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COMPETITION COMMITTEE****Personalised Pricing in the Digital Era – Note by the European Union****28 November 2018**

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More documentation related to this discussion can be found at:

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## EU

### 1. Introduction

1. In recent years, several articles and reports have raised potential concerns in relation to online personalised pricing. These concerns seem driven by the rise of e-commerce combined with the rise of online personal data collection.
2. To shape a public policy response to these concerns, it is useful to consider (a) whether online personalised pricing is positive or harmful for consumers overall, from an economic point of view; (b) whether it is happening in practice or may happen in the future; and (c) if online personalised pricing is harmful and it is happening, which area(s) of EU law is (are) best placed to address it now.
3. This contribution discusses these three points, after first setting out some background and economics of personalised pricing.

### 2. Background

4. Some instances of personalised pricing have taken place in the offline world for a long time. For example, in some countries, some day care facilities, schools and universities charge prices defined as percentages of household income. A car dealer might adjust his price depending on his ability to estimate a customer's maximum willingness to pay. More broadly, any market with discretionary rebates off advertised prices is susceptible to personalised pricing.
5. In the online world, some firms may be able to extract personal data from people, or to buy such data.<sup>1</sup> Some personal data may indicate a person's revenue bracket, interests, preferences, geolocation, or other factors. These factors may be combined to approximate that person's maximum willingness to pay for a particular product or service (hence "WTP" or "WTP pricing").
6. Having estimated a person's maximum willingness to pay thanks to their personal data, a company might display the corresponding – personalised – price and thus charge a higher or lower price to this person, compared to others whose personal data suggests a different maximum willingness to pay.
7. Personalised pricing is different from "dynamic pricing", such as adjusting air fares or hotel prices based on the date of booking or based on real-time supply and demand. While two people sitting next to each other on a plane might have paid very different prices for similar seats, there is a difference between the person who booked early and the person who booked late. The person who booked late kept her options open longer and therefore

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1 See also European Commission Preliminary Report on the E-commerce Sector Inquiry, SWD(2016) 312 final, paragraph 583. In the EU, buying personal data is limited by data protection requirements as set out in the General Data Protection Regulation ("GDPR"). See Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC, OJ L 119, 4.5.2016, p. 1.

enjoyed flexibility. The person who booked early reduced the flexibility of her travel plans earlier.

8. Personalised pricing is also different from personalised ranking – altering the display of available options on e-commerce websites to suit a particular person, for example on hotel and air travel websites. Such personalised ranking may entail an element of personalised pricing if the options ranked highest are actually there to fit the person's maximum willingness to pay.<sup>2</sup> By contrast, some personalised ranking rather focuses on proposing options that fit a person's tastes and preferences.

9. Yet other instances of personalised ranking are meant to reward particular sellers on an e-commerce platform. For example, it has been argued that Airbnb rewards the best-behaved hosts by displaying their offers first when customers search for accommodation, which may explain ranking variations over time.<sup>3</sup> Another type of personalised ranking directs customers towards Airbnb hosts that are more likely to accept those customers.<sup>4</sup> This shows that a two-sided platform has an interest in ensuring that both sides have access to the most suitable participants on the other side.<sup>5</sup> Instead of displaying options in a purely neutral and uniform way, there is an element of "matchmaking" in platform design.

10. Dynamic pricing and personalised ranking fall outside the scope of this paper.

### 3. Economics of personalised pricing<sup>6</sup>

#### 3.1. Blurring the line between first-degree and third-degree price discrimination

11. "Perfect" price discrimination would mean charging each person the price that reflects their exact personal maximum willingness to pay. This is also known as "first-degree" price discrimination.<sup>7</sup> Perfect first-degree price discrimination is unlikely to occur in practice. More likely, producers would segment customers into groups and charge different prices to these groups. This is known as "third-degree" price discrimination.<sup>8</sup>

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2 The person may be able to scroll down to find other options. Or the website may restrict the range of products which is visible to a consumer to the more high-priced items, and not show the cheaper products at all. This type of personalised ranking would correspond more closely to straightforward personalised pricing.

3 Susan Athey and Michael Luca, "Economists (and Economics) in Tech Companies", NBER Working Paper No. 25064, September 2018.

4 Andrey Fradkin, "Search, Matching, and the Role of Digital Marketplace Design in Enabling Trade: Evidence from Airbnb", MIT Working Paper, March 2017.

5 Geoffrey G. Parker, Marshall W. Van Alstyne, and Sangeet Paul Choudary, *Platform Revolution: How Networked Markets Are Transforming the Economy—and How to Make Them Work for You*, W.W. Norton, New York City, 2016.

6 See also Ipsos, London Economics & Deloitte, report for DG JUST, "Consumer market study on online market segmentation through personalised pricing/offers in the European Union", 19 July 2018, especially section 7.

7 After Arthur Cecil Pigou, *Economics of Welfare*, Macmillan, London, 1932.

8 "Second-degree" price discrimination is not further discussed here. It refers to price discrimination among buyers by letting them select different gradations of the product, such as high-quality

12. Third-degree price discrimination is sometimes practiced at the level of large groups, e.g., a lower price in one Member State, and a higher price for the same item in another Member State (e.g., through geolocation or limits on parallel trade, although there are limits to such behaviour in the EU, under both competition law and the Geoblocking Regulation).<sup>9</sup>

13. The novelty in digital markets is that the use of personal data may allow online sellers to sort people into much smaller groups, which fit people's maximum willingness to pay much more closely. For example, a website may know that (a) Mr A wants to buy a tennis racquet, and (b) based on previous purchases, he tends to buy high-end products, and (c) he lives in a wealthy neighbourhood, and (d) he is browsing the web on the latest expensive device. The website would then quote Mr A a correspondingly high price. Any person who displays the same factors would fall in the same group, and receive the same high price.

14. The more factors, the smaller the group, until, in theory, it becomes possible to identify a "group" of one person: that would be perfect first-degree price discrimination. Therefore the distinction between first-degree and third-degree price discrimination (individualised pricing versus group pricing) becomes more blurred: there is a spectrum based on the size of the group, rather than a sharp distinction. Put differently, personalised pricing is a way to segment people into ever smaller groups – moving from third-degree price discrimination to first-degree price discrimination.

### **3.2. Necessary conditions for personalised pricing**

15. To achieve such personalised pricing, three conditions must be present: (a) the ability to accurately sort consumers into such ever smaller groups based on their maximum willingness to pay; (b) market power; and (c) consumers must not be reselling items on a significant scale.

16. Some firms may be able to accurately sort consumers into ever smaller groups thanks to personal data. To some extent, consumers may be able to defeat this by protecting their online anonymity. Firms, in turn, may use counter-strategies, such as increased use of face recognition, or matching people's online and offlines profiles – although it remains to be checked whether this actually happens on a significant scale in Europe, keeping GDPR requirements in mind.

17. Market power is a necessary condition as well. If consumers are subject to personalised pricing by firm A concerning a particular product, but they are able to find the same product elsewhere at a cheaper price – because there is price transparency and search costs are low –, this would defeat firm A's personalised pricing. Lack of consumer

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versions versus low-quality versions, or products that are cheaper when sold in bulk compared to products sold more expensively in smaller quantities.

<sup>9</sup> Regulation (EU) 2018/302 of the European Parliament and of the Council of 28 February 2018 on addressing unjustified geo-blocking and other forms of discrimination based on customers' nationality, place of residence or place of establishment within the internal market and amending Regulations (EC) No 2006/2004 and (EU) 2017/2394 and Directive 2009/22/EC, OJ L 60I , 2.3.2018, p. 1.

awareness, as well as consumers' failure to "shop around", due to inertia, may increase the market power of a firm in this context.<sup>10</sup>

18. Finally, if low-price consumers can resell the items at a higher price, such arbitrage would frustrate the firm's attempt to engage in personalised pricing to some extent. In this regard, the rise of the internet has had a double-edged effect. On one hand, the internet has expanded opportunities to resell items – e.g. through eBay or other online classified ads for second-hand items – although there are still significant transaction costs associated with such second-hand markets. On the other hand, fully digitalised, DRM-protected content such as e-books, music, movies and software cannot be resold as easily as when such content was held on tangible media (books, CDs and DVDs).<sup>11</sup>

### 3.3. Economic effects of personalised pricing

19. While the effect of third-degree price discrimination on consumer surplus can be ambiguous, the effect of first-degree price discrimination is clearer but multifaceted, and it is more likely to be negative for consumers.

20. In terms of output and total welfare, first-degree price discrimination is, in theory, as good as perfect competition, since every consumer who is willing to pay a price above marginal cost is served. There is no deadweight loss. But EU competition law is concerned with consumer welfare, not total welfare.

21. The effect of first-degree price discrimination on consumer welfare is more likely to be harmful than third-degree price discrimination, because the producer captures up to the entire surplus for all consumers, leaving them with potentially no gains from trade.

22. While some consumers with a low willingness to pay may be able to purchase a product that they wouldn't have been able to afford otherwise, a price equivalent to their maximum willingness to pay leaves those consumers worse off than any other purchase that would have left them more gains from trade.

23. In sum, there is an output-expansion effect (a pro-competitive effect) combined with a wealth transfer effect (an anti-competitive effect). However, this could mask a more complex and less positive reality.

- First, because of the wealth transfer effect associated with personalised pricing of a particular product or service, consumers are less able to spend on other products or services. Therefore the output-expansion effect *for the particular product or service subject to personalised pricing* comes at the expense of the output (consumption) of other products and services.
- Second, the output-expansion effect is limited in situations where there is limited output. For digital services with almost zero marginal costs, there is in practice almost unlimited output. But for e-commerce of tangible products, there is likely to be limited output. In such cases, one would expect the firm to sell its limited output

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10 Sellers may make it difficult for consumers to compare prices, by ensuring the offers are slightly different – e.g. through different after-sales services, bundling with value-added products, different reputation of the seller and therefore different levels of risk associated with a buy, or by different names for the same product.

11 Digital Rights Management (DRM) technology is a set of software or other technical measures that limit the copying, printing, and sharing of digitalised copyrighted content.

to wealthier customers as a matter of priority, leaving nothing for less well-off customers. This scenario constitutes an exception to the idea that less well-off consumers will be able to purchase a product that they would not have been able to afford otherwise.

- Third, there is another reason why it cannot be assumed that personalised pricing would necessarily allow lower-revenue consumers to be served. Indeed, maybe the opposite would happen: lower-revenue consumers being charged more (because they are perceived as more likely to default on a loan or to dent a rental car, for example), and higher-revenue consumers being charged less. This would be consistent with "risk-based pricing".<sup>12</sup> It would also be consistent with the fact that some firms take a "lifetime value" view of consumers. Firms try to capture higher-revenue consumers in the hope of turning them into regular customers.

24. Finally, if a consumer finds out after having made a purchase that the price paid was higher than what other consumers paid, personalised pricing may have a negative impact on the reputation of the seller which may result in lost revenue. It may also lead to direct costs to the seller and the consumer, if the consumer makes use of its 14-day right of withdrawal under Article 9 of Directive 2011/83 in order to avoid these higher costs.<sup>13</sup>

### 3.4. Personalised pricing and tacit collusion

25. Finally, and importantly, another economic effect of personalised pricing is that it makes tacit collusion (e.g. through pricing algorithms) less sustainable.<sup>14</sup> When there are different prices for each consumer, there is no longer a single observable price that pricing algorithms can match. Personalised pricing means many individual, untransparent prices. Therefore, *prima facie*, personalised pricing and tacit collusion cannot function at the same time in the same market.<sup>15</sup>

26. However, it has been argued that personalised pricing and tacit collusion may interact in other ways.

- First, there is an argument that personalised pricing and algorithm-enabled tacit collusion may co-exist, but in different segments of a relevant market. For example,

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12 "Algorithms and Collusion – Note from the European Union", note to the OECD roundtable on algorithms and collusion, 14 June 2017, OECD document number DAF/COMP/WD(2017)12, para. 5.

13 Directive 2011/83/EU of the European Parliament and of the Council of 25 October 2011 on consumer rights, amending Council Directive 93/13/EEC and Directive 1999/44/EC of the European Parliament and of the Council and repealing Council Directive 85/577/EEC and Directive 97/7/EC of the European Parliament and of the Council, OJ L 304, 22.11.2011, p. 64.

14 See "Price discrimination – Background note by the Secretariat", 13 October 2016, OECD document DAF/COMP(2016)15, footnote 29, with further references. See also "Algorithms and Collusion – Note from the European Union", note to the OECD roundtable on algorithms and collusion, 14 June 2017, OECD document number DAF/COMP/WD(2017)12, footnote 5.

15 See also Competition and Markets Authority, "Pricing algorithms – Economic working paper on the use of algorithms to facilitate collusion and personalised pricing", 8 October 2018, [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/746353/Algorithms\\_econ\\_report.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/746353/Algorithms_econ_report.pdf).

could there be personalised pricing for wealthy consumers and tacit collusion for less wealthy consumers of the same product?

- Second, there is an argument that competitors may try to collude – tacitly or explicitly – not on a single "focal point" (i.e. price) for the entire market, but on the personalised price displayed to each consumer. This argument assumes that all competitors have sufficient information to know a consumer's maximum willingness to pay, and all competitors adjust their prices to that level, so the consumer has no other option than that price. Further evidence would be needed to test whether this is a realistic scenario.

#### 4. Currently no personalised pricing in the EU on any significant scale

27. This section reviews previous studies carried out between 2013 and 2018, including the most recent and largest study of personalised pricing in Europe, a study carried out by Ipsos, London Economics and Deloitte for the European Commission's Directorate-General for Justice and Consumers. The conclusion of this section is that personalised pricing does not seem to be present in the EU on any significant scale, at least for the moment. That could change if the conditions for personalised pricing materialise.

28. A 2013 report by the UK Office of Fair Trading found that "our evidence indicates that businesses are not using information about individuals to set higher prices to them".<sup>16</sup>

29. In 2014, a joint investigation by the French data protection authority (CNIL) and the French consumer protection authority (DGCCRF) came to the same conclusion.<sup>17</sup>

30. The European Commission's 2016 Guidance on the Unfair Commercial Practices Directive (UCPD) states that

*"personalised pricing policies based, for instance, on the customer's purchasing power/wealth as perceived by a trader do not currently seem to be widespread outside of loyalty programmes and price advantages, which are normal business practices, and prices that vary by distribution channel used (e.g. online as opposed to brick and mortar shops)".<sup>18</sup>*

31. A 2016 paper by the European Commission's Joint Research Centre (JRC) found that "there seems to be some anecdotal evidence of personalized price discrimination but no systematic evidence" in the EU and "there is no evidence so far of regular use of personal data for personalised pricing on platforms".<sup>19</sup>

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16 "Personalised Pricing, Increasing Transparency to Improve Trust", OFT 1489, [https://webarchive.nationalarchives.gov.uk/20140402165101/http://oft.gov.uk/shared\\_of/markets-work/personalised-pricing/oft1489.pdf](https://webarchive.nationalarchives.gov.uk/20140402165101/http://oft.gov.uk/shared_of/markets-work/personalised-pricing/oft1489.pdf).

17 See <https://www.economie.gouv.fr/dgccrf/ip-tracking-conclusions-lenquete-conjointe-menee-par-cnil-et-dgccrf>.

18 European Commission Guidance on the Implementation/Application of Directive 2005/29/EC on Unfair Commercial Practices, document SWD(2016)163 Final, pages 149-150.

19 Bertin Martens/European Commission Joint Research Centre, "An economic policy perspective on online platforms", 2016, pages 5 and 40.

32. The 2016 joint report of the French Autorité de la concurrence and the German Bundeskartellamt found that "individual pricing has – up to now – not been observed to be widespread in practice."<sup>20</sup>

33. In 2016, the OECD found that "personalised pricing of the type that we envisage is not yet widespread".<sup>21</sup>

34. The European Commission's E-commerce Sector Inquiry final report of May 2017, authored by the Directorate-General for Competition, also makes some findings in this regard, although they aggregate personalised pricing and dynamic pricing:

*"Dynamic/personalised pricing, in the sense of setting prices based on tracking the online behaviour of individual customers, is reported as rather rare. 87 % of the retailers participating in the sector inquiry declare that they do not apply that type of pricing. No pattern in terms of size or profile can be established among the few retailers (2 %) explicitly declaring that they use or have used such dynamic/personalised pricing. [NB: The remaining 11% either did not reply or replied "I don't know". The 2% figure may be within the margin of error.] Such pricing strategies may, however, be used more frequently in the future, as the technical ability to collect and analyse large amounts of customer-specific data increases possibilities to differentiate between customers and provide targeted, individualised advertisements or offers."*<sup>22</sup>

35. In the 2018 European Commission market study on online market segmentation through personalised pricing/offers in the EU,<sup>23</sup> the research method applied in the mystery shopping *did not* find evidence of consistent and systematic online personalised pricing across the eight EU Member States and the four markets covered.<sup>24</sup>

- Across the four product markets assessed, price differences between personalisation and 'no personalisation' scenarios were observed in only 6% of situations with identical products.
- Where observed, price differences were small, the median difference being less than 1.6%.
- Prices were not systematically higher or lower in the 'personalisation' scenarios compared to the 'no personalisation' scenario.
- Airline and hotel booking websites showed relatively a higher evidence of price personalisation compared to websites selling TVs and shoes, whereas accessing the e-commerce website via a price comparison tool had the highest impact on the prices observed.

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20 Competition Law and Data, 10 May 2016, available at <http://www.autoritedelaconcurrence.fr/doc/reportcompetitionlawanddatafinal.pdf>.

21 "Price discrimination – Background note by the Secretariat", 13 October 2016, OECD document DAF/COMP(2016)15, paragraphs 144-149.

22 European Commission document SWD(2017)154 final, para. 152.

23 Cited above, footnote 7.

24 TVs, sport shoes, hotels rooms and airline tickets from websites of platforms selling airline tickets (not websites of airlines as such).

36. The study did find evidence for widespread ‘personalised ranking of offers’, i.e; websites changing the order of search results when different consumers search for the same products online.<sup>25</sup>

## 5. Should personalised pricing take place in the EU on a significant scale, what could be the EU public policy response?

### 5.1. EU competition law

37. Depending on circumstances and subject to further reflection, personalised pricing might in theory be caught by competition law in potentially two ways: a discrimination abuse or an exploitative abuse. This is not to suggest that such cases would be necessarily frequent or appropriate. Moreover, other areas of EU law – such as EU consumer protection law and/or EU data protection law – may be better suited to address personalised pricing concerns (see next subsections).

- *Discrimination.* Article 102 contains a list of examples of abuses. One of those examples, Article 102(c), prohibits "applying dissimilar conditions to equivalent transactions with other trading parties, thereby placing them at a competitive disadvantage". For this example to apply, there has to be a relationship of competition between the favoured and disfavoured trading parties, in their own relevant market.<sup>26</sup> This is also called "secondary-line" price discrimination. However, that list of examples in Article 102 is merely indicative, not limitative, so one may take a broader view of the definition of an "abuse" than the strict drafting of those examples.
- *Exploitation.* With regard to the possibility of an exploitative abuse, a price is excessive under Article 102 where it is "disproportionate" or "excessive" "in relation to the economic value of the service provided" or other factors.<sup>27</sup> In recent years, the European Commission has taken action in relation to concerns about excessive prices.<sup>28</sup> However, in relation to personalised pricing, it is not clear that the price charged to wealthier consumers would be excessive as such, according to

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25 Over three fifths (61%) of the e-commerce websites were found to personalise the ranking, either based on information about the shoppers’ access route to the website (through price comparison websites, search engines or via a mobile device etc.) or based on information about the shoppers’ past online behaviour (e.g. history of visits/clicks); including 92% for the airline ticket websites and 76% for hotel room websites.

26 See e.g. case C-95/04 P British Airways, ECLI:EU:C:2007:166, paras. 143-144; case T-301/04 Clearstream, ECLI:EU:T:2009:317, para. 192; and case C-525/16 MEO, ECLI:EU:C:2018:270, para. 24.

27 See e.g. case 27/76 United Brands, ECLI:EU:C:1978:22, para. 252; case C-52/07 Kanal 5 and TV4, ECLI:EU:C:2008:703, para. 28; case C-385/07 P Der Grüne Punkt, ECLI:EU:C:2009:456, para. 142; and case C-177/16 AKKA/LAA, ECLI:EU:C:2017:689, paras. 35-38.

28 See e.g. Commission Decision of 9.12.2009 in case COMP/38.636 Rambus; Commission Decision of 24.5.2018 in case AT.39816 Upstream gas supplies in Central and Eastern Europe ("Gazprom"); and the opening of proceedings concerning Aspen Pharma, press release number IP-17-1323 of 15 May 2017. See also the materials provided to the OECD roundtable of November 2018 on "Excessive Pricing in Pharmaceuticals".

the standards used in precedents in this area. Under personalised pricing, the price difference between two consumers may be subtle, for example 60 euros for Mr A for a tennis racquet, as in the example above, and 70 euros for Mr B.

## 5.2. EU consumer protection law

38. Marketing techniques such as personalised pricing, price discrimination or dynamic pricing fall under Directive 2005/29/EC on unfair commercial practices<sup>29</sup> (UCPD) and are addressed in the Commission guidance on the application of that Directive<sup>30</sup>. According to the Directive, traders are required to be transparent and clearly inform consumers about prices or how they are calculated<sup>31</sup>. Traders remain free to determine their prices in different ways as long as they duly inform consumers.

39. The 2016 guidance refers to personalised pricing combined with unfair practices that breach the Directive. For example, when the information gathered through profiling is used to exert undue influence, e.g. a trader finds out that the consumer is running out of time to buy a flight ticket and falsely claims that only a few tickets are left available, it could be in breach of Article 6(1)(a) and Annex I No 7 UCPD. Furthermore, under Articles 8 and 9 of the UCPD, marketing based on tracking and profiling must not involve aggressive commercial practices. Moreover, Point No 26 of Annex I prohibits making persistent and unwanted commercial communications to consumers ('spam').

40. Within the context of the 2016-2017 Fitness Check of EU consumer and marketing law<sup>32</sup>, the above-mentioned marketing techniques were not identified as requiring legislative measures. This was having regard also to the General Data Protection Regulation which sets strict obligations of transparency and, should marketing techniques based on automated decision-making, including profiling<sup>33</sup>, gives data subjects the right to know the logic involved, as well as the significance and envisaged consequences of such processing for the data subject.<sup>34</sup> The data subject further has the right to have the data corrected and erased, as well as the right to object to the processing of personal data.

41. In its legislative proposals of April 2018<sup>35</sup> ("New Deal for Consumers" package), the Commission has not proposed amendments to Directive 2005/29/EC in relation to these

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29 Directive 2005/29/EC of the European Parliament and of the Council of 11 May 2005 concerning unfair business-to-consumer commercial practices, OJ L 149, 11.6.2005, p 22.

30 See document SWD(2016)163 final of 25.5.2016, <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52016SC0163&from=EN>, in particular sections 5.2.11 to 5.2.13.

31 The price calculation refers to situations where the price or additional charges (e.g. freight, delivery, postal charges) cannot be calculated in advance, see for example Article 7(4)(c) of the UCPD.

32 REFIT Fitness Check of EU consumer and marketing law, SWD(2017)209 of 23.5.2017, and Report on the application of Directive 2011/83/EU on consumer rights, COM(2017)259 and SWD(2017)169 of 23.5.2017.

33 Article 22 of the GDPR.

34 Articles 13(2)(f), 14(2)(g), 15(1)(h) GDPR.

35 "New Deal for Consumers", [https://ec.europa.eu/info/law/law-topic/consumers/review-eu-consumer-law\\_en](https://ec.europa.eu/info/law/law-topic/consumers/review-eu-consumer-law_en).

marketing techniques. However, the legislative proposals aim at strengthening the enforcement of the Directive, in particular by introducing a right to individual remedies for victims of unfair commercial practices, improving the effectiveness of penalties and introducing a new mechanism of collective redress.

42. However, the Commission will continue monitoring the prevalence of personalised pricing and other marketing techniques and, if necessary, take additional measures to ensure the effectiveness of consumer protection.

### 5.3. EU data protection law

43. Personalised pricing is based on the processing of personal data in the form of profiling. As all processing, the related processing operations must therefore comply with the GDPR<sup>36</sup> and all its principles. Profiling as “any form of automated processing of personal data consisting in the use to evaluate certain aspects relating to a natural person”<sup>37</sup> must be, amongst others, transparent and based on one of the legal grounds provided by Article 6(1) GDPR. Where the processing cannot rely on the data subject’s consent or on a contract, particularly relevant is the legitimate interest ground, which requires a balancing exercise to assess whether the legitimate interests of the controller are not overridden by the data subject’s interests or fundamental rights and freedoms (Article 6(1)(f) GDPR).

44. In addition to its general rules and principles, Article 22(1) GDPR provides that the data subject shall have the right not to be subject to a decision based solely on automated processing, including profiling, which produces legal effects concerning him or her or similarly significantly affects him or her. According to the guidelines on automated decision-making and profiling, adopted by the Article 29 Working Party and endorsed by the European Data Protection Board, this provision establishes a general prohibition for such decision-making, independently of whether or not the data subject takes an action regarding the processing of their personal data.<sup>38</sup> In the absence of human involvement in the processing operations leading to personal pricing, such processing is to be considered as based solely on automated processing. Personalised pricing does not lead to a decision producing legal effects concerning the data subject, but it might similarly significantly affect him or her. In that respect the guidelines point out that “Automated decision-making that results in differential pricing based on personal data or personal characteristics could also have a significant effect if, for example, prohibitively high prices effectively bar someone from certain goods or services.”<sup>39</sup>

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36 Regulation (EU) no. 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation), OJ L 119 of 4.5.2016, 1.

37 According to the definition in Article 4(4) of the GDPR, “‘profiling’ means any form of automated processing of personal data consisting of the use of personal data to evaluate certain personal aspects relating to a natural person, in particular to analyse or predict aspects concerning that natural person’s performance at work, economic situation, health, personal preferences, interests, reliability, behavior, location or movement.”

38 Guidelines on Automated individual decision-making and Profiling for the purposes of Regulation 2016/679 (WP251rev.01), as last revised and adopted on 6.2.2018, p. 19.

39 *Ibid.*, p. 22.

45. In such circumstances, personalised pricing would only be lawful if covered by one of the exceptions provided by Article 22(2) GDPR, namely where necessary for entering into, or performance of a contract between the data subject and a controller; or authorized by Union or Member State law; or based on the data subject's explicit consent, and subject to the conditions laid down in Article 22(2), (3) and (4) GDPR.

46. Therefore, in the absence of such contract or law, personal pricing based solely on automated-decision making and affecting the data subject in such a manner, is only lawful when based on the explicit consent of the data subject. In any case and independently whether such automated decision-making is involved or not, the explicit consent of the data subject is required, when the processing includes special categories of personal data revealing racial or ethnic origin, political opinions, religious or philosophical beliefs, or trade union membership, and the processing of genetic data, biometric data for the purpose of uniquely identifying a natural person, data concerning health or data concerning a natural person's sex life or sexual orientation (Art.9(1) and (2)(a) GDPR).

#### **5.4. Personalisation, behavioural economics, and transparency in new forms of price discrimination**

47. The current evidence base on personalised ranking and pricing and social media marketing shows that the technological means for online personalisation and price discrimination are extensive and developing rapidly, and difficult to detect in market monitoring research by authorities. It also shows that online marketplaces, platforms and social media use or can use data analytics and profiling techniques to improve the efficiency of advertising and marketing, up to the level of individual shoppers. They are used to personalise the ranking of the offers in online marketplaces and platforms, and may be used to rank and target offers on the basis of estimated maximum willingness to pay of individuals, or to vary prices to reflect the cost of serving individual customers.

48. The same profiling data also enable traders to exploit (observed) behavioural biases through personalising advertising and marketing messages, and to nudge individual consumers into purchases on the basis of their personal characteristics and preferences, including willingness to pay. The combination of personalised ranking as a form of personalised pricing and (disguised) "personalised nudging" may present a further challenge for consumers and policymakers.

49. To date it remains unclear to what extent the combination of different types of personalisation, and the level of sophistication of personalisation practices may or may not prevent consumers from getting the best deal on the market. It also remains unclear if the benefits that tech-savvy and informed consumers may obtain from personalisation practices will trickle down to all consumers, or whether, on the contrary, the impact on less assertive or vulnerable consumers may be that they will end up paying more. Although the GDPR gives individuals the right to know the logic involved in the automated decision-making and the significance and envisaged consequences of such processing, it does not require a complex explanation of the algorithms used or disclosure of the full algorithm. This points to the need for increased transparency, so that prices for particular (groups of) consumers can be scrutinized to evaluate if markets exert sufficient competitive pressure on prices.