but we would like to make three points. First, the use of data has “pro-competitive” as well as “anti-competitive” aspects: with more data, platforms can better serve their consumers. Therefore, data regulation should not be focused on limiting the amount of data, but on ensuring that data is collected, treated, and protected appropriately. In particular, data should be, with proper protections, shared between service providers, as long as this is done for the benefit of users. Second, if privacy is valued by consumers, we would expect that platforms which protect the privacy of consumers better would have a comparative advantage. In practice, this comparative advantage is lessened by the inability of users to assess levels of privacy protection and their belief that so much of their personal data is “out there” that extra effort to protect their privacy is worth little. These issues should be treated through a mix of regulations that control the use of data and increase transparency.⁴⁵ Policy proposals to enhance transparency around privacy are discussed in the **consumer protection** paper. Third, interoperability requirements are a potential tool to implement the right mix of data use and data protection.⁴⁶

3.9 THE LIMITS OF THE CONCEPT OF CONTESTABILITY

As we have shown, the concept of contestability is very rich and can provide a solid theoretical underpinning for policy analysis. It does not, however, provide a key to understand all regulatory issues. Partly this results from the fact that, due to demand and technological constraints, contestability can be infeasible or only very limited. As we discuss in the conclusion, when this is the case, fairness regulation to limit the negative consequences of monopoly power is appropriate.

One also needs to take care not to focus exclusively on the contestability of existing markets. The concept is not a natural fit when it comes to the analysis of the creation and invention of new markets with new types of products. However, we believe that, alongside fairness, it can be adapted to this purpose and we turn to this task in the last section of the paper.

⁴⁵ The Digital Regulation Project’s paper about online consumer protection offers a set of proposals intended to enhance transparency around privacy. See Fletcher et al., *Consumer Protection*, *supra* note 24 at 23-25.

⁴⁶ As previously mentioned, *see supra* note 43, the Digital Regulation Project will in the near term publish a paper discussing how interoperability can be used to improve the workings of various aspects of digital markets, including data use and protection.

Recital (79) of the DMA states:

The objective of this Regulation is to ensure a contestable and fair digital sector in general and core platform services in particular, with a view to promoting innovation, high quality of digital products and services, fair and competitive prices, as well as a high quality and choice for end users in the digital sector.

All the references to innovation are in the explanatory memorandum and in the recitals, and most are boilerplate assertions that unfair practices and/or lack of contestability are detrimental to innovation.⁴⁷ Yet, the way in which the proposed regulations impact innovation is critical to their performance. In addition to the value of innovation to consumer welfare, business users of the platform value the freedom to innovate and earn the returns from that innovation; and both will be controlled by the DMA.

4.1 INNOVATION AND REGULATION

Many critics of the DMA have focused on the effects of the DMA on innovation. They argue that the hoped-for positive consequences of the DMA for the welfare of European consumers and the competitiveness of European firms will not materialize or, at best, be substantially reduced as the DMA will stifle innovation, by the gatekeepers and by their competitors, as well as by the business users (for instance, the app developers) active on their platforms.⁴⁸ We agree that the problem of innovation is important, sufficiently important that it is right to situate its discussion at the center of the “theory” of the DMA. It is also clear from economic theory and empirical evidence, however, that the rather simplistic view often expressed by these critics that regulation is systematically and always antagonistic to innovation is incorrect.

To understand why, it is useful to review the arguments of the most prominent exponents of this view. Many of them, often with a background in strategy and management, explain that the largest tech platforms are hugely innovative, both technically and organizationally. We fully endorse this point. They, however, argue further that these platform’s profits are due to the value of the IP that they have generated, and therefore that profit-decreasing regulation would decrease the incentives to acquire new IP, and hence the incentives to innovate. This argument is over-broad. We fully support the idea that innovative firms should be entitled to the profits generated by their IP (when they comply with all other laws). As we have explained above and as the economics literature has made clear, however, the profits of platforms are also due to the fact

⁴⁷ Exceptions are Recitals (52), which argues that lack of interoperability and access to some functionalities of operating systems are detrimental to innovation, and (54) which argues that lack of access to data can be detrimental to innovation.

⁴⁸ D. Teece and H. Kahwaty have recently written about the relationship between the DMA and innovation. Most of their analysis is focused on the Commission’s impact statement: they argue that it does not take sufficiently into account its consequences on innovation. Their own analysis of the consequences of the DMA on innovation is much more cursory and focused on identifying negative consequences. See generally D. Teece & J. Kahwaty, *Is the Proposed Digital Markets Act the Cure for Europe’s Platform Ills? Evidence from the European Commission’s Impact Assessment* (2021), https://media.thinkbrg.com/wp-content/uploads/2021/04/11215103/Is-the-DMA-the-Cure_Teece_Kahwaty.pdf.

that they are the nexus of network externalities. Regulating in a way that limits the excess benefits that incumbents draw from this situation has no reason to reduce innovation and could well increase it.

We will therefore turn to a more detailed discussion of the reasons for which we believe that, by increasing the contestability and fairness of the European digital sector, the DMA, *if well implemented*, need not decrease innovation and is likely to even boost it: fairness can increase the rewards to innovation, and contestability can make it easier for innovative firms to compete. **This will increase the innovation rents and therefore the incentive for innovation as well as affect its type and direction.** We will stress that the proper interpretation of fairness and contestability can help make the DMA an even better instrument for the promotion of innovation, by, at the same time, ensuring that the innovation from the gatekeepers serve the public good, and by encouraging innovation from other firms in the ecosystem.

4.2 THE VALUE OF INNOVATION

Perhaps the defining characteristic of the digital sector is its pace of innovation and the tremendous benefits that it has generated for consumers. Indeed, a large macroeconomics literature has established the principle that by far the most important contributor to higher standards of living and consumer welfare is innovation. For example, an “old” case of the gains from innovation is the provision of artificial light. Light became both higher quality and cheaper over the decades as innovation moved society from candles, to kerosene, to a simple electric bulb, to LEDs.

The benefits that consumers derive from innovation by some of the gatekeepers, whose behavior the DMA will presumably constrain, are often in the form of quality innovation and new services. This is easiest to see whenever, as is common, consumers do not pay a monetary price for services, but it holds more broadly. Due to the importance of digital platforms as a source of innovation that benefits consumers, it is critical that any regulation in this sector should maintain or increase the pace of innovation.

One important concept to address at the outset of the discussion is the difference between the absolute level of innovation by today’s platforms compared to the level of innovation we would see *if those platforms faced more competition*. It is the difference between the two that matters for regulatory policy.

4.3 CONTESTABILITY AND INNOVATION

4.3.1 CONTESTABILITY AND INVESTMENT IN INNOVATION BY GATEKEEPERS

It is certainly the case that the firms that will be designated as gatekeepers have been and continue to be fantastic innovators. To take a few examples, Google made the wealth of information of the web easily discoverable and continues to innovate not only in search but in mapping technology, in AI, and in many other directions. Apple invented the smartphone and continues to expand its functionalities. Again, the question is not whether the absolute level of

innovation by today's platforms is high, but whether it would be higher *if those platforms faced more competition*.

A digital platform with no competitors has less incentive to invest in innovation to retain its customers than a platform that risks losing its customers to rivals. The second type of platform experiences “innovation diversion” in the sense of Federico et al.⁴⁹ While it is true that the promise of gaining profits from rivals spurs innovation, the promise of losing profits also spurs innovation; neither incentive is present for an entrenched digital platform without rivals. When contestability is low a monopolist's incentive to innovate is also lower than it would be in a setting where it had to innovate to retain customers.

The impact of lessened competition on innovation has recently gained attention in the merger context. Federico et al. (2019) survey the economics literature, and the topic is also discussed in the media for high-profile cases such as Dow-Dupont in Europe and Facebook-Instagram in the United States. There is less evidence on the innovation effects of breakups because breakups are rare. An investigation of the last breakup in the US, the breakup of the Bell System in 1984, shows that it had a substantial positive long-term impact on US innovation, more so than prior regulation (Schnitzer and Watzinger, 2021).⁵⁰

Important innovation, however, is not specific to the largest digital firms. Smaller digital firms also spend a large amount of their revenues on R&D and conduct important innovation. Shopify is revolutionizing the way in which retailers can sell online while keeping direct contact with their clientele, and in so doing allows those retailers, among other things, to easily multihome across Amazon.com and its competitors. In a few months, Zoom has become a household name for videoconferencing, competing with such established products as Microsoft's Skype and Teams or Apple's FaceTime. Below, we explain why increasing the contestability of markets does not necessarily lower the incentives of gatekeepers to innovate, and why there are reasons to think it may well increase it by increasing the incentives of smaller firms and of entrants: when access to the consumers is blocked, there is little, if any, reason to innovate!⁵¹

The preceding argues that contestability can trigger more innovation. It is also true, and important to notice, that the causality runs the other way. There is a positive feedback loop: innovation by smaller firms increases contestability by allowing them to develop new goods and services that compete with those offered by the gatekeepers.

⁴⁹ See Giulio Federico et al., *Antitrust and Innovation: Welcoming and Protecting Disruption*, NATIONAL BUREAU OF ECONOMIC RESEARCH (2019), <https://www.nber.org/papers/w26005>.

⁵⁰ See Monika Schnitzer & Martin Watzinger, *The Breakup of the Bell System and its Impact on Innovation* (forthcoming) (abstract available at <https://www.monika-schnitzer.com/research.html>).

⁵¹ There has recently been a very lively debate among economists on the relationship between competition and innovation, to which it is impossible to do justice in this document. In the industrial economics literature, the focus has been on the effect of mergers on innovation. The interested reader may find the two following surveys useful entry point in the literature: Federico et al., *Antitrust and Innovation*, *supra* note 50; B. Jullien & Y. Lefouili, *Horizontal Mergers and Innovation*, 14 JOURNAL OF COMPETITION LAW & ECONOMICS (2018) at 364–92. Because of the focus of the literature on mergers, it is difficult to draw firm conclusions about the effects on innovation resulting from the types of conduct that are the object of the DMA on innovation.

4.3.2 CONTESTABILITY AND THE NATURE OF INNOVATION

The quantity of innovation should not be the only concern of public policy makers – the type of innovation is also important. Incumbents have incentives to innovate in ways that limit the contestability of the market they control. This has a directly negative effect: making markets less contestable. It has also a less direct effect: displacing other innovations that could be better from the viewpoint of social welfare. In this part of the paper, we expand on the relationship between contestability and the nature of innovation in ways that are detrimental to end users.

4.3.2.1 INNOVATION TO MAKE THE MARKETS LESS CONTESTABLE

In all industries, the innovation of firms is aimed at creating better products and or reducing costs, but also at reinforcing the market power that they possess. For instance, research will be aimed at discovering technologies that complement the product of the firm rather than general purpose technologies. The same is true, and there is no reason why it would not be true, for digital industries.

It is practically impossible to regulate the direction in which firms will innovate, but regulators and competition authorities can influence the direction of innovation away from the creation of moats by making sure that the firms gain more by increasing the value to the consumers of the services they offer. A regulation that limits the value of moats, by, for example, imposing interoperability or making the migration of consumers to other platforms easier, will reduce the incentive to invest in innovation designed to increase market power through the creation of new moats or the deepening of existing ones.

4.3.2.2 INNOVATING FOR RENT EXTRACTION

Faced with vigorous competition for the market, even a monopolist or quasi-monopolist CPS would have incentives to improve its product with the objective to thwart entry. As competitive pressure decreases, the incentives to search for innovation designed to extract more rents from consumers increase. Think of an investment in a ranking scheme that promotes products that are, for some reason or the other, more profitable to the platform and less to the consumers.⁵² This type of innovation does not increase consumer surplus, but rather reduces it by converting it to producer surplus. With competition, rival CPS's that have better consumer offers create an incentive for an entrenched CPS to innovate to benefit consumers; if the incumbent does not, it faces a credible loss of its business to entrants.

⁵² The UK financial regulator, for example, complained that Google does not prevent ads for financial “scam,” illustrating this by showing in a press conference that individuals who search for “high yield investments” are shown ads that promise unrealistic and clearly fraudulent returns such as “50% in one week” or 15% income from “risk free bonds.” See Mathew Vincent, *UK regulator says Google not doing enough about scam ads*, FINANCIAL TIMES, (September 24th, 2020.), <https://www.ft.com/content/ca700726-c48c-4132-953b-8d6a1e57f00c>. Although this is an extreme example, Google as a general matter benefits when advertisers can bid to profitable but low-quality or even dangerous or damaging products to consumers, including those consumers who may be vulnerable to such exploitation.

4.3.2.3 INNOVATION TO LEVERAGE MARKET POWER

New technologies open opportunities for new services. Often, these services build on, and are complements to, existing services. Gatekeepers are well placed to take advantage of these opportunities when they build on the services that they offer. They understand the needs of consumers and of business users; they have the technological expertise to develop the new services; and they have the incentives to develop new services that make their existing services more valuable. They may, however, have both opportunities and incentives to develop these new services, and to adapt their old offerings, in a way that leverages their existing market power into these adjacent related markets. This will reduce competition in the new services and help them capture more rents – it may also widen the “moat” around their old services. The DMA recognizes this issue in several places by regulating interoperability and portability of data, as well as access to real time data, etc.⁵³

Some writers complain that these types of obligations make innovation more costly and more difficult for the incumbent platforms, and hence will lead to a less dynamic economy. We agree that this cost does exist. On the other hand, the increased possibilities of innovation for third parties such as app developers weigh in the opposite direction. If this innovation is successful, it will not only *directly* benefit consumers but will also increase the competitiveness of the app industry in the long run, which will *indirectly* benefit them.⁵⁴

As a consequence, we are cautiously optimistic about the impact of the DMA on pro-competitive innovation, although we should warn that the consequences of the law will depend crucially on the way in which it is enforced by the Commission. This is one of the areas in which we think that a robust dialog between the regulator and the regulated firms is crucial.

4.4 FAIRNESS AND INNOVATION

If one starts from the observation that today’s digital platforms capture the bulk of the surplus created by a combination of business users, end consumers, and platform functionality, then innovation incentives are also skewed. If regulation redistributes rents so that they are in closer proportion to each party’s contribution to welfare, then innovation incentives will also be more balanced. When innovation incentives align with the social benefit of that innovation, then total innovation benefit to consumers will be higher. **In this way, increased fairness can increase innovation.**

Recall our analysis of fairness in surplus sharing and let us focus on what we will call complementors – the business users who provide services that complement those of the CPS’s. The platform has little use or value if they do not participate. Consumers join the platform in

⁵³ For instance, article 6.1(f) compels a gatekeeper to “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.” This rule seeks to level the playing field and limit the ability of the gatekeeper to leverage into adjacent markets.

⁵⁴ See W. Wen & F. Zhu, *Threat of Platform-Owner Entry and Complementor Responses: Evidence from the Mobile App Market*, 40 STRATEGIC MANAGEMENT JOURNAL (2019) at 1336–67. According to the authors of this paper, data show that app developers reduce innovation efforts and increase app prices in response to threatened entry by Google. We explore this concept in greater depth in the forthcoming paper addressing interoperability. See *supra* note 43.

order to enjoy their services. However, as we have shown, due to the way in which value is shared, consumers receive rewards that are smaller than their actual contribution and the platform will capture a large part of the value. Therefore, the complementors' incentives for innovation will be sub-optimally low.⁵⁵ If well implemented, the DMA will redistribute rents more in line with the value contributed by each side of the platform. This will tilt rewards towards complementors and increase their incentives to invest. The point was well illustrated by Horacio Gutierrez, General Counsel, for Spotify during an April 22, 2021, Senate Judiciary Committee hearing: "*Apple therefore has things exactly backwards when it claims that companies like Spotify are free-riding on Apple's innovations. It is Apple's success that rode in large part on the creativity of third-party app developers that created demand for Apple's devices.*"⁵⁶

A further point to make about complementary businesses is that they are more likely to be local to the platform users. For example, a dating app specific to a language or geography is more likely to have been created by a local entrepreneur, and employ local residents, than is the platform itself. Similarly, if brick and mortar retailers join a large e-commerce platform, those retailers may specialize in goods that their geographically local users want to buy. It is estimated that the gatekeepers subject to the DMA obligation will for the most part be American firms, whereas the complementors of these platforms will presumably be situated in geographies closer to their users. If the DMA increases innovation by complementors, some of that innovative activity will likely occur in Europe. This is an important objective given the relatively low innovativeness of European industry; furthermore, innovation by European firms may reflect more closely the tastes and needs of European users.

At the same time, these rules redistribute rents away from the CPS and this may reduce innovation (some of it exploitative and leveraging) by the CPS. More specifically, some of the DMA rules are designed to facilitate platform disintermediation. The impact of complementors disintermediating the platform will depend on how that disintermediation impacts the range of products consumers can choose from. For example, if disintermediation of the platform causes complementors to invent convenient and differentiated alternatives while the platform continues to operate, then consumer choice is increased. On the other hand, it is possible that disintermediation by the sides of the platform (e.g., contracting around the platform to avoid its fee) could cause an otherwise useful platform to fail to host transactions and, ultimately, cease operation. Less dramatically, it could make the platform less useful, for instance by making it less trustworthy or preventing a close integration of its functionalities. The loss of the platform as a competitor in the marketplace reduces choice and is likely a harm to competition and consumers. If disintermediation creates new products but causes the core platform to fail, then the impact on welfare becomes ambiguous.⁵⁷

⁵⁵ It could very well be that this is not true for some forms of innovation by the complementors, and a complete analysis of all possible cases is far beyond this paper. We believe, however, that our description is correct for the vast majority of possible innovation by the complementors.

⁵⁶ See <https://www.pbs.org/newshour/economy/watch-live-senate-judiciary-committee-will-hold-hearing-examining-competition-in-app-stores>.

⁵⁷ Many of the points of this paragraph are treated in more detail in our paper addressing online consumer protection. See Fletcher et al., *Consumer Protection*, *supra* note 24.

Because we understand that the DMA will be applied to only a few very large platforms, at least initially, the ability to disintermediate is unlikely to cause these very large platforms to cease operations. They have well established brands and reputations, a range of services, and troves of consumer data. It seems more likely that the ability of complementors and end users to disintermediate the platform will provide the incentives for both platform and complementors to innovate and will give complementors more bargaining power in the division of the surplus.

Furthermore, the fact that complementors can capture a greater part of the profits might induce them to compete more aggressively with the CPS's own complementary products. This extra competitive pressure could also provide the CPS with more incentives to innovate.

4.5 SOME CONCLUDING WORDS ON INNOVATION

Before closing our discussion on the relationship between the DMA and innovation, we want to stress that unfair competition by digital giants is very far from being the main causes of the lack of innovation of the European industry. Two of the three founders of Snowflake, for example, are European.⁵⁸ Despite that, they found it easier to develop their firms in the United States where the competitive pressure from "Big Tech" was certainly not any less. The causes of the lack of European innovation are its lackluster and often sclerotic university system, the inflexibility of its financial sector, etc.

Better regulation of the digital sector may increase digital innovation in Europe. But it should not distract from the important task of tackling the root causes of the lack of European innovation. Innovative firms need better access to finance, and better returns for their innovative activities. A more united single market will facilitate access to consumers. European higher education and research need to be better financed and reorganized. Closer to the digital sector, reforms that, for instance, lead to better access to data for entrants and small platforms while preserving privacy would also be important.

5 CONCLUSION

As we have stressed throughout this paper, the DMA is a good, albeit certainly not perfect, first step towards an improved regulation of the largest technology firms. Our aim has been to contribute to its development, by showing how the concepts of contestability and fairness can be defined in such a way as to provide a solid economic foundation for regulation of the digital industries, a regulation that would increase competition and be beneficial for consumers and for business users.

As stated in the introduction, we make four policy prescriptions:

- The text of the DMA should include definitions of contestability and fairness. They would make it easier to understand the obligations of Articles 5 and 6. Leaving them

⁵⁸ See [Snowflake Leadership and Board of Directors | Get to Know the Team](https://www.snowflake.com/leadership-board/), <https://www.snowflake.com/leadership-board/> (last visited July 6, 2021).

undefined will weaken the implementation of the DMA, as the regulator, the regulated firms and the courts will not have a clear understanding of what they mean, and no agreed upon common framework to discuss them.

- The implementation of the DMA should focus on encouraging competition in the market, and not just competition for the market. As we have discussed at the end of section 3.6, we think that competition in the market is a more realistic goal and leads to easier enforcement than a focus on competition for the market.
- As discussed in 2.1, the platform economy leads to “unfair” outcomes where users are not rewarded for their contribution to the success of the platform. Correcting this distortion through regulations that change bargaining power and increase choice is therefore desirable. Thus, in some digital markets quality or price regulation could be appropriate.
- If well implemented, regulations based on the concepts of fairness and contestability can be favorable to innovation, especially to innovation by users of platforms. The knee-jerk reaction that any form of regulation will kill innovation by the large gatekeepers is unwarranted.

We have not discussed in any detail the important issue of the implementation of the DMA, which is probably just as important as the text itself for its success. We call on our economist colleagues to participate fully in that debate, alongside legal scholars. The issues of implementation, as, for instance, the proper degree of flexibility in the implementation of the different rules, are not only legal, but also economic. The economist Jean Tirole has recently called for a “participative antitrust.”⁵⁹ In the same spirit we should explore the possibility of “participative regulation.”⁶⁰

⁵⁹ See, e.g., Allison Schrager, *A Nobel-winning economist’s guide to taming tech monopolies*, QUARTZ (June 18, 2018), <https://qz.com/1310266/nobel-winning-economist-jean-tirole-on-how-to-regulate-tech-monopolies/>.

⁶⁰ This discussion would be more productive if we had better economics of the regulatory process, both at the theoretical and empirical level. It is an extremely important topic, which is too often neglected in current economic research.

Appendix 1 – Author Conflict of Interest Disclosures

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