European Commission

Progress Report

Expert Group for the Observatory on the Online Platform Economy

Work stream on Differentiated treatment

Contents

Executive summary

This report analyses practices of differentiated treatment, whereby a platform applies dissimilar conditions to business users in equivalent situations, and explores the extent to which such practices constitute a potential source of "unfairness" in the relationship between platforms and businesses in the online platform economy. A distinction is made between practices of self-favouring, whereby a platform gives preferential treatment to its own vertically integrated activities over those of rivals, and more general practices of differentiated treatment where one or more business users are treated more favourably than one or more others.

The report aims to provide guidance on how to assess the impact of differentiated treatment by online platforms from a technical, economic and legal perspective, and identifies areas requiring further scrutiny because of the especially problematic nature of certain practices implemented by platforms. This would include in particular practices of differentiated treatment that significantly harm business users and for which the platform does not have a legitimate justification. The extent to which legitimate reasons invoked by a platform can justify harm to businesses is the key issue for future consideration.

As such, the report stresses that for assessing what practices can be considered "unfair" more transparency and oversight is needed into the practices in which platforms engage. In this regard, the Platform-to-Business Regulation (Regulation 2019/1150) provides a good starting point facilitating the more concrete stipulation of "unfair" forms of differentiated treatment that may require additional regulatory intervention, depending on the policy objectives chosen to be prioritised in the online platform economy.

To this end, the report recommends to conduct three focused studies within the observatory to gain more insight into the impact of problematic practices: (1) a study dedicated to exploring solutions for the problems concerning the observability of differentiated treatment by platforms arising from techniques such as personalisation and localisation; (2) a comparison across e-commerce platforms to determine how vertical integration affects practices of differentiated treatment, including in particular data sharing policies, and to illustrate how platforms' size/market share correlates with the prevalence and the effects of such practices; and (3) a study into the frequency, impact as well as the availability of redress for businesses against the restriction, suspension or termination of service by platforms.

1 Introduction

The relationship of businesses vis-à-vis online platforms (i.e. internet-based services that bring different customer groups together) has recently come under increased scrutiny, both from a regulatory as well as from a competition law perspective. Differentiated treatment is a common feature across markets and is not inherently problematic. Hence, a key issue in these investigations, which focus on the online platform economy, is under what conditions 'differentiated treatment' by platforms of business users is to be regarded as problematic. The most prominent example is the decision of the European Commission in June 2017 to fine Google for abusing its dominance in the market for online search by systematically giving prominent placement to its own comparison shopping service. To end the infringement, the Commission required Google to treat 'competing comparison shopping services no less favourably than its own comparison shopping service', in particular by applying 'the same processes and methods to position and display' comparison shopping services in its general search results.[1] Following this *Google Shopping* decision, various national competition authorities have started investigations into differentiated treatment by a number of online platforms, including Apple, Allegro and emag.[2] In 2019, the European Commission opened a new competition investigation into Amazon's use of competitively sensitive data that it collects from independent retailers selling on its marketplace.[3]

Many of these cases illustrate the tensions arising from the possible dual role of the platform in (1) providing online intermediation or online search services for business users, and (2) selling its own products on that marketplace as well so that it competes with business users. As such, these platforms are vertically integrated and provide services to consumers in competition with businesses active on their platform. Depending on its size and importance, this dual role can give the platform a superior bargaining position in relation to its business users. This may result in situations where an imbalance occurs between the interests of the platform and businesses, potentially leading to the imposition of unfair practices on business users. The favouring of own products or services by online platforms was also identified as one of three most commonly experienced problematic trading practices by business respondents to the European Commission's 2016 public consultation on platforms.[4]

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[1] Case AT.39740 *Google Search (Shopping)*, 27 June 2017, par. 699-700.

[2] See Press release Netherlands Authority for Consumers and Markets, 'ACM launches investigation into abuse of dominance by Apple in its App Store', 11 April 2019, available at https://www.acm.nl/en/publications/acm-launches-investigation-abuse-dominance-apple-its-app-store; Press release Polish Competition Authority, 'Competition authority searches premises of Grupa Allegro', 7 July 2017, available at https://www.uokik.gov.pl/news.php?news_id=13332; Press release Romanian Competition Authority, ´The Competition Council analyses a possible abuse of dominant position of Dante International SA´, of 4 January 2018, available at: http://www.consiliulconcurentei.ro/uploads/docs/items/bucket13/id13068/inspectii_dante_dec_2017_english.pdf.

[3] Press release European Commission, 'Antitrust: Commission opens investigation into possible anti-competitive conduct of Amazon', 17 July 2019, available at http://europa.eu/rapid/press-release_IP-19-4291_en.htm.

[4] Synopsis Report on the Public Consultation on the Regulatory Environment for Platforms, Online Intermediaries and the Collaborative Economy.

Any analysis of differentiated treatment has to consider cases that go beyond mere self-favouring, as unfair differentiated treatment may also occur in situations where the platform does not directly compete with business users. Both of these scenarios are considered here. From a more factual perspective, differentiated treatment can take various shapes as the different ongoing competition investigations and various reports on competition in the digital era[5] illustrate: from cases of self-favouring or otherwise unfair treatment in rankings to differentiation in terms of access to data. The power of companies in prioritising certain offerings in the online marketplace over others, also raises broader issues related to fairness, transparency and accountability towards business users and end-users, and the functioning of our democracies.[6] While these are vital concerns, such broader considerations do not form the core of this report.

Our focus is on an analysis of differentiated treatment as a potential source of 'unfairness' in the relationship between platforms and businesses in the online platform economy. While companies can also engage in differentiated treatment towards consumers in business-to-consumer (B2C) relations, for instance in the form of personalised prices,[7] the focus here is on the impact of differentiated treatment in business-to-businesses (B2B) or, more specifically, platform-to-business (P2B) relations. For the purposes of this report, 'differentiated treatment' is defined as the application of dissimilar conditions to equivalent situations (see also Article 102(c) TFEU). We distinguish between practices of self-favouring, whereby a platform gives preferential treatment to its own vertically integrated activities over those of rivals, and more general practices of differentiated treatment where one or more business users are treated more favourably than one or more others. As mentioned from the outset, differentiated treatment is present in many markets and is not problematic in itself. In the online platform economy, differentiation is inherent in rankings, whose exact function is to list content in an order of importance or relevance in view of the platform's offering to end-users. Differences in the position of businesses vis-à-vis the platform may also sometimes make situations non-equivalent, so that there is no differentiated treatment in the first place. And there may be objective reasons or justifications for a platform to apply different conditions to businesses in similar situations. Such possible justifications notwithstanding, the potentially far-reaching consequences of differentiated treatment for business users raise significant issues with respect to the functioning of markets that require further analysis.

In light of these concerns, this report aims to provide guidance on how to assess the impact of differentiated treatment by online platforms from a technical, economic and legal perspective, and identifies areas requiring further scrutiny because of the especially problematic nature of certain practices implemented by platforms. As instances of differentiated treatment are not necessarily limited to cases where a platform holds a 'dominant position' within the meaning

[5] See DG Competition report 'Competition policy for the digital era', April 2019; Report of the Digital Competition Expert Panel 'Unlocking digital competition', March 2019; Australian Competition & Consumer Commission report 'Digital Platforms Inquiry', June 2019.

[6] For a discussion of end-user interests and relevant legal frameworks, see section 6.2.

[7] See Consumer market study on online market segmentation through personalised pricing/offers in the European Union conducted for DG Just by Ipsos, London Economics and Deloitte, June 2018, available at https://ec.europa.eu/info/publications/consumer-market-study-online-market-segmentation-through-personalised-pricing-offers-european-union_en.

of EU competition law,[8] the report looks beyond the application and interpretation of competition rules.

2 Analogies with other sectors

The issue of differentiated treatment by entities holding a position of power in particular value chains is by no means a new phenomenon. For assessing the impact of differentiated treatment in the online platform setting, we briefly take stock of the best-known analogies with other sectors: differentiated treatment in a brick-and-mortar setting (supermarkets) and the notion of net neutrality as enforced in the context of electronic communications services. This section explores the extent to which such analogies can provide useful insight for our analysis.

2.1 Analogy with differentiated treatment in a brick-and-mortar context

Practices of differentiated treatment that are observed in the online platform economy have a similarity with offline commercial behaviour, for instance in the context of supermarkets. The ranking that an online platform displays to users can be compared to the way a supermarket displays products to shoppers as they walk along the shelves in the store.

Like a vertically integrated platform may have incentives to put its own products higher up in the ranking, a supermarket will want to use its power over the placement of products in its bargaining with suppliers, while products of its own brand get the spot on the shelves that generates the highest profits. One can draw an analogy with how some online platforms offer business users the option of getting a more favourable placement in the ranking by paying commissions, engaging in special deals or taking ancillary services. This type of paid prominence is indeed similar to 'slotting allowances' in supermarkets, referring to a lump-sum up-front payment that a supplier must pay to a supermarket for having its products placed on the shelves. Slotting allowances have generated the competition concern that strong retailers demand large up-front payments that small suppliers cannot afford to pay.[9] At the same time, slotting allowances have the benefit of helping newcomers to attain visibility more quickly. If such analogy with online platforms works, depends on whether supermarkets can be compared with online platforms that act as intermediaries between businesses and consumers, considering the various angles relating to their business model and economic features.

One such obvious angle is scale and the possibility of expanding it. Platforms offer unprecedented scale (in the online world, even a specialised platform can have sellers in the order of millions[10]), and have virtually unlimited shelf space. Moreover, expansion is not

[8] In *United Brands*, the Court of Justice defined 'dominance' as 'a position of economic strength enjoyed by an undertaking which enables it to prevent effective competition being maintained on the relevant market by giving it the power to behave to an appreciable extent independently of its competitors, customers and ultimately of its consumers' (Case 27/76 *United Brands*, ECLI:EU:C:1978:22, par. 65).

[9] W.K. Tom, 'Slotting Allowances and the Antitrust Laws: Testimony of the Federal Trade Commission before the Committee on the Judiciary U.S. House of Representatives', Washington D.C., 20 October 1999.

[10] Some of the most important platforms have several million sellers whereas the biggest supermarkets will have a maximum of a few thousand.

constrained by costly investments as in the case of supermarkets, as platforms do not need to invest in the production of the content, goods or services or other forms of capital they give access to. Supermarkets need to change their physical layouts in shops, warehouses, and physical supply chains, whereas digital intermediaries benefit from so-called "scale-without-mass".

Another angle relates to the nature of the markets operated by platforms versus supermarkets. Platforms are multi-sided markets and intermediate direct transactions between business users and consumers. They offer a unique form of intermediation and create entirely new markets (apps for instance would not exist without app stores). Although there is a discussion in economic literature about the extent to which supermarkets can be modeled as two-sided platforms,[11] supermarkets are usually characterised as one-sided resellers. This is a relevant difference considering that it locates part of the risk and the ability to set prices with the supermarket (depending on the circumstances, such as whether the supermarket can return unsold items to the supplier), rather than with the suppliers as is the case in the online platform setting.

A question is whether more systematic monitoring or a stricter attitude should be taken towards forms of differentiated treatment on online platforms as compared to offline equivalents, because of the scale of the practices and affected businesses or the increasing market concentration and dependence on platforms. For instance, the practices of online platforms are more opaque due to personalisation of rankings in accordance with the profile of the user, while the shelves in a supermarket are arranged in the same way for all shoppers. The effects of paid-for placement in supermarkets are therefore more easily verifiable for suppliers who can visit the shop and check for themselves how the shelves are organised. At the same time, the increased use of data on customer preferences and behaviour and the integration of such data into supermarkets' business practices, including through personalised shopping experiences, does create additional information asymmetries between suppliers and supermarkets.[12]

Similar to the position of supermarkets, online platforms have a large sets of data on the transactions facilitated on their marketplace. However, at least two factors would seem to differentiate the amount and depth of data that the two can gather: a) the number of customers that platforms can reach (far larger than supermarkets) and b) the mechanisms of data collection (which appear more limited for supermarkets – such as loyalty cards). Based on those, it seems reasonable to assume that platforms' datasets on customers are richer by orders of magnitude, and therefore allow for personalisation that is much more sophisticated (although structured attempts of quantifying or describing have yet to be undertaken). Scale and speed in the use of data online appear therefore as main differentiators between platforms and brick-and-mortar.

This data gives the platform insights into the overall purchasing behaviour of consumers and trends in consumer preferences. The use of such information by the platform to the benefit of its vertically integrated activities may amount to self-favouring. In this regard, one of the potentially harmful practices identified by the Commission in its fact-finding exercise is the

[11] M. Armstrong, 'Competition in two-sided markets', *RAND Journal of Economics* 2006, p. 684-686; A. Hagiu, 'Merchant or Two-Sided Platform?', *Review of Network Economics* 2007, p. 1-19; M. Rysman, 'The Economics of Two-Sided Markets', *Journal of Economic Perspectives* 2009, p. 125-143.

[12] For a discussion of developments in supermarket tracking of customers, see Turow, Joseph. The aisles have eyes: How retailers track your shopping, strip your privacy, and define your power. Yale University Press, 2017.

'use of transaction data to learn from downstream competitors and improve online platforms' own competing service'.[13] The *Amazon* competition investigation initiated by the Commission in July 2019 seems to target such a scenario, as the press release states that 'the Commission will focus on whether and how the use of accumulated marketplace seller data by Amazon as a retailer affects competition'.[14]

While similar practices may occur in the context of supermarkets, their effects may not be as far-reaching as on online platforms. For instance, if a supermarket identifies a trend among consumers for a particular product that is offered by one of its suppliers, the supermarket can decide to develop its own-brand product with similar features, in order to extract more value from that particular market segment. However, in order to do so, it will need to invest in developing its own brand in order to compete with that supplier. Platforms, on the contrary, can decide to start selling the exact same product as offered by a business user – and possibly even against a lower price, because of their scale advantages – if the manufacturer is willing to supply the product. Alternatively, they can decide to start selling very similar products but which have a slightly lower price and/or some additional particular features that may make them more attractive to the customers. This way, without taking the same risk, the platform can compete intensely with businesses who took the risk in growing a market for a product whose success among consumers was not yet established at the initial launch of the product on the platform.

Due to the way customers are presented with product options on a platform (via ranking of the results in response to a query, via recommendations of products etc.), platforms have the ability to direct the customers' attention, in a focused manner, to certain products – arguably to a larger extent than supermarkets do. For instance, a customer searching for a product will likely look at the first few results a platform is presenting for that query, while a customer entering a supermarket will inevitably see a large variety of products). In case of certain platforms with a large market presence, this kind of influence can reach tens of millions of customers virtually at the same time. This is not possible in the case of supermarkets, where physical and logistic limitations constrain the number of customers who can be reached and extend the time needed to do so. As we show in section 5 below, platforms also may have the economic incentives to be biased in favour of certain products (which may be their own offerings or offerings of certain sellers). To summarise, in contrast to supermarkets, platforms appear to have more a) possibilities to adopt certain products very fast with limited risk and to reach a large number of customers instantly and b) incentives to differentiate between products/sellers in the way they are made visible on a platform. This combination makes such instances of differentiated treatment more problematic for the business users of online platforms than for suppliers of supermarkets.

In conclusion, although it is clear that differentiated treatment is not an isolated phenomenon of the online platform economy, the effects of differentiation on online platforms differ considerably from the context of supermarkets due to differences in business models, scale and

[13] Commission Staff Working Document – Impact Assessment – Accompanying the document Proposal for a Regulation of the European Parliament and of the Council on promoting fairness and transparency for business users of online intermediation services, SWD/2018/138 final, 26 April 2018, p. 16-17.

[14] Press release European Commission, 'Antitrust: Commission opens investigation into possible anti-competitive conduct of Amazon', 17 July 2019, available at http://europa.eu/rapid/press-release_IP-19-4291_en.htm.

issues relating to the use of data and algorithms for personalisation that are specific to the online environment. As a result, the fact that differentiated treatment has so far not led to competition concerns in the context of supermarkets does not mean that equivalent practices should be tolerated in the online platform economy.

2.2 Analogy with net neutrality

Two types of non-discrimination obligations have been put in place for the telecom sector – EU net neutrality rules[15] – and the non-discrimination obligation available within the regime applicable to telecom operators with significant market power (SMP)[16]. The Telecom Single Market Regulation lays down the principle of net neutrality for providers of electronic communications networks and services (including broadband providers), requiring them to treat all traffic 'without discrimination, restriction or interference, and irrespective of the sender and receiver, the content accessed or distributed, the applications or services used or provided, or the terminal equipment used'.[17] Net neutrality reflects the much older principle of common carriage. The central concern that led to regulatory intervention was the ability of broadband providers to use their key position to distort competition and limit access of consumers to internet-based content and services.

Intermediation services like online platforms, app stores but also certain device manufacturers (such as smartphones, tablets and personal voice assistants) are also important gateways to access content and other services on the internet. In this light, different reports (including from

[15] Net neutrality rules imply that there should not be no blocking or throttling of online content, applications and services. All traffic needs to be treated equally. This means, for example, that there can be no paid prioritisation of traffic in the internet access service. At the same time, equal treatment allows reasonable day-to-day traffic management according to justified technical requirements, and which must be independent of the origin or destination of the traffic and of any commercial considerations. Common rules on net neutrality mean that internet access providers cannot pick winners or losers on the internet, or decide which content and services are available. Service providers must be able to provide their services via a high-quality open internet and every European must be able to have access to the open internet.

[16] Article 7 of the EU's Electronic Communications Framework Directive (2002/21/EC) is one of the main EU instruments to ensure consistency of regulation of the telecoms sector. National Regulatory Authorities (NRAs) must ensure that telecoms markets are competitive. If NRAs find that one or more market players have SMP, they should impose appropriate regulatory obligations (remedies) - including non-discrimination - to ensure effective competition. The notion of SMP is equivalent to the competition law concept of "dominance", as defined in the case law of the Court of Justice of the European Union. The Commission Recommendation (2013/466/EU) of 11 September 2013 on "consistent non-discrimination obligations and costing methodologies to promote competition and enhance the broadband investment environment" further specifies the non-discrimination obligation.

[17] Article 3(3) of Regulation (EU) 2015/2120 of the European Parliament and of the Council of 25 November 2015 laying down measures concerning open internet access and amending Directive 2002/22/EC on universal service and users' rights relating to electronic communications networks and services and Regulation (EU) No 531/2012 on roaming on public mobile communications networks within the Union (Telecom Single Market Regulation) [2015] OJ L 310/1.

telecom bodies like BEREC and ARCEP)[18] as well as literature[19] have suggested to extend the net neutrality principle beyond the network and infrastructure layer to the device layer and application/service layer under the umbrella of 'platform neutrality' or 'device neutrality'.

From a more technical perspective, there are differences as to what a neutrality obligation would entail for online platforms and devices as compared to the net neutrality principle that applies to electronic communications networks and services. Such a principle cannot be transposed one-to-one to online platforms, for instance so as to establish a form of 'platform neutrality', because differentiation is inherent in rankings on online platforms. The objective of a ranking is precisely to select the pieces of information that it considers most relevant to users. Its success in doing so is a core aspect of its value proposition toward end-users. There are many ways to operationalise relevance and platforms constantly adapt to changing user preferences and optimisation strategies. Thus, the way offerings are ranked and presented to users on online platforms requires a more complex trade-off than in electronic communications services. Any regulation with respect to the platform's freedom to differentiate has to take account of this. The results matching a user's query have to be displayed to the user at the same moment and in the same place, unlike internet traffic that is delivered to users sequentially. These technical differences also illustrate that the working of rankings differs from how traffic over the internet is handled, so that differentiated treatment on online platforms may indeed require an assessment distinct from net neutrality.

In addition, there is another distinguishing element to be taken into consideration: internet packets are basically the same from a technical point of view (heavily standardised), and hence the service offered by different operators who might engage in differentiated treatment are basically highly mutually substitutable from a consumer perspective. The situation is different in the platform world where platforms are not substitutable, and consumers multi-home more than in the telecom sector; they would have accounts on several platforms on which the products supplied would be different, for instance on e-commerce market places for mass products versus handy-craft products.

While above-mentioned reports by European regulators point at potentially problematic practices related to notions of platform and device neutrality, an immediate imposition of a

[18] See French Conseil National du Numérique, 'Platform Neutrality: Building an open and sustainable digital environment', May 2014, available at https://cnnumerique.fr/files/uploads/2014/06/PlatformNeutrality_VA.pdf; French ARCEP, 'Devices, the weak link in achieving an open internet. Report on their limitations and proposals for corrective measures', February 2018, available at https://www.arcep.fr/uploads/tx_gspublication/rapport-terminaux-fev2018-ENG.pdf; BEREC report on the impact of premium content on ECS markets and the effect of devices on the open use of the Internet, March 2018, section 3 available at https://berec.europa.eu/eng/document_register/subject_matter/berec/reports/8013-berec-report-on-the-impact-of-premium-content-on-ecs-markets-and-the-effect-of-devices-on-the-open-use-of-the-internet; CERRE Issue paper by J. Krämer, 'Device neutrality: the missing link for fair and transparent online competition?', March 2019, available at https://www.cerre.eu/sites/cerre/files/CERRE_DeviceNeutrality_IssuePaper_March2019_0.pdf.

[19] On search neutrality, see for instance: O. Bracha & F. Pasquale, 'Federal Search Commission - Access, Fairness, and Accountability in the Law of Search' (2008) Cornell Law Review 1149; J. Grimmelmann, 'Some Skepticism About Search Neutrality' in Berin Szoka & Adam Marcus (eds.), *The Next Digital Decade: Essays on the Future of the Internet* (2010), 435; G.A. Manne & J.D. Wright, 'If Search Neutrality is the Answer, What's the Question' (2012) Columbia Business Law Review 151.

general obligation of non-discrimination for platforms or devices does not seem suitable or desirable, considering the – so far – inconclusive findings about the impact of differentiated treatment – as illustrated below in sections 4, 5 and 6. In addition, simply extending net neutrality regulation to platforms would ignore different technical underpinning of these services. Appropriate regulatory intervention may need to be devised but this appears premature at this stage, especially since not all forms of differentiated treatment will have equally negative effects. On the basis of preliminary research from a technical, economic and legal perspective, sections 4-6 below discuss more specifically which types of differentiated treatment appear most problematic and would thus deserve further scrutiny.

3 Different interests involved: those of consumers, businesses, and the platform

Before moving to specific technical, economic and legal insights into differentiated treatment by platforms, it is worthwhile to point out the different interests that are at stake. Online platforms pursue their own commercial interests and, because of their multi-sidedness, they have to cater to both businesses as well as consumers. Beyond the specific interests of these three actors (the platform, its business users, and consumers), there are also broader societal concerns relating to the selection and prioritisation of offerings by platforms. By disrupting and transforming value chains, platforms have the capacity to undercut existing regulatory approaches, raising issues in intellectual property, labour law, and regulation of hotels and transport services. By optimising the matchmaking function between suppliers and end-users, platforms may also generate significant externalities, transforming people's living environments in the process. Platforms have become essential facilitators and mediators of democratic processes, including access to factual information, news, political campaigning and public debate. In all of this, platforms, due to their increasing power, help to determine the winners and losers in ways that may not be transparent, legitimate or properly informed by and accountable to the principles of democracy. These are good reasons to consider the public interest as a fourth interested party that may be detrimentally affected by business models organised around the maximisation of user engagement metrics.[20]

On a more immediate level, the need to keep consumers satisfied means that platforms do not have an unlimited ability to engage in differentiated treatment. For instance, once the more favourable display of one's own offerings in a ranking significantly lowers the quality of the service, such a form of self-preferencing can at some point reduce consumer participation into the platform. Depending on the strength of the position of the platform, the market may self-correct so that competition constrains the scope for differentiated treatment at least to a certain extent. Where the market position of the platform is strong or consumers do not switch or multi-

[20] While conclusive empirical evidence is still lacking, the high visibility of disinformation and controversial political content on social media (e.g. Allgaier Joachim, 2019. Science and Environmental Communication on YouTube: Strategically Distorted Communications in Online Videos on Climate Change and Climate Engineering. In: Frontiers in Communication 4) may be due to search and recommendation systems privileging information that 'activates' users more strongly. While social media platforms are not replacing other media channels, their very high user numbers, penetration rates, and reliance on algorithmic ordering raises specific questions.

home (out of convenience or for another reason), however, consumer preferences can to a large extent be shaped by the platform.

As regards the interests of businesses, it is important to recognise that platforms provide significant benefits by enabling businesses to target a wide audience that typically exceeds the territory of individual Member States and even beyond. In the absence of platforms who act as intermediaries between business users and consumers, small enterprises in particular would not have had equally effective possibilities to reach consumers. While platforms constitute a key entry point for businesses to access certain markets, platforms rely on the presence of businesses in order to create value for consumers. Because of this mutual dependency, competition may constrain the extent to which a platform can successfully engage in differentiated treatment if unsatisfied businesses can switch to an alternative platform. However, the ability for business to switch or multi-home depends on the strength of competition in the market.

The platform has an interest in protecting the quality of its service and in recouping its investments. To prevent a decrease in innovation incentives of platforms in the long term, leeway to design their business in a way that allows them to recoup their initial investment is likely justified, even if this results in the lack of enforcement of a principle to treat all businesses in similar situations alike. At the same time, differentiated treatment should not be tolerated if it creates harm that a platform cannot justify on the basis of legitimate reasons. The adoption of some obligations - such as for example the transparency requirements with regard to differentiated treatment set out in the Platform-to-Business Regulation[21] - therefore constitute an appropriate first regulatory step.

As a result, the starting point for our analysis is that platforms should be granted a certain degree of discretion in deciding how to design their platform, so that some level of differentiation is to be regarded as inherent in their functioning – just like in any other segment of the economy. In addition, one should keep in mind that it is impossible to reconcile all interests, implying that it is inevitable for one interest to prevail over others in a particular situation. A platform needs to be able to get a return on its investments so that some promotion of its own activities may be justified, even though this at the same time can harm businesses that get less exposure to consumers. EU competition law, however, is an important limit in situations where self-favouring creates anticompetitive effects that harm businesses as well as consumers. A platform may have legitimate reasons[22] to downgrade or even delist a particular offering to protect consumers against low quality services and to guard the reputation of its platform. This implies that not every instance of differentiated treatment is problematic. At the same time, some forms of differentiated treatment can have far-reaching consequences for the viability of businesses that are dependent on platforms, so that further measures for such situations may be necessary. The purpose of the analysis presented in the next sections is to

[21] Regulation (EU) 2019/1150 of the European Parliament and of the Council of 20 June 2019 on promoting fairness and transparency for business users of online intermediation services [2019] OJ L 186/57 ('Platform-to-Business Regulation').

[22] Examples of such legitimate reasons one might think of include: delisting of illegal content; prohibiting of offers contrary to the nature of the platform, but not illegal (e.g. mass manufactured products on handmade-only platforms; pornographic material on platforms aimed at children), which is this is especially important to consider since platform specialisation is a competitive strategy to survive next to the big platforms; and finally, the asks to downrank low quality content in the context of disinformation.

draw insights from a technical, economic, and legal perspective on how harmful effects from differentiated treatment can be assessed.

4 Technical insights into rankings

To better understand the various issues surrounding ranking, it is necessary to clarify a number of points, starting from the recognition that ranking and similar techniques *necessarily* engage in differentiated treatment when information and what it stands for is put into a particular order or sequence. As Grimmelman argues[23], search engines and other automated information systems face the dilemma that they *have* to rank and differentiate to be useful in the first place. Systems that suggest, promote, classify or filter items operate under similar imperatives to differentiate. A fully randomised search engine would be useless, but the specific criteria used still imply some interpretation of potentially contested terms such as relevance, quality, or authority. Five aspects are particularly salient in this context:

First, as Ciborra[24] and others have argued, information technology reduces the three factors originally identified by Coase[25] that weigh on transaction cost: search, contracting, and control over execution. In Coase's perspective, these factors introduce costs that limit the use of the pricing mechanism as coordination principle and make it profitable to organise economic activities through firms. The lowering of transaction cost through information technology along these three axes has made it possible to organise many economic sectors around the large-scale and potentially globe-spanning marketplaces for "items" of all kinds (messages on social media sites, products offered by online retailers, web sites indexed by search engines, potential partners on dating sites, units of housing for real estate or short-term rental services, driving services or other forms of labor in the "gig economy", etc.). In this context, ranking and similar gestures serve as the principal means to structure and manage connections between market participants, influencing the matching between offer and demand. The Web, for example, holds billions of documents and a user query can easily match millions of them. Ranking uses many different factors or signals to assess notions such as relevance, quality, authority, fit, and so forth. Users are thus presented with a reduced and ordered subset of items, conferring considerable power to the techniques in question.

Second, ranking is only one relevant form of "information ordering" and from a technical perspective in particular, it is closely related to activities like filtering, classifying, or recommending.[26] In many cases, similar algorithmic techniques are used, the difference between these gestures becoming a matter of interface design. In all of these cases, the goal is similar: a potentially large number of "items" are being made available to users and their sheer mass can lead to disorientation or information overload, as users' attention and cognitive

[23] Grimmelmann, James. (2009) The Google Dilemma. 53 New York Law School Law Review 939.

[24] Ciborra, Claudio U. (1985). 'Reframing the Role of Computers in Organizations: The Transaction Costs Approach', in: Proceedings of the Sixth International Conference on Information Systems, ed. Lynn Gallegos, Richard Welke and James C. Wetherbe, Chicago: Society of Information Management, 57-69.

[25] Coase, Ronald H. (1937). 'The Nature of the Firm', in: Economica, vol. 4, no. 16, 386-405.

[26] See, for example, Garcia-Molina, Hector, Georgia Koutrika, and Aditya Parameswaran. 2011. 'Information Seeking: Convergence of Search, Recommendations, and Advertising.' Communications of the ACM 54(11): 121-130/ https://doi.org/10.1145/2018396.2018423.

capacity are limited. Ordering mechanisms that filter, classify, recommend, or rank these items seek to present users with a more structured perspective on what is on offer to reduce cognitive weight. We can distinguish three broad settings:

- Users actively search for items, generally by formulating a query that describes a product or piece of information. Interfaces often provide structured means to further specify the query, e.g. through the selection of a product category, a price range, or a publication date.
- The system itself "suggests" or "recommends" items to users without asking them explicitly. While quite different from a user perspective, the underlying technical principles are similar: instead of using search terms, many different signals can take the place of a query, for example a user's profile and transaction history, their geographical location, the device they are using, and so forth.
- A combination of both, where explicit user requests are combined with "contextual" information that weighs on selection and ranking. This is generally referred to as personalisation.

All three settings can be organised in dynamic ways, where results are generated in real-time and may change over time based on interaction history, changes in the database of items, or the behaviour of other users.

Third, while techniques like ranking are at the heart of practices like search and recommendation, it is important to distinguish three "stages" of the retrieval process that can all have effects on the eventual matching between users and items:

- *Selection* concerns the identification of relevant items, i.e. the construction of a pool of items to consider for output. While this may seem straightforward, this stage already implies an interpretation of what is on offer and various techniques allow for a widening or contraction of the initial selection. Web search engines, for example, use synonyms to retrieve documents that may actually not contain the initial user query. Recommender systems often compare users to define lists of items from "similar" users as potential candidates. A company may organise selection in potentially problematic ways, e.g. by organising the underlying informational grid in self-serving ways.
- *Ordering* implies the arrangement of selected items, often – but not always – into a sequence: a list of search results, a set of recommendations, or an algorithmic timeline of social media messages make fine-grained distinctions between items, giving prominence to some over others. At the heart of this process sits an algorithmic decision model that defines the signals taken into account. The many different and frequently changing[27] factors that influence this process can make it hard to make overall assessments: depending on the chosen algorithmic technique and the specific domain, ordering can provide many different directions for problematic behaviour. As Brin and Page note in the annex to their paper on what was to become Google, 'a search engine could add a small factor to search results

[27] Some several hundreds of changes to factors can be made every year. In settings where machine learning is used, the number of variables taken into account and the probability relationships between features and target variables are in constant flux.

from "friendly" companies, and subtract a factor from results from competitors. This type of bias is very difficult to detect but could still have a significant effect on the market'.[28]

- *Interface design* gives concrete visual and navigable form to selection and ordering, defining the actual effort users have to invest to move beyond the first result. Design issues have been discussed around the separation of paid and "organic" results on web search engines and they become increasingly relevant in the context of mobile devices: the results page on Google Search, for example, now requires significant scrolling to reach "organic" results below advertisements and the various types of info-boxes. While design questions are not identical to the previous points, they can have a clear effect on user behaviour and are therefore relevant aspects of a larger matching process. The spread of voice assistants[29] means that auditory interfaces are increasingly relevant and these tend to move away from lists to a "single answer" format, adding another dimension to these issues.

Separating these three stages can help us get a better grip on the complex technical dimensions involved. While neither is problematic *per se*, they define different directions for organising the matching process in ways that may be undesirable.

Fourth, while the various aspects of the matching process involve many explicit instances of design, the decision models at the heart of ranking and recommendation are increasingly dynamic, personalised and automatic. One problem is that the behaviour of each market participant can affect the outcomes for all the others: if competitors "improve" their websites, e.g. through search engine optimisation, a company's online presence may drop in visibility without any doing of their own. But more importantly, techniques like machine learning have the effect that the decision models themselves can change quickly and are no longer the same for each user. The canonical example is spam filtering: when messages arrive in a user's inbox, they can decide to mark them as spam or not. Every time a message is labeled that way, the "features" it contains, e.g. individual words, form indicative relationships with the output class or "target variable", in this case spam or not-spam. If a word often appears in messages marked as spam, it will become an indicator for the spam category. Once the classifier has been "trained" this way, it can begin to rank or discard incoming emails according to their predicted "spamminess". Instead of defining a reduced number of defining characteristics into a set formula, every single word or other feature can be taken into account to "allow many small and individually ambiguous clues to combine and interact".[30] Millions of variables can thus come into play. Any kind of ordering process can be organised this way, given the availability of user feedback: taking behaviour as "revealed preference"[31] means that a user's transaction history

[28] Brin S and Page L (1998) The anatomy of a large-scale hypertextual web search engine. Available at: http://ilpubs.stanford.edu:8090/361/, p.18.

[29] For a discussion on ethical issues concerning voice assistants, see: https://www.gov.uk/government/publications/cdei-publishes-its-first-series-of-three-snapshot-papers-ethical-issues-in-ai/snapshot-paper-smart-speakers-and-voice-assistants

[30] Spärck Jones, Karen (1999). 'Information Retrieval and Artificial Intelligence', in: Artificial Intelligence, vol. 114, 257-281, p.228.

[31] Samuelson, Paul A. (1948). 'Consumption Theory in Terms of Revealed Preference', in: Economica, vol. 15, no. 60, 243-253.

can be used to define a decision model that applies only to them and potentially changes over time.

Fifth, one of the consequences of a more nuanced (technical) appreciation of ranking and similar processes is a certain hesitancy when it comes to notions such as transparency. While complex technical systems can be described in broad terms, the distinction between "algorithm" and "data" becomes increasingly problematic when decision models are generated on the basis of feedback rather than explicit design. At the same time, techniques are developed to make algorithmic decisions more "explainable"[32]. Such approaches may bridge the space between the broad assessment of problematic behaviour and the actual techniques relying on non-anthropomorphic forms of decision-making or "reasoning" operating in the background, but they may also require significant effort when it comes to implementation[33], increasing the burden of compliance.

In conclusion, rankings bring about important benefits by ordering and selecting information among the wealth of sources available. Differentiation is inherent in the way rankings operate, as their purpose is to pick the most relevant pieces of information and present them to users in a particular order of priority. By determining what information or offerings users will see, rankings have considerable power. While it may be possible to define problematic, unfair or illegal differentiated treatment in principle, it may be very difficult to establish such practices in practice. Platforms rarely make detailed information and first-hand data available and practices like personalisation and localisation make it difficult to establish a clear picture of the actual outcomes of ordering procedures. And even if such data were made available, the number of variables involved in ranking processes creates a form of opacity that makes causality elusive. An additional challenge comes from the limited capacity of some bodies (e.g. public administrations) to comprehend ranking underpinning systems. While the observatory's report on measurement provides further details concerning both problems and solutions pertaining to ranking, one can distinguish three broad strategies for creating greater clarity and transparency:

- platforms can grant access to internal processes, for example through data sharing, reporting, or technical audits;

- (business) users can become a source of information, for example through polling or mechanisms for making complaints[34];

[32] Voosen, Paul (2017, July 16). 'How AI Detectives are Cracking Open the Black Box of Deep Learning', in Science AAAS, https://www.sciencemag.org/news/2017/07/how-ai-detectives-are-cracking-open-black-box-deep-learning

[33] While research on "explainability" is advancing, there is little experience with the use of relevant techniques in operational settings. Designing a system in a way that the main factors going into decisions can be communicated to end-users or regulators may actually be technically challenging and require significant engineering and design effort.

[34] It is relevant to mention that Art.11 of the Platform-to-Business Regulation provides for a complaint handling mechanism.

- techniques like web scraping can create first-hand data on actual results of ordering processes and even personalisation and localisation can be dealt with given sufficient investment[35];[36]

Depending on the specific platform under scrutiny, one or a combination of these three strategies could be applied to monitor the actual outcomes of ordering processes – the equivalent of checking the shelves in a supermarket – in cases were sufficient reasons for suspicion are given. Since there are many open questions concerning details, we recommend conducting a study dedicated to exploring solutions for the problems concerning the observability of differentiated treatment by platforms arising from techniques such as personalisation and localisation.

5 Economic insights

Although there is a large economic literature on net neutrality[37] exploring whether allowing Internet Service Providers (ISPs) to discriminate on the business side - content providers - is welfare-improving or not, the literature about discrimination on the business side by a B2C platform is pretty thin. Note that the net neutrality literature examines not only the impact of discrimination on static welfare but also on the innovation incentives of both content providers and ISP(s). In what follows, we study practices of differentiated treatment by platforms and evaluate them by using both static and dynamic welfare criteria.

Three types of differentiation are distinguished, based on the distinction made in EU competition law between exclusionary and exploitative behaviour. Exclusionary behaviour risks foreclosing competitors from the market, thereby diminishing competition on the basis of parameters like price, quality and innovation. Exploitative behaviour consists of practices that exploit businesses and/or consumers through, for instance, excessive prices or unfair contract terms. Differentiated treatment can be either exclusionary or exploitative, or contain a mix of exclusionary and exploitative elements. To categorise practices of differentiated treatment in line with their exclusionary and/or exploitative character, a distinction can be made between: (1) cases of 'pure' self-favouring whereby a vertically integrated platform treats its own services more favourably than those of others (for instance, the more prominent display of Google's comparison shopping service in its general search results as compared to rival comparison shopping services); (2) cases of 'pure' secondary line differentiation whereby a non-vertically integrated platform differentiates between non-affiliated services in a market in which it is not active itself (for instance, a hotel booking platform providing hotels that pay

[35] It is worth noting that the Commission is currently commissioning a study on such tools, see https://ec.europa.eu/digital-single-market/en/news/call-tenders-exploratory-study-governance-and-accountability-mechanisms-algorithmic-systems

[36] The German Datenspende project (https://datenspende.algorithmwatch.org), for example, asked users to install a small browser extension to study Google search results for political candidates during the last parliamentary elections. With over 4000 participants, effects of personalisation and localisation could be sufficiently accounted for.

[37] For a survey, see S. Greenstein, M. Peitz & T. Valletti, 'Net Neutrality: A Fast Lane to Understanding the Trade-Offs', *Journal of Economic Perspectives* 2016, p. 127-150.

more commission fees with a higher ranking); and (3) 'hybrid' cases where a platform differentiates among non-affiliated services in an effort to favour its own business (for instance, an app store blocking an app that interferes with its ability to gain revenues through advertising). In competition law, pure self-favouring more typically qualifies as an exclusionary practice, while pure secondary line differentiation more typically concerns exploitative behaviour. Differentiation of the hybrid category consists of both exclusionary and exploitative elements.[38]

In the following sections, we analyse these three categories. First, section 5.1 provides an extensive discussion of recommendation bias (i.e. favouring certain products in platforms' recommendations) by both vertically integrated platforms and non-integrated ones. Then, section 5.2 focuses on pure self-favouring by vertically integrated platforms specifically.

5.1 Recommendation bias

Even if our focus is on the incentives for pure self-favouring by vertically integrated platforms, we start by examining various incentives for recommendation bias that exist both for vertically integrated platforms and non-integrated platforms. The current section is closely related to section 4 on ranking as recommendation bias can take the form of bias in the ordering of search results.

5.1.1 A simple framework to understand basic incentives for recommendation bias

Let us provide a simple framework in order to explain recommendation bias. Consider a two-sided platform that mediates interactions between a mass of sellers and a mass of consumers. Sellers compete for the consumers and the consumers are heterogeneous in terms of their match value with each seller, i.e. the surplus they obtain by trading with each seller. As consumers do not know their match values, they rely on the platform's recommendation to decide which seller to trade with. Assume for simplicity that for each given consumer, there are two relevant sellers (called seller A and seller B): the consumer obtains positive net surplus by trading any of the two.

We below consider two different criteria to define recommendation bias – consumer surplus maximisation and social welfare maximisation.

Let 'b' represent the bias such that when b is equal to zero, the recommendation is unbiased. We can first define recommendation bias from consumers' point of view as follows: recommendation is biased toward seller A by "b(>0)" from consumers' point of view if the platform recommends seller A whenever the net consumer surplus generated by seller B is lower than b plus the net surplus generated by seller A. Given this definition of bias, it seems rational for a two-sided platform to introduce some bias. This is because social welfare is maximised when the recommendation is based on the total surplus generated on both sides instead of the net surplus generated on the consumer side. In other words, even if a consumer

[38] This typology is based on I. Graef, 'Differentiated treatment in platform-to-business relations: EU competition law and economic dependence', *Yearbook of European Law* 2019, available at https://doi.org/10.1093/yel/yez008.

prefers seller A to seller B in terms of net surplus, if seller B generates more profit than seller A such that the profit difference is higher than the consumer net surplus difference, welfare maximisation requires recommending B to the consumer.

We can also define recommendation bias from a welfare point of view as follows: recommendation is biased toward seller A by "b(>0)" from a welfare point of view if the platform recommends seller A whenever the total surplus generated by seller B is lower than b plus the total surplus generated by seller A. In what follows, we examine whether a platform has an incentive to engage in recommendation bias from a welfare point of view.

Consider first a non-integrated platform and examine when it has an incentive to engage in pure secondary-line differentiation by introducing recommendation bias. In this case, the platform maximises its own profit generated by the commissions (per transaction) it receives from the sellers. Therefore, its recommendation would be biased toward seller A when the commission from seller A is larger than the one from seller B.

For instance, Bourreau and Gaudin (2018) consider a distribution platform such as Pandora or Spotify. In their paper, the platform does not have its own content and thus hosts content from different content providers, which charge different royalty rates per consumption. This generates an incentive for the platform to bias its recommendation toward the content provider charging a lower royalty.[39] In fact, Pandora engaged into a special agreement with the indie-label coalition Merlin in 2014, whereby Merlin would accept reduced royalty rates in exchange for an increased performance of its titles.[40]

We now ask when the platform has an incentive to engage in pure self-favouring through recommendation bias. Suppose that seller A is vertically integrated with the platform while seller B is independent. Then, the platform would bias recommendation toward A if A's profit per transaction is larger than the commission that it obtains from B. For instance, even if seller B's product generates a higher net consumer surplus and a higher profit margin than seller A's product, the integrated platform would recommend A when it does not fully extract B's profit and hence A's profit is larger than the commission from B.

The simple framework shows that a vertically integrated platform and a non-integrated one have some similarity in terms of incentives to bias recommendation. The former will bias recommendation toward a vertically integrated product if the profit from recommending the product is higher than the commission from recommending an alternative product of an independent seller. A similar force induces a non-integrated platform to bias recommendation toward products generating high commissions and against products generating low commissions.

We can also study when the platform has an incentive to engage in hybrid differentiation. For this purpose, suppose that both sellers are independent but that their sale through the platform requires some complementary service. Each seller can use a service provided by the platform or a service provided by a third-party and the use of the platform's service generates some

[39] M. Bourreau & G. Gaudin, 'Streaming Platforms and Recommendation Bias', *CESifoWorking Paper No. 7390*, 2018.

[40] https://rainnews.com/pandora-proposes-lowered-music-royalty-rates-based-steering-merlin-agreement/

profit to the platform. Then, the platform may bias its recommendation toward the sellers who use the vertically integrated service and against those who do not use it.

Without reaching a conclusion on whether these practices are acceptable or not, we would like to emphasise that a platform may use recommendation bias to enforce its own terms of trade with respect to business users such as promoting the use of its own logistics services or discouraging business users from offering lower prices on rival platforms etc. For instance, when a publisher did not capitulate during a negotiation for fees for ancillary services, Amazon shut off the recommendation algorithm for its books and the publisher's sales fell by as much as 40 percent.[41]

5.1.2 *Other motives for recommendation bias*

We below examine other various motives for recommendation bias that can be applied to both vertically integrated platforms and non-integrated ones.

In case of attention platforms such as Facebook and Youtube that harvest users' attention and sell it to advertisers, their recommendation algorithm is programmed to boost users' engagement, which may be in serious conflict with maximisation of social welfare or promotion of democracy. For instance, engagement-maximising algorithm tends to recommend partisan news which generate fear and outrage since this creates emotional state open to engagement.[42]

Many online platforms sell prominent positions. This practice may have a consequence of discriminating against small business users as it may favour large and established companies with superior access to financial resources over new market entrants and SMEs. A similar concern has been raised regarding slotting allowances in the supermarket context discussed above in section 2.1. Such discrimination would reduce competition among business users especially if consumers pay attention only to top positions. Furthermore, platforms may have an incentive to induce such behaviour of consumers by filling lower positions with irrelevant products, effectively creating a sort of monopoly power for the sellers buying top positions.[43]

In fact, Ursu (2018) suggests that ranking can be used to generate market power. Using data from Expedia on hotel booking, Ursu (2018) estimates a demand model with consumer search and uses it to run a counterfactual in which the hotels displayed under Expedia's ranking are reordered according to expected utility of consumers.[44] In all 4 destinations in her data utility-based rankings increase consumer welfare, by up to 49 percent. Reductions in search costs only explain a minor part of consumer welfare gains. Also, the number of transactions increases under utility-based ranking but total revenues fall in 3 of the 4 destinations. The most likely explanation is that utility-based ranking shows consumers less expensive hotels than rankings used by Expedia.

As consumers do not internalise the profits made on the seller side when they perform a search, they tend to conduct a lesser amount of search than what is desirable from social welfare point

[41] B. Stone, *The Everything Store: Jeff Bezos and the Age of Amazon*, Back Bay 2013.
[42] R. McNamee, *Zucked: Waking Up to the Facebook Catastrophe*, Penguin Press 2019.
[43] J. Crémer, Y.-A. De Montjoye & H. Schweitzer, Competition policy for the digital era, 2019, p. 62.
[44] R.M. Ursu, 'The Power of Rankings', *Marketing Science*, 37(4), p. 530-552, 2018

of view. This generates an incentive for a platform to divert search to induce consumers to engage in more search and thereby to discover more products. Search diversion has long been prominent feature of offline retail intermediaries: retailers often place the most sought-after items at the back or upper floors of their stores (e.g. bread and milk at supermarkets), while shopping malls design their layout to maximise the distance traveled by visitors between anchor stores.[45] According to the theoretical work of Hagiu and Jullien (2011, 2014), search diversion is widespread among online platforms and, for instance, e-commerce sites design their websites in order to divert users' attention away from the products they were initially looking for, and towards the discovery of products that they might be interested in and eventually buy (unsolicited products or advertising).[46] Search diversion does not necessarily reduce welfare as consumers conduct suboptimal level of search at the first place although platforms may engage in excessive search diversion toward high margin products.

A dominant platform can exercise its monopsonic power with respect to business users.[47] The monopsonic power is enhanced by the use of a recommendation algorithm as a bargaining chip. The exercise of monopsonic power can squeeze the profit margin of business users and thereby reduce their incentives to innovate. In addition, the recommendation algorithm affects product diversity by deciding which products get prominence. For instance, a group of authors calling themselves Authors United claim that Amazon's exercise of market power reduced book diversity by making publishers 'dropping some midlist authors and not publishing certain riskier books, effectively silencing many voices', which eventually harms consumers.[48]

An interesting question to study is how recommendation bias affects competition and incentives to innovate. De Cornière and Taylor (forthcoming) provide a general analysis that encompasses various modes of competition. They distinguish two cases depending on whether a seller's and its customers' payoffs are conflicting or congruent. They are conflicting (congruent) if giving more surplus to customers requires the seller to reduce (increase) its profit margin. In the case of price competition, the payoffs are conflicting. In the case of price and quality competition, they are congruent if products are not much differentiated and/or the marginal cost of quality increase is small. They find that the bias toward a seller reduces overall consumer surplus in the case of conflict while it may raise it in the case of congruence.[49] Although very interesting, De Cornière and Taylor (forthcoming) intentionally abstract from any contracting between the platform and seller(s). Hence, it is hard to extrapolate their findings to the more realistic situation in which such contracting takes place. What is missing in the literature is the analysis of an equilibrium recommendation bias for a two-sided platform that offers tariffs to one or both sides. We expect that platforms that extract surplus from both sides have fewer incentives to bias recommendation than those who make money only from seller/advertiser side.

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[45] H. Petroski, *Small Things Considered: Why There Is No Perfect Design*, Knopf 2003.

[46] A. Hagiu & B. Jullien, 'Why do intermediaries divert search?', *RAND Journal of Economics* 2011, p. 337-362; A. Hagiu & B. Jullien, 'Search diversion and platform competition', *International Journal of Industrial Organization* 2014, p. 48-60.

[47] P. Krugman, 'Amazon's Monopsony Is Not OK', The New York Times, 19 October 2014, available at https://www.nytimes.com/2014/10/20/opinion/paul-krugman-amazons-monopsony-is-not-ok.html.

[48] V. Vara, 'Is Amazon Creating a Cultural Monopoly?', The New Yorker, 23 August 2015, available at https://www.newyorker.com/business/currency/is-amazon-creating-a-cultural-monopoly.

[49] A. De Cornière & G. Taylor, 'A Model of Biased Intermediation', *RAND Journal of Economics,* forthcoming.

In summary, platforms have various incentives to bias their recommendations. They may bias recommendations toward high margin products or vertically integrated services; they may use recommendation bias to enforce their own terms of trade with respect to business users; dominant platforms may even have an incentive to fill low positions by recommending irrelevant products in order to sell monopoly power to those buying top positions. This analysis of incentives for platforms to bias recommendations is without prejudice to the question of whether such behaviour is to be tolerated or not, which would merit further analysis. In some cases, recommendation biases could be very problematic depending, for instance, on the platform's market power or the inability of businesses to switch.

5.2 Pure self-favouring by vertically integrated platforms.

We now consider pure self-favouring by a vertically integrated platform. Pure self-favouring by a platform can take the form of high prices or unfavourable treatments through biased recommendations or limiting data access. We first review the main insights from the large literature on the incentives for a vertically integrated firm to engage in vertical foreclosure[50] and apply it to online platforms. And then we study self-favouring in terms of limiting data access.

5.2.1 Applying to online platforms main lessons from the literature on vertical integration and vertical foreclosure

Consider for instance an upstream monopolist that is vertically integrated with a downstream firm. The integrated downstream firm faces competition from another downstream firm. Does the integrated firm that has upstream monopoly power have an incentive to foreclose the downstream rival?

According to the Chicago school, the vertically integrated firm has no incentive to engage in vertical foreclosure even if it has the ability to do it. For instance, suppose that the rival firm produces the same final good as the downstream unit of the integrated firm but at a lower marginal cost. Then, the integrated firm has an incentive to sell its monopoly input to the rival as long as it can share the extra profit generated by the lower cost of production.

However, there are three different arguments that restore the vertical foreclosure incentive.

One argument that makes the Chicago school logic invalid is based on "imperfect surplus extraction". Suppose that in the above situation, a regulator adopts some cost-based regulation of the monopoly input price such that it chooses an upper bound of the price that is lower than the surplus the input generates. Hence, the integrated firm cannot extract the whole surplus generated by its input if it sells the input to the rival. Then, it has an incentive to engage in vertical foreclosure. By doing so, it becomes a monopolist in the downstream market and can charge a monopoly price to the final good, thereby extracting the whole surplus generated by both the upstream and downstream units.

[50] For a survey, see C. Fumagalli, M. Motta & C. Calcagno, *Exclusionary Practices: The Economics of Monopolisation and Abuse of Dominance*, Cambridge University Press 2018.

This argument based on imperfect surplus extraction is relevant when we consider two-sided platforms, since it seems hard to expect a platform to fully extract the whole surplus of business users. For instance, the tariffs that a platform applies to business users are typically not personalised, making full surplus extraction impossible. In addition, no seller will incur the cost of joining a platform if it expects the full surplus being extracted.

A second argument is based on the "incentive to limit competition". Ideally, the integrated firm would like to realise a monopolistic outcome, which requires limiting the total amount of output sold by the downstream firms. Suppose that the rival downstream firm is more efficient than the downstream unit of the integrated firm. Then, efficiency requires the former to produce more than the latter, which will occur for instance if the integrated firm sells the input at a wholesale price equal to the marginal cost (and realises a profit by receiving a fixed payment). However, as long as the integrated firm is unable to commit to the amount of output its downstream unit will produce, selling the input at the marginal cost leads both firms to sell too much output relative to the monopoly output.[51] Therefore, in order to reduce the total output, the integrated firm will sell the input to the rival at a wholesale price much larger than the marginal cost of production, which leads to a partial or complete foreclosure of the rival even when it is more efficient.

The first argument based on "imperfect surplus extraction" can explain why a platform may maintain the operation of a downstream unit even when it is less efficient than the rival. Once a vertically integrated downstream unit is under operation, the second argument based on the "incentive to limit competition" kicks in and induces the platform to engage in partial or complete foreclosure of the rival firm. This argument is relevant whenever platforms' integrated services face competition from business users.

A third argument that invalidates the Chicago school logic is based on network effects. Suppose that there are two periods such that in each period there are N number of new consumers who buy the final good. In addition, suppose that there are network effects such that period-two consumers prefer to buy the final good produced by the firm whose final good was chosen by period-one consumers. Then, the vertically integrated firm has an incentive to "deny scale to the rival" by refusing to sell the input to the rival even if welfare maximisation requires the same network effects to be enjoyed by the rival firm that has a lower cost of production. In addition, the rival may have an incentive to enter the upstream monopoly segment once its downstream market position is strengthened by the network effects. As entry into the monopoly segment threatens the main profit source of the integrated firm, it has an even stronger incentive to engage in vertical foreclosure.

This argument based on network effects is pretty relevant to a two-sided platform since network effects on the same side or across two sides are a salient feature of two-sided platforms.[52] For instance, due to data-driven network effects, the larger the consumer base of an application, the higher the quality of its service, creating a tendency for market tipping. This triggers a race for

[51] O. Hart & J. Tirole, 'Vertical Integration and Market Foreclosure', *Brookings Papers on Economic Activity (Microeconomics)* 1990, p. 205-285; P. Rey & J. Tirole, 'A Primer on Forecloure', *Handbook of Industrial Organization* 2005, vol. III, North Holland, 2005, p. 2145-2220; M. Reisinger & E. Tarantino, 'Vertical Integration, Foreclosure and Productive Efficiency', *RAND Journal of Economics* 2015, p. 461-479.

[52] Choi and Jeon (forthcoming) provides a leverage theory of tying in the presence of intergroup network effects in two-sided markets. J. P. Choi and D.-S. Jeon, 'A Leverage Theory of Tying in Two-Sided Markets with Non-Negative Price Constraints', American Economic Journal: Microeconomics, forthcoming

scale, generating a strong incentive for vertical foreclosure. In addition, once the market for an important application tips toward a rival, the rival may have an incentive to grow to become an alternative platform. Anticipating such threat, an incumbent platform has an extra incentive to engage in vertical foreclosure.

Pure self-favouring generates static welfare loss by making rival business users' services less attractive as well as dynamic loss by inducing the exit of rivals or by weakening their incentives to invest. This harm from self-favouring should be compared with its benefit. Pure self-favouring may improve static efficiency by eliminating double marginalisation and can also induce a platform to invest more at the platform level or at the level of integrated products/services.

When platform competition is vigorous and consumers face low switching costs, platforms are likely to engage in pure self-favouring only if this increases consumer surplus. Otherwise, self-favouring will induce many consumers to switch to rival platforms. In contrast, when platforms have strong market power (either because they are dominant or because consumers single-home and face high switching costs), they have incentives to engage in pure self-favouring even if this reduces consumer surplus since very few consumers will switch even if they are harmed.

In summary, all the three explanations – imperfect rent extraction, competition-limiting incentive, incentive to deny scale – for vertical foreclosure are relevant to platforms with strong market power. When platforms are dominant or when consumers single-home and face high switching costs, vertically integrated platforms can have an incentive to engage in anticompetitive pure self-favouring. For instance, according to a recent analysis of the App Store by the New York Times,[53] since Apple added its apps to the App Store in June 2016, it has been the top result for many popular search terms. Those Apple apps held on for years while top rivals remained stuck below, sometimes hundreds of spots down the list.

5.2.2 Differentiated data access by vertically integrated B2C platforms

Online platforms obtain massive amount of detailed data about their consumers as a by-product of providing their services. For instance, Amazon obtains extraordinary real-time insight into the preferences of its more than 200 million customers, who can purchase products from millions of third-party sellers on the platform's marketplace. When a platform does not share the collected data or shares very little data with its business users, this can give its vertically integrated downstream unit a potentially enormous advantage relative to its rival business users. Depending on the factual settings, this can apply to any vertically integrated platform that collects information about transactions and consumer behaviour on its platform. Amazon is one example that is examined in economic literature.

Zhu and Liu (2018) empirically study Amazon Retail's entry in Amazon Marketplace. They find that Amazon is more likely to enter the spaces of products with higher sales and better reviews, and those not using Amazon's fulfillment service. They also find that Amazon is less likely to enter product spaces that require greater seller effort to grow. Their empirical evidence suggests that Amazon's entry strategy is likely premised on acquiring new information after forming partnerships with third-party sellers. They find that Amazon's entry increases product

[53] https://www.nytimes.com/interactive/2019/09/09/technology/apple-app-store-competition.html

demand and reduces shipping costs, and that affected third-party sellers are discouraged from growing their businesses on the platform.[54]

In summary, Zhu and Liu (2018) find that Amazon's practices benefit consumers and harm sellers. However, this is a static analysis. What is more important to study is how Amazon's practices affect sellers' incentives to innovate, especially the incentive for brand owners to invest in their branded products to improve their quality. The way Amazon benefits from the innovations of sellers is likely to reduce the latter's incentives to innovate, which can harm consumers when this dynamic effect outweighs consumers' static gain.

5.3 Conclusion

The review of the economic literature confirms that platforms have various incentives to bias recommendations regardless of whether they are vertically integrated or not. Platforms can engage in recommendation bias toward vertically integrated products (leading to pure self-favouring) or toward high margin products of independent sellers (leading to secondary line differentiation). More generally, they can use recommendation bias to enforce their own terms of trade with respect to business users, which can lead to hybrid differentiation.

We have shown the different motives for a vertically integrated firm to engage in vertical foreclosure through pure self-favouring. Although the harm from pure self-favouring should be compared with its benefit, when platforms are dominant or when consumers single-home and have high switching costs, the harm can outweigh the benefit, implying that pure self-favouring requires special scrutiny under those market conditions.

It should be further assessed in which cases differentiated treatment (in the three forms specified in this report) is to be tolerated or proscribed. Apart from a more in-depth assessment of the harmful effects from an economic perspective, further monitoring and empirical studies are necessary to identify how pronounced and sustainable such practices are.

The economic literature on differentiated treatments of B2C platforms is nascent and more research is needed. In particular, it is important to understand how vertical integration affects the data access policy of a platform and how that policy in turn affects static and dynamic welfare. More precisely, we need more studies about: (i) how vertical integration and other factors affect a platform's incentive to share data with business users; for this purpose, we can compare data sharing across different e-commerce platforms; and (ii) how the data advantage of a vertically integrated platform affects static competition with rival business users and the innovation incentives of both the platform and business users.

[54] F. Zhu & Q. Liu, 'Competing with complementors: An empirical look at Amazon.com', *Strategic Management ournal* 2018, p. 2618–2642.

6 Legal insights

This part provides an overview of how differentiated treatment is dealt with under various legal regimes. The objective is to illustrate that there are various interests at stake protected by different legal frameworks. Because of the complexity of the relationships between platforms, business users and consumers, it seems impossible to require the platform to act in one particular way that can be considered as 'fair'. In this regard, it is more helpful to regard 'fairness' as a range, rather than a black-and-white concept.

6.1 Insights from competition and economic law

6.1.1 EU competition law

Recent competition cases illustrate the application of the three categories of differentiated treatment distinguished at the beginning of section 5, namely pure self-favouring, hybrid forms of differentiation and pure secondary line differentiation.

Pure self-favouring was targeted by the European Commission in the 2017 *Google Shopping* competition case. Pure self-favouring concerns differentiated treatment by a vertically integrated platform. In addition, self-favouring may occur with respect to partially owned, upstream firms.[55] The key objective is to exclude rivals from the market. Google was fined for abusing its dominant position in the market for online search by giving illegal advantage to its own comparison shopping service. In particular, Google was alleged to have systematically given prominent placement to Google Shopping, while demoting rival comparison shopping services in its search results.[56] With regard to the use of data, there is also scope for self-favouring practices whereby the platform may gain a competitive advantage through the data it receives about sales made by rivals. In this regard, the European Commission has started to look into how Amazon uses data from rival suppliers on its platform.[57] Another typical example of a vertically integrated business is Apple App Store, which markets a number of its own popular apps like Apple Music, and at the same time maintains the same marketplace for competitors like Spotify. A vertically integrated platform might face accusations of self-favouring through applying more favourable policies for its own products, and selective drafting and application of rules favouring own products.

For instance, Apple is currently facing a number of complaints and controversies as reported by news outlets. Most notably Spotify filed a complaint arguing that it cannot be set as a default

[55] In February 2019, new regulation entered into force in India that precludes e-commerce companies running marketplace platforms to sell products through companies, and of companies, in which they hold equity stake. See https://indianexpress.com/article/explained/new-rules-for-e-commerce-how-they-affect-marketplace-players-buyers-5512553/ and https://www.reuters.com/article/us-india-ecommerce-amazon/amazon-removes-numerous-products-from-india-site-as-new-e-commerce-rules-bite-idUSKCN1PP2OO.

[56] Case AT.39740 *Google Search (Shopping)*, 27 June 2017.

[57] See https://www.bloomberg.com/news/articles/2018-09-19/amazon-probed-by-eu-on-data-collection-from-rival-retailers. For a recent empirical study of Amazon's practices, see F. Zhu & Q. Liu, 'Competing with complementors: An empirical look at Amazon.com', *Strategic Management Journal* 2018, p. 2618–2642.

app, has difficulties sharing discounts with customers, and faces unfair pricing conditions.[58] Apple's own apps allegedly do not face the same restrictions. Similarly, Apple was reported in the media to coincidentally ban or restrict some of the most downloaded screen-time and parental-control apps exactly around the same time as Apple debuted its own app.[59] According to Apple's account, it only tried to limit privacy exposure of its users due to some technologies used.[60] However, it seems that no action was taken against these apps before Apple's own app in the segment was launched.[61] As regards the legal test for assessing self-favouring under Article 102 TFEU, the Commission in *Google Shopping* referred to 'the use of a dominant position on one market to extend that dominant position to one or more adjacent markets' (commonly qualified as 'leveraging') which, according to the Commission, 'constitutes a well-established, independent, form of abuse falling outside the scope of competition on the merits'.[62] The more favourable positioning of Google's own comparison shopping service in its general search results was qualified as abusive, because it diverted traffic away from rivals and was capable of having, or likely to have, anticompetitive effects in the relevant markets for general search and comparison shopping.

The hybrid category differs from pure self-favouring in that hybrid forms of differentiated treatment do not relate to the favouring of a platform's affiliated services versus non-affiliated services. Instead, the differentiation takes place among non-affiliated businesses but indirectly benefits the platform in a different market than the one in which the non-affiliated customers compete. The investigation of the Italian Competition Authority against Amazon is a good example. According to the Italian competition authority, Amazon grants improved visibility, higher search rankings and better access to consumers only to merchants who also use its logistics services.[63] Some of these merchants can compete with the platform in their respective retail market. However, the platform's benefit from engaging in this type of differentiation mainly lies in a different market, namely in the market for logistics services. The platform's behaviour provides merchants with incentives to rely on the platform's logistics services, which may reduce competition in this market to the detriment of rival providers of logistics services. The key question is whether this type of differentiation is legitimate. The platform may for instance claim that it benefits consumers, because the fact that merchants also take its logistics services means the platform can better assure consumers a good quality deal and faster delivery. This type of behaviour is not an 'outright' form of self-favouring, since the platform does not simply give its own offerings more prominent placement in the ranking vis-à-vis those of non-affiliated business. However, it is clear that the downgrading in a ranking of business users who do not take additional services versus those who do, can benefit the platform by foreclosing competition in a related market. The behaviour contains exploitative elements because some businesses are favoured over others. However, an exclusionary motive prevails

[58] See https://www.theverge.com/2019/3/13/18263453/spotify-apple-app-store-antitrust-complaint-ec-30-percent-cut-unfair

[59] See https://www.nytimes.com/2019/04/27/technology/apple-screen-time-trackers.html?module=inline

[60] See https://www.nytimes.com/2019/04/27/technology/apple-screen-time-trackers.html?module=inline

[61] See https://www.nytimes.com/2019/04/27/technology/apple-screen-time-trackers.html?module=inline

[62] Case AT.39740 *Google Search (Shopping)*, 27 June 2017, par. 649.

[63] Press release Italian Competition Authority, 'A528 - Amazon: investigation launched on possible abuse of a dominant position in online marketplaces and logistic services', 16 April 2019, available at https://en.agcm.it/en/media/press-releases/2019/4/Amazon-investigation-launched-on-possible-abuse-of-a-dominant-position-in-online-marketplaces-and-logistic-services.

because the ultimate aim of the platform is to strengthen its own position to the detriment of rivals in the related market.

Pure secondary line differentiation qualifies as purely exploitative behaviour. Whereas primary line injury concerns exclusionary behaviour by which a supplier forecloses competitors from the market in which it operates itself, secondary line injury is exercised by a supplier against some of its customers compared to one or more of its other customers. This way, the supplier can distort competition on the downstream market, where it is not active, by favouring and exploiting some customers over others.[64] The Court of Justice clarified in the *MEO* judgment in November 2018 to what extent a dominant firm can be held liable for discriminatory conduct towards downstream customers under EU competition law. In particular, the Court stated that 'the mere presence of an immediate disadvantage affecting operators who were charged more, compared with the tariffs applied to their competitors for an equivalent service, does not, however, mean that competition is distorted or is capable of being distorted'.[65] While focusing on the relationship between the dominant undertaking and those trade partners which this undertaking allegedly discriminated against, the Court held that the finding of 'a 'competitive disadvantage' does not require proof of actual quantifiable deterioration in the competitive situation, but must be based on an analysis of all the relevant circumstances of the case leading to the conclusion that that behaviour has an effect on the costs, profits or any other relevant interest of one or more of those partners, so that that conduct is such as to affect that situation'. Advocate General Wahl discussed the incentives of an undertaking to discriminate between downstream competitors in his Opinion in *MEO*. According to the Advocate General, it is difficult to see how an undertaking benefits from differentiated treatment on a downstream market in which it is not active itself. In his words: 'it would appear highly problematic to penalise an undertaking for an abuse of its supposed dominant position on the ground that it has applied differentiated prices to its trading partners on the downstream market when it is not even active on that market and benefits directly from the competition that exists between those trading partners'.[66]

Whereas EU competition law is generally capable to target the exclusionary forms of differentiated treatment, namely pure self-favouring and hybrid differentiation, the scope for competition enforcement relating to pure secondary line differentiation seems more difficult following the *MEO* case. This means that other regimes, in particular those of national economic law, become more important as tools to address possible harmful effects of exploitative forms of differentiated treatment. The next section discusses the role of these regimes of national economic law in this regard.

6.1.2 National economic law

Beyond the applicability of EU competition law, a number of Member States (e.g. Germany, France, Greece, and recently also Belgium) have national legislation in place to protect against abuses of economic dependence. Economic dependence is a different concept than dominance

[64] P. Ibanez Colomo, 'Exclusionary discrimination under Article 102 TFEU', *Common Market Law Review* 2014, vol. 51, p. 145.

[65] Case C‑525/16 *MEO*, ECLI:EU:C:2018:270, par. 26.

[66] Opinion Advocate General Wahl, Case C‑525/16 *MEO*, ECLI:EU:C:2017:1020, par. 59.

in EU competition law, so that businesses who are dependent on a platform to operate may rely on such national regimes if practices of differentiated treatment are not caught by the competition rules. While some of these regimes also require commercial conduct to distort competition for triggering protection, their objective complements competition law that mainly protects the welfare of consumers and not the ability of businesses to compete. For instance, in its press release announcing the investigation against Amazon's terms and conditions, the German Bundeskartellamt referred not only to the possibility that Amazon holds a dominant position but also that 'the sellers are dependent on Amazon'.[67] National rules on abuse of economic dependence may particularly complement competition law by targeting exploitative behaviour. The scope of competition enforcement for exploitation is more limited than that for exclusionary behaviour as discussed in the previous section. Despite their potential to provide protection to business users of online platforms, one may wonder whether possibly divergent regimes at national level (i) can effectively resolve platform-related issues that are often of a cross-border nature and/or (ii) even constitute a fragmentation of the internal market.

Another relevant regime is unfair competition law, which again is regulated at the national level with some EU harmonisation for B2B practices with impact on consumers. The relationship between competition law (stemming from the EU framework) and national unfair competition law for cases of differentiated treatment can be illustrated by reference to situations where platforms engage in a restriction, suspension or termination of service towards business users. Such blocking can take place due to delegated enforcement of governmental policies (e.g. data protection rules,[68] rules on illegal content, governmental bans[69]), or enforcement of a platform's own rules/preferences. Here we focus on the latter, although in practice, the two might not always be easy to separate.[70] Platforms try to enforce their terms of service independently, if necessary. Because of the 'platform nature' of their operations, a very effective way to do so is simply to suspend, restrict or terminate services that consumers access through the platform. Platforms thus consciously use their gatekeeping function in order to enforce contractual discipline of their business partners. For instance, app stores like Apple App Store or Google Play Store are able to remove apps; on-demand cloud computing platforms like Amazon Web Services are able to suspend accounts of their clients; mobile operating systems like Android are able to restrict particular functionalities. In these situations, there are two main constellations depending on whether the platform is engaging in self-favouring or not. While for cases of pure self-favouring the often-invoked legal instruments originate in EU competition law (as discussed in the previous section), the accusation often takes the form of unfair competition claims in cases where platforms are not vertically integrated.

In these situations where platform operators enforce policies regulating access to the platform, the objections have an exploitative rather than a purely exclusionary nature. The platforms are

[67] Press release Bundeskartellamt, 'Bundeskartellamt initiates abuse proceeding against Amazon', 29 November 2018, available at https://www.bundeskartellamt.de/SharedDocs/Meldung/EN/Pressemitteilungen/2018/29_11_2018_Verfahrenseinleitung_Amazon.html;jsessionid=28428957AB1B6DED02C51B292680654A.2_cid387?nn=3591568.

[68] See https://9to5mac.com/2019/05/06/apple-removes-three-dating-apps-from-app-store/

[69] See https://www.reuters.com/article/us-huawei-tech-alphabet-exclusive/exclusive-google-suspends-some-business-with-huawei-after-trump-blacklist-source-idUSKCN1SP0NB

[70] For instance, Apple requires that apps in the kids category cannot include third-party advertising or analytics software and may not transmit data to third parties. See https://developer.apple.com/news/?id=06032019j

accused either to enforce their policies inconsistently among market participants, thus indirectly favouring some, or to formulate policies in ways, which discriminate certain classes of services. A good example of such platforms are operating systems, browsers, ad-blocking or anti-virus software. Especially the last two groups of platforms are increasingly under scrutiny in Germany for alleged violation of fair commercial practices. A number of German courts were asked to assess whether ad-blocking services can be seen as unfairly competing if they block advertising as a source of revenue and sometimes even ask for fees for white-listing of particular websites. The German Federal Supreme Court held in April 2018[71] that such a practice does not constitute a deliberate hindrance of competitors or aggressive commercial practice, both torts of unfair competition. The main argument for allowing the offering of the blocking software in its commercial form (i.e. by whitelisting certain ads against payment) was that this would allow for a fair outcome and balancing of interests between end-users, publishers and software producers. Similar outcomes were encountered in cases against anti-virus services blocking third-party services.[72] Nevertheless, the balancing of interests is to be carried out on a case-by-case basis. Those cases are evidence of the long and complex chain of dependencies: data subscription rates / app store policies / ad-blocking software / publishers' revenue.

Although these regimes in national economic law may complement EU competition law by providing stronger protection against exploitation, they thus also have their limits considering the outcomes of the cases discussed above.

6.2 Insights from regimes protecting rights of individuals

Legal regimes protecting the rights of individuals form a further disciplining force on the ability of platforms to act solely in their own interests. This includes requirements from consumer law, including the law related to unfair business practices targeted at the relationship between businesses and consumers (unlike the business-to-business protection for unfair commercial practices considered in the previous section), consumer contract law protecting reasonable expectations with respect to platform functioning, non-discrimination law (direct discrimination/indirect discrimination), and data protection law in particular with regard to the collection and use of personal data by platforms, the passing on of such data to business users and third parties, and automated decision making/profiling.

Consumer law is relevant for the relationship between platforms and end-users, as well as for business users and end-users. Consumers may be confronted with platform and business practices that lack transparency or are misleading. For instance, end-users may be misled or not properly informed about the collection and use of their data. Platform ranking practices may be misleading or unfair, for instance in the way that rankings may suggest an objective

[71] BGH, I ZR 154/16; The case related to a conflict between a publisher and a company providing adblock software. This software blocks advertising according to some filtering criteria. The software producer gives the publishers of content seeking to add the advertising the possibility to be exempted from the adblocking, against a payment, by putting their advertising on a whitelist. The Court said that this is legitimate because installing this software is an autonomous decision of the internet user.

[72] LG Hamburg 312 o 202/18.

evaluation of the relevance of particular supply side offerings without disclosure of payment for more favourable treatment.

Considering the data-intensive nature of platform governance and platforms' business models, data protection is a crucial legal framework that applies to this context. European data protection law applies to the processing of personal data, assigning a set of responsibilities to the controller(s) that is (or are jointly) responsible for complying with the law.[73] European data protection law is concerned with and underpinned by the protection of fundamental rights, the right to private life (Article 7 Charter of Fundamental Rights) and the right to protection of personal data (Article 8 Charter of Fundamental Rights) in particular. For platforms in their relation to business users and end-users, the General Data Protection Regulation is the relevant framework. In addition, for some platforms, the ePrivacy Directive (currently under revision) has relevant additional rules.

As personal data ends up playing a crucial role in the offering of platforms to supply-side users, data protection law has a significant impact on this relationship, too. As shown by a decision of the German Competition authority (BKartA) against Facebook,[74] data protection law may also be of relevance to determine the existence of abuse of dominance under competition law and thereby shape platforms' relationships not only with consumers but also with supply side-users - depending on the extent to which such an approach to integrate data protection concepts into competition law is accepted.[75] European data protection requires that controllers process personal data of individuals lawfully, fairly and transparently. The definition of personal data is broad and will easily apply to much of the data that is captured on individual end-users and end-user interactions with the platform. Even if platforms would be willing to share as much data as business users would be willing to receive or pay for, data protection law requires such sharing to be properly negotiated with end-users. The Cambridge Analytica scandal has shown the extent to which the sharing of personal data by platforms with business users can breach the trust and expectations of end-users, in addition to breaching the relevant laws.

Ideally, compliance with data protection law by platforms does not affect the level playing field between business users, but there are a number of instances where platforms have been accused of enforcing data privacy anti-competitively. This is a complex problem that also intersects with the pressure on platforms to police business users on relevant data practices. In the context of mobile applications, for instance, regulators have recommended that app stores set and enforce restrictions related to data privacy on apps.

Another legal framework that can be of relevance here, is non-discrimination law (in the broader sense, i.e. concerning not only businesses but also individuals). In discussions of algorithmic governance and data-driven decision making, the possibility that problematic

[73] Recent case law (Wirtschaftsakademie) of the Court of Justice shows that business users can, under conditions, be held jointly responsible under data protection law for the processing of personal data for platform analytics that are offered to business users.

[74] See the English translation of the decision of the BKartA of 15 February 2019 at https://www.bundeskartellamt.de/SharedDocs/Entscheidung/EN/Entscheidungen/Missbrauchsaufsicht/2019/B6-22-16.pdf?__blob=publicationFile&v=5.

[75] This decision is challenged in courts, see decision of 26 August 2019 of the Higher Civil Court of Düsseldorf (VI-Kart 1/19 (V)) ordering the suspension of the enforcement of the decision of the BKartA Court at http://www.olg-duesseldorf.nrw.de/behoerde/presse/Presse_aktuell/20190826_PM_Facebook/20190826-Beschluss-VI-Kart-1-19-_V_.pdf (in German).

and/or even unlawful discriminatory practices may take place, has been a prominent concern. One concern is that platform users may discriminate other users when using the platform. Whereas traditional suppliers of services in areas that come with particularly strong risks of discrimination, such as housing, hotels, transport and labour, have to comply with non-discrimination law, platforms can create new ways in which such discriminatory practices by users may remain undetected. The possibility that business users may indeed try to discriminate in the way that they use platforms, can be a reason for platforms to police business users in this regard. In response to concerns about discrimination of drivers and passengers, Uber, for instance, recently launched new features to its service to report discrimination.[76] Another possible concern is that platforms may themselves discriminate between different business users and/or end-users.[77] Such discrimination can happen deliberately, but more often than that, it may be the result of biased data-sets and inputs that are used in decision-making processes that try to optimise the platform's performance. For instance, relying on reviews and ratings that are partly shaped by discriminatory preferences and practices of users may lead to biased training data in machine learning models that platforms use for the optimisation of their matchmaking function.[78] The question of how to detect, audit and address such discriminatory bias is an active area of research as well as practice.

In sum, the platform finds itself in a position of power not only vis-à-vis business users but also versus consumers. And enforcement of relevant laws to protect end-users interests and fundamental rights increasingly relies on the platforms' cooperation and sometimes even proactive efforts to police supply side-users for illegal and harmful practices. This increases the legal complexity of the relationship between platforms and business users. It can also provide a justifiable defense for platforms to act restrictively towards business users that do not, in the eyes of the platform and relevant regulators, comply with relevant protections of end-users. The extent to which this is legitimate considering the potential far-reaching impact of such practices on business users depends on how to strike a balance between the various interests at stake.

6.3 Conclusion

The analysis illustrates that it is difficult – if not impossible – to reconcile the interests of platforms, businesses and consumers in one particular way that is to be regarded as 'fair'. For this reason, 'fairness' should not be seen as a black-and-white concept, but instead as a range. For assessing what practices fall outside this range of 'fairness', in other words which practices can be considered as 'unfair', in a first step more transparency and oversight is needed into the practices in which platforms engage. The Platform-to-Business Regulation provides a good starting point in this regard by, amongst others: imposing a notice period of at least 15 days before platforms (referred to as 'providers of online intermediation services' in the Regulation)

[76] See Uber, Together We Celebrate Pride, 2019, available at https://www.uber.com/en-NL/blog/together-we-celebrate-pride/

[77] A trivial example that may illustrate the possible issue is that Google used to refuse beer advertising for beer, while accepting sponsored links for Wine, in Google Adwords.

[78] For a discussion, see e.g. Rosenblat, Alex, Karen EC Levy, Solon Barocas, and Tim Hwang. "Discriminating Tastes: Uber's Customer Ratings as Vehicles for Workplace Discrimination." Policy & Internet 9, no. 3 (2017): 256-279.

can implement changes to its terms and conditions;[79] requiring platforms to provide a business user with a statement of reasons when restricting, suspending and terminating its service;[80] requiring platforms to set out in their terms and conditions the main parameters determining ranking and the reasons for the relative importance of those main parameters as opposed to others,[81] a description of any differentiated treatment platforms give[82] and a description of the access of business users to data.[83] As a second step, this can facilitate the more concrete stipulation of forms of differentiated treatment that can be considered unfair, and that to the extent necessary require new regulatory mechanisms. More generally, as unfair should be regarded practices of differentiated treatment that significantly harm business users and for which the platform does not have a legitimate reason. The extent to which legitimate reasons invoked by a platform can justify harm to businesses is the key issue here. More proactive guidance to this effect is welcome to prevent that platforms act as enforcers of public interests.

To further strengthen protection and increase 'procedural fairness', one can think of mechanisms to reverse the burden of proof and assist businesses who do not have access to information about why they have been subject to differentiated treatment by a platform.[84] Ultimately, a policy choice has to be made regarding the regulatory objectives to be pursued when considering to adopt further measures to protect substantive fairness. Because of the far-reaching consequences a restriction, suspension or termination of service can have on business users, we recommend to prioritise this issue within the observatory and conduct a study in order to determine the frequency, impact as well as the availability of redress for businesses against such practices.

7 Way forward

Bringing together the technical, economic and legal insights, a number of areas can be identified that require further scrutiny due to the especially far-reaching impact differentiated treatment can have here.

While differentiated treatment already poses challenges in principle, the size and technical makeup of online platforms make it difficult to establish problematic differentiated treatment in practice. Techniques like machine learning create opacity when it comes to nailing down causal relationships between data signals and outcomes, while personalisation and localisation further reduce the "observability" of how platforms differentiate between products and participants. Regulators hoping to acquire the capabilities to monitor the behaviour of platforms in greater detail will have to innovate and experiment with methods such as technical audits or web-scraping to deal with this situation.

[79] Article 3(2) of the Platform-to-Business Regulation.
[80] Article 4(1) of the Platform-to-Business Regulation.
[81] Article 5(1) of the Platform-to-Business Regulation.
[82] Article 7(1) of the Platform-to-Business Regulation.
[83] Article 9(1) of the Platform-to-Business Regulation.
[84] In the context of self-favouring, see J. Crémer, Y.-A. De Montjoye & H. Schweitzer, Competition policy for the digital era, 2019, p. 66-67.

The economic analysis shows that platforms have various incentives to bias recommendations regardless of whether they are vertically integrated or not. Moreover, vertically integrated platforms can have incentives to engage in vertical foreclosure through differentiated treatments. In particular, when platforms are dominant or when consumers single-home and have high switching costs, practices of differentiated treatment by vertically integrated platforms require special scrutiny as the relevant harms can outweigh the benefits. It is also important to understand better how vertical integration affects the data access policy of a platform and how that policy in turn affects static and dynamic welfare.

Differentiated treatment cannot be looked at in isolation or from a mere economic perspective. Considering the increasingly significant societal function and impact of platforms, platforms have increasingly taken on broader regulatory functions and manage complex trade-offs between different interests involved in their governance in ways that are not clearly stipulated by existing law. Media pluralism, data privacy, consumer protection, and non-discrimination are amongst the areas implicated in the functioning of platforms. This is an additional reason for increased transparency and the development of more effective oversight frameworks related to platforms, from the perspective of fairness to relevant constituencies, including, but not limited to business users.

For these reasons, it is desirable to keep monitoring the sector closely and conduct focused studies to gain insight into the impact of problematic practices. While differentiation is inherent in the economy (both offline and online), there is a need to keep a close eye on how platforms design their rankings, enforce their terms and conditions and treat business users. This is especially the case where competition is not strong enough to discipline the ability of platforms to act solely in their own interests.

Moving forward, policy choices have to be made about which objectives should be prioritised in the online platform economy. There are real trade-offs to be made, as the different interests, those of the platform, business users, and consumers, cannot be fully aligned and reconciled. An analogy can be made here with the trade-off between open and closed systems.[85] Both have advantages and disadvantages: open systems promote complementary innovation and access for small businesses, while closed systems let the ability of system providers to recoup their investments prevail, which in the long term may give stronger incentives to newcomers to disrupt established positions of incumbents. Both are valid policy choices but require different trade-offs between the various interests involved. A similar policy dilemma applies to differentiated treatment in the online platform economy. It is a valid choice to promote the contestability of markets and ban certain forms of differentiated treatment (subject to the ability of platforms to defend their practices on the basis of public interest objectives), but this implies that we accept possible risks of negative effects on incentives to invest in platforms in the long run. The high levels of market concentration and dependency of business users in some parts of the online platform economy should be taken into account when balancing different policy options.

From a policy perspective, there are various possibilities in between keeping to existing competition enforcement for dominant platforms and the imposition of a non-discrimination

[85] See for instance the report of the French Autorité de la concurrence and the UK Competition & Markets Authority, 'The economics of open and closed systems', 16 December 2014, available at http://www.autoritedelaconcurrence.fr/doc/economics_open_closed_systems.pdf.

obligation applicable to any platform regardless of its size. Different measures with a varying level of intervention can be designed with a different impact on the various actors involved. For instance, some Member States have national legislation in place protecting against abuse of economic dependence that only targets businesses with a certain level of market strength – but lower than the threshold of dominance in competition law. National regimes on unfair competition law similarly provide remedies for business users, also outside cases of vertical integration and self-favouring where platforms discriminate among business users more generally. Inspiration may be drawn from these national regimes for possible measures at the EU level.

In order to gather more evidence about the frequency and impact of practices of differentiated treatment, we suggest to prioritise conducting studies within the observatory into three areas: (1) a study dedicated to exploring solutions for the problems concerning the observability of differentiated treatment by platforms arising from techniques such as personalisation and localisation; (2) a comparison across e-commerce platforms to determine how vertical integration affects practices of differentiated treatment, including in particular data sharing policies, and to illustrate how platforms' size/market share correlates with the prevalence and the effects of such practices; and (3) a study into the frequency, impact as well as the availability of redress for businesses against the restriction, suspension or termination of service by platforms.