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The regulation of personalised pricing in the digital era

Note by Marc Bourreau and Alexandre de Streel[1]

1. From price discrimination to personalised pricing

1. **Price discrimination.** A firm price discriminates when it charges two consumers (or the same consumer) different prices for two units of the same product or similar products, and the price difference does not reflect cost differences (see generally, OECD, 2016). A firm price discriminates to extract as much as possible what the consumers are willing to pay for its products or services.

2. Price discrimination is feasible under some conditions: (i) the firm should have some market power (price discrimination is not feasible under perfect competition); and (ii) there is no or limited possibilities of arbitrage or resale (otherwise, consumers who benefit from low prices would have an incentive to resell the goods at higher prices and compete with the high-priced versions). The economic literature further distinguishes between different types of price discrimination, according to the level of information that the firms have about consumers.[2] The general idea is that the more accurate the information about consumers a firm possesses, the higher its ability to price discriminate and the higher the profitability of doing so (US Executive Office of the President, 2015).

3. **Personalised pricing.** The availability of big data facilitates price discrimination. Firms can use the data that they have collected to infer consumers' willingness-to-pay. The more information a firm can collect about its existing or potential customers, the more accurate its estimate of consumers' willingness-to-pay. To the extent that the firm has some market power, it can then set discriminatory prices based on this estimation. At the extreme, the firm is able to set individual prices and fully extract consumers' willingness-to-pay. Perhaps more realistically, it is able to engage in group pricing, with small targeted groups (e.g., fishing enthusiasts, etc.). We refer to both individual pricing and group pricing with small targeted groups as *personalised pricing* or *price targeting*.[3]

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[2] The economic literature (Pigou, 1920) distinguishes between first-degree discrimination (or personalised pricing), third-degree discrimination (or group pricing) and second-degree discrimination (or versioning). See Tirole (1988), chapter 3, or Belleflamme and Peitz (2015), chapters 8 to 10, for definitions and a detailed treatment of price discrimination.

[3] Individual pricing corresponds to first-degree price discrimination and group pricing to third-degree price discrimination. We exclude versioning (second-degree price discrimination) from our definition. Indeed, the debate about personalised pricing revolves around situations where

4. There is no conclusive empirical evidence that personalised pricing actually exists in online markets. For example, the report of OFT (2013) argues that personalised pricing is technically possible, but found no evidence that it was used by online firms in the UK in 2012. The CNIL-DGCCRF report (2014) found no evidence of personalised prices based on IP address in France in e-commerce websites. In 2017, the Competition and Markets Authority in the UK replicated and expanded the study of OFT (2013) and found no evidence of personalised pricing (CMA, 2018). Consultants for the European Commission conducted a similar study for 8 member states and 4 markets with similar findings (Ipsos et al., 2018). In the computer science literature, Vissers et al. (2014) ran a three-week experiment with 66 virtual user profiles connecting 25 airlines twice a day, and found no evidence of price targeting, though prices were observed to be very volatile.[4]

5. But this remains a controversial area. An (in)famous case occurred in 2000 when a customer complained that, after erasing the cookies from his computer's browser, he obtained a lower price for a particular DVD on Amazon.com. Consumers were very upset, and Amazon's CEO, Jeff Bezos, promised that the company "never will test prices based on customer demographics".[5] The fear of consumer backlash may explain why targeted pricing is hardly observed.[6] However, there are subtler – and more acceptable, from a consumer viewpoint – ways for a company to achieve the same outcome.

6. First, firms can offer the same uniform prices to all consumers, but with *personalised discounts*. Since discounts are less easily compared, negative reaction from consumers seems less likely. Since consumers end up paying different, personalised, net prices, this pricing strategy is equivalent to personalised pricing. Second, a firm can engage in *search discrimination* or *steering*, which consists in showing different products to customers from different groups, based on the available information about consumers. For example, the Wall Street Journal (2012) reported that the travel agency OrbitzWorldwide was showing more expensive hotel offers to Mac users than to PC users. A similar practice has been employed by Staples.com: the same newspaper article revealed that this website displayed different prices once the potential buyers' locations had been identified. The studies of CMA (2018) and of Ipsos et al. (2018) also found evidence of steering, consumers being shown different search results on some websites based on their operating system or the access route to the websites.[7]

7. In sum, with the advent of big data, we should expect more personalised prices, though firms may have to employ indirect methods (such as personalised discounts or search discrimination) to avoid upsetting consumers.

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consumers are offered different prices for the *same* good, which excludes second-degree discrimination where firms offer differentiated products in order to price discriminate.

[4] Other types of practices may explain the high variability of online prices. In particular, it may be the case that firms use the possibility to change their prices online frequently to explore the demand curve (and estimate price elasticities).

[5] See https://en.wikipedia.org/wiki/Amazon.com_controversies#Differential_pricing.

[6] Consumers may perceive personalised prices as 'unfair'. Xia et al. (2004) argue that this happens when consumers observe that they are paying a higher price than the other consumers for a similar product.

[7] See also Mikians et al. (2012, 2013) and Hannak et al. (2014) who collected data on various e-commerce websites and provide some empirical evidence of search discrimination.

2. Impact of personalised pricing on firms' profits and economic welfare

2.1. Impact of personalizing pricing on profits

8. ***Monopoly settings.*** To begin with, consider a monopoly firm (or equivalently, a firm with a super dominant position). If the firm can collect precise data about its consumers (e.g., demographics, online behaviour, etc.), simple economics shows that it may increase its profits by offering personalised prices.[8] For example, using a structural approach, Shiller (2014) estimates the increase in profit if Netflix would introduce personalised prices. According to the author, this would lead to an increase of profit for the company between 0.8% (if it used data on consumer demographics) and 12.2% (if it used the browsing history of its consumers). Dubé and Misra (2017) conducted an experiment on Ziprecruiter, an online recruiting company, comparing the existing uniform price charged by Ziprecruiter, an optimized uniform price and targeted prices. They find that the firm's profits increase by 65% when moving from the existing price to the optimized price, and increase further by 10% when adopting targeted pricing.

9. There is one caveat highlighted by the literature, when the monopolistic seller has repeated interactions with its consumers and cannot commit to future prices. The economics literature shows indeed that intertemporal price discrimination is not optimal for the monopolist (see for instance, Stokey, 1979). Acquisti and Varian (2005) revisit this result in a model where a monopolist has access to a tracking technology (e.g., putting cookies on consumers' device) and consumers can use an anonymizing technology (e.g., by erasing their cookies). Acquisti and Varian show that using past information about consumers benefits the monopolist either if a large share of consumers is myopic (i.e., they ignore the fact that paying a high price today makes it more likely that they will be offered a high price tomorrow) and/or tracking is also used to provide consumers with personalised (higher-quality) services.

10. ***Competition settings.*** While a monopoly firm benefit from personalised prices in many settings, it is less clear when the firm faces competition. First, consider a situation where all competing firms have access to the same information about consumers' tastes and preferences. What is the effect of a switch from uniform to personalised prices? The economic literature suggests that if only one firm introduces personalised prices, this firm can increase its profit. By contrast, if all firms switch to personalised pricing, the intensity of competition can either increase or decrease (see, e.g., Corts, 1998; Taylor and Wagman, 2014). Therefore, from the industry point of view, the availability of big data containing consumer information can be either beneficial or harmful.

11. So far we postulated that firms in the market have access to the same information about consumers. But this is not necessarily the case, for example, when firms obtain data about consumers from independent data brokers. Montes, Sand-Zantman and Valletti (2018) study a setting where two competitors obtain data from a data broker. They show that in equilibrium the data broker sells its data to only one firm, and therefore only one of the competing firms can set personalised prices. The firm that has access to the data makes higher profits than in the situation without information about consumers, and the firm without access to data makes lower profits. In this model, a move from uniform to personalised prices decreases total welfare, though consumers benefit from this move.

[8] E.g., Belleflamme and Peitz (2015), chapter 8, show that a monopoly makes higher profits if it collects more precise information about consumer demand.

12. To sum up, in a monopoly situation, a firm will benefit from personalised pricing. In a competitive environment, it is much less clear; whether firms benefit from personalised pricing will depend ultimately on the characteristics of the market. In all cases, the profitability of personalised pricing will also depend on consumers' reaction to this type of pricing strategy.

2.2. Impact of personalised pricing on economic welfare

13. When a firm sets personalised instead of uniform prices, a trade-off arises: some consumers with high willingness-to-pay can be worse off (appropriation effect), while some consumers with low willingness-to-pay can be better off (market expansion effect):

- The *appropriation effect* means that the firm charges higher personalised prices to consumers with high willingness-to-pay compared to the price that they would be charged under uniform pricing (note that this is true under monopoly, but not necessarily true in a competitive environment); if this is the case, those consumers are then worse off with personalised prices;
- The *market expansion effect* means the firm charges lower personalised prices to consumers with low willingness-to-pay, and some consumers with low willingness-to-pay who could not afford the good previously under uniform pricing can now purchase it with the low personalised prices.

14. Ignoring other effects, personalised pricing increases the total consumer surplus if the demand expansion effect outweighs the appropriation effect, and decreases the total consumer surplus otherwise. In a *monopolistic context*, the economics literature shows that either effect can dominate, and thus personalised prices can either increase or decrease consumer surplus and social welfare depending on demand conditions.[9] For example, Bergemann et al. (2015) show that when there is a switch from uniform pricing to price discrimination, social welfare and consumer surplus can both increase, both decrease, or social welfare increases while consumer surplus decreases.

15. In a context of *imperfect competition*, the impact of personalised pricing on consumer welfare is also ambiguous. For example, Taylor and Wagman (2014) consider different standard models of oligopolistic competition, and show that depending on the model, a switch from uniform pricing to personalised pricing can lead to either lower or higher consumer surplus.

16. In sum, the collection of detailed data on consumers' preferences allows firms, in theory at least, to set personalised prices, but it is not necessarily harmful to consumers as a whole. However, there might be winners and losers among consumers. Consumers with low willingness-to-pay will tend to benefit from personalised pricing, while consumers high willingness-to-pay will tend to be hurt.

3. The regulation of personalised pricing

17. The regulation of personalised pricing is a complex issue because, on the one hand, personalised prices are not very common at this stage and very few case have be dealt with by the regulators and, on the other hand, several legal instruments can be applicable. As

[9] See, e.g., Aguirre, Cowan and Vickers (2010), Bergemann et al. (2015) and Cowan (2016).

explained by OECD (2018b), four main instruments apply: rules on consumer protection, data protection, competition protection and anti-discrimination. Those rules aim to empower consumers by increasing transparency and consumers' choice and to prohibit price discrimination in some circumstances.

3.1. Consumer protection rules

18. Consumer protection rules generally apply to B2C relationships, although they have been extended to B2B relationships in some jurisdictions. They aim to ensure that those relationships remain fair even when consumers usually have less bargaining power than the professional traders. To do so, those rules impose several transparency obligations on the professional traders such as a clear indication of the prices and prohibit commercial practices and contracts terms which are unfair to the consumers such as misleading practices or unbalanced terms.

19. At this stage, in many jurisdictions it is not always clear which information should be communicated to the consumers in case of price personalisation, as transparency may have different degrees:

- The first and most basic degree is that consumers are informed that the price they are offered is personalised.
- A most advanced degree of transparency relates to the manner the prices were personalised. In this case, the firms may be obliged to indicate the main parameters determining the personalised prices.
- Another advanced degree of transparency relates to the prices offered to others, so that a specific consumer can have an anchor price allowing to situate herself across the range of prices offered (Ezrachi and Stucke, 2016; Townley et al, 2017).

20. It is not clear either under which circumstances personalised prices can be considered as unfair practice. Thus, the application of the transparency obligation, and unfair practices and contract terms prohibition to personalised prices could benefit from legal clarification either through case law or through administrative guidance.[10]

3.2. Data protection rules

21. Data protection rules apply to all transactions involving the collection or the processing of personal data. They aim to ensure that the privacy and the right to self-determination of the data subjects are protected. To do so, those rules impose several transparency obligations on the data controllers and processors and require the consent of the data subjects when their personal data need to be collected or processed. Rules also prohibit the processing of some personal data which are particularly sensitive such as data on race and ethnic origin, religious or philosophical beliefs, genetic, health or sex life and orientation.

22. As explained by Zuiderveen Borgesius and Poort (2017), data protection rules apply when the personalisation involves personal data, which is nearly always the case given the broad definition of personal data and their high informative value. One of the

[10] In the EU context, some clarifications have been given by the Staff of the European Commission (2016) when updating the Guidance on the Unfair Commercial Practices Directive to better take into account the evolution of the online sector.

most comprehensive data protection regime is the General Data Protection Regulation (GDPR), which became recently applicable in the European Union. In case of price personalisation involving personal data, the GDPR imposes the provision of information on the use of personal data for personalisation, the provision of "*meaningful information about the logic involved, as well as the significance and the envisaged consequences of such processing for the data subject*",[11] and the consent of the data subjects for the use of their personal data for the price personalisation. In addition, stricter rules and, in some cases, prohibitions apply when the price is personalised on the basis of sensitive data. Thus, data protection rules offer more empowerment tools for the data subject than the consumer protection rules, although those tools still need to be clarified further with case-law or administrative guidance.

3.3. Competition protection rules

23. Competition protection rules apply to all transactions concluded by private or public undertakings. As generally recognised, they aim to ensure that those transactions maximise the total welfare (of the consumers and the producers) in some jurisdictions and merely the total consumer welfare in other jurisdictions (see OECD, 2018b, p. 29). To do so, antitrust rules prohibit firms' agreements (in a broad sense) and unilateral conducts by firms which are decreasing the total or consumer welfare.

24. As the effects of personalised prices on economic welfare depend on the market characteristics and the specificities of the case at hand, a general *per se* prohibition of the practice by antitrust law is not justified. However, if it can be proved in a specific case that the personalisation of the prices decreases total or consumer welfare, the practice is prohibited by the antitrust rules. In the EU, Article 101(1d) TFEU and Article 102(c) TFEU prohibit specifically anti-competitive discriminatory agreement and abuse of dominant position respectively. In this context, discrimination is defined as "*applying dissimilar conditions to equivalent transactions with other trading parties, thereby placing them at a competitive disadvantage"*.

25. Anti-competitive agreements: a distinction is usually made between horizontal agreements among competitors and vertical agreements among firms at different places of the same value chain.

- Regarding *horizontal agreements*, if competitors agree to charge the same personalised prices, this is a standard cartel which is prohibited as any other cartel.[12]
- The analysis is more complex when personalised prices are agreed in *vertical relationships* and the personalisation contributes to anti-competitive effects of the agreement. In the EU context where the European Commission and the Courts are

[11] Article 13(2f) and 14(2g) GDPR. The national data protection authorities in Europe clarified their interpretation of this provision by indicating that : '*The controller should find simple ways to tell the data subject about the rationale behind, or the criteria relied on in reaching the decision. The GDPR requires the controller to provide meaningful information about the logic involved, not necessarily a complex explanation of the algorithms used or disclosure of the full algorithm. The information provided should, however, be sufficiently comprehensive for the data subject to understand the reasons for the decision'*: Article 29 Guidelines (2018, p 25).

[12] Maggiolino (2017). Note that the reliance on pricing algorithms, which may be used for personalisation, has also an effect on the factors leading to price collusion, see UK-CMA (2018), OECD (2017).

particularly worry about the partitioning of the single market, vertical agreements between suppliers and distributors which entail geographical discrimination on the basis of the residence of the consumer are prohibited in many circumstances (European Commission, 2017).

26. Anti-competitive unilateral conducts: A distinction is generally made between exclusionary conducts in B2B relationships which are prohibited by antitrust rules in all jurisdictions and exploitative conducts in B2C relationships which are prohibited by antitrust rules only in some jurisdictions.

- In *B2B relationships*, price discrimination and personalisation between firms may lead to a (i) *secondary-line (or external) discrimination* when the dominant firm is charging different prices to similar customers and is not competing against those customers; or (ii) a *primary-line (or internal) discrimination* when the dominant firm is charging different prices to similar customers and, being vertically integrated, is directly competing against those customers. In most jurisdictions, both types of discrimination are prohibited by antitrust rules when the discrimination is decreasing total or consumer welfare.[13] As shown in section 2, this requires a case-by-case analysis.
- In *B2C relationships*, price discrimination and personalisation between consumers could be prohibited by antitrust rules in the jurisdictions where exploitative abuses of market power are covered by those rules, such as for instance in the EU, Australia, Korea or Turkey.[14] The threshold for antitrust intervention, which often amounts to price regulation, is always very high in those circumstances as explained by the OECD (2011). This is justified given the high risks of errors of antitrust intervention against exploitative practices and the relative higher costs of type I errors (as antitrust intervention may distort incentives to invest and innovate by dominant and small firms) over type II errors (as markets usually self-correct in case of exploitative practices, in particular excessive prices).

27. In the EU, the Court of Justice judged that a price is excessive when: "the difference between the costs actually incurred and the price actually charged is excessive, and, if the answer to this question is in the affirmative, whether a price has been imposed which is either unfair in itself or when compared to competing products'.[15] In case of personalisation, the determination of the excessive character and the comparison with the costs should be made, according to us, against all the prices together and not against each individual price, as the normative standard for antitrust intervention is the total consumer welfare and not the welfare of each consumer.[16]

[13] Sse O'Donoghue and Padilla, 2013 for analysis of the application EU competition law to exclusionary personalised prices.

[14] For an analysis of the EU rules, see Botta and Wiedemann, 2018.

[15] Case 27/76, *United Brands v. Commission*, EU:C:1978:22, point 252, as recently recalled in Case C-177/16, *AKKA/LAA*, EU:C:2017:689, point 36.

[16] In Case C-238/05, *Asnef-Equifax v. Asociación de Usuarios de Servicios Bancarios (Ausbanc),* ECLI:EU:C:2006:734, point 70, the Court of Justice judged that: '*it is the beneficial nature of the effect on all consumers in the relevant markets that must be taken into consideration, not the effect on each member of that category of consumers*'.

28. However, some authors like Ezrachi and Stucke (2016), and Graef (2017) suggest that antitrust intervention could go further and that the prohibition of exploitative personalised prices could be broader. This is related to the current more general debate on the role of antitrust in the digital sector and, more broadly, on the objective and the normative standard for intervention, being the protection of consumer or total welfare in the short term or in the long term, the protection of the competition process, the protection of diversity and consumers' choice or the protection of fairness defined in ex ante perspective (equality of opportunities) or ex post perspective (fair distribution of the economic surplus).

3.4. Anti-discrimination rules

29. Anti-discrimination rules may apply to the actions of the State and private firms. Those rules aim at protecting the fundamental right not to be discriminated on the basis of some grounds that our liberal democracies find unacceptable. To do so, anti-discrimination laws prohibit the use by the administration and by private firms of those grounds to differentiate individuals.

30. In many jurisdictions, international treaties, constitutional norms or legislations prohibit the public authorities to discriminate individuals on the basis of sensitive factors. For instance, Article 21 of the Charter of Fundamental Rights in the EU prohibits: "any discrimination based on any ground such as sex, race, colour, ethnic or social origin, genetic features, language, religion or belief, political or any other opinion, membership of a national minority, property, birth, disability, age or sexual orientation." Legislations also prohibit private firms to discriminate individuals, hence to personalise the prices, on the basis of sensitive grounds, although the list of such grounds is generally narrower than for public authorities. For instance at the EU level, firms can not discriminate on the basis of racial or ethnic origin or sex.[17]

31. As one of the fundamental principles of the EU is the non-discrimination between its citizens, several provisions prohibit in principle the discrimination, hence the personalisation of prices, on the basis of the nationality or the residence of the users.[18]

3.5. Summary of the main rules applicable to personalised pricing

32. The Table 1 below summarises the main conditions of application and the effects of the four main legal instruments which have just been described. The Table shows and compares the main objectives and scope of each legal instrument, as well as the

[17] Council Directive 2000/43 of 29 June 2000 implementing the principle of equal treatment between persons irrespective of racial or ethnic origin, O.J. [2000] L 180/2; Council Directive 2004/113 of 13 December 2004 implementing the principle of equal treatment between men and women in the access to and supply of goods and services, O.J. [2004] L 373/37.

[18] Article 18 TFEU ; Article 20 of the Directive 2006/123 of the European Parliament and of the Council of 12 December 2006 on services in the internal market, O.J. [2006] L 376/36; Regulation 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 consumers' nationality, place of residence or place of establishment within the internal market O.J. [2018] L 60/I/1.

consequences on users and consumers' transparency and choice and on the prohibition of some cases of personalisation when empowerment is deemed to be insufficient.

33. While some rules can be substitute, in particular the consumer protection and personal data protection rules, most of the rules are complementary.[19] Indeed, consumer protection and data protection rules mainly aim at increasing transparency while competition protection and anti-discrimination rules mainly aim at prohibiting some cases of price personalisation. The first set of rules allows the consumers to understand better the market dynamics and, provided they have alternatives to which they can switch, vote with their feet and go to other providers. They also allow the authorities in charge of the second set of rules, i.e. antitrust and anti-discrimination agencies, to understand better the basis and the effects of the personalised pricing and the need for prohibition. Hence, the first set of rules contributes to the effectiveness of the second set of rules.

Table 1. Conditions and effects of the main rules applicable to personalised pricing (PP)

Types of legal instrument	Consumer protection	Personal data protection	Competition protection	Non-discrimination
Main Objectives	*Transparency and fairness in transactions*	*Data subject privacy and self-determination*	*Economic welfare: total or consumer*	*Protection of some fundamental rights*
Scope	*Mainly B2C transactions*	*Transactions relying on personal data*	*Transactions made by undertakings*	*All transactions by the State and/or private firms*
Transparency	Different degrees of transparency - mere fact that prices are personalised - the parameters of the personalisation - the average or median price offered	- Use of personal data - Logic of PP		
User choice	PP may be considered as unfair under some circumstances affecting the *quality* of consumer choice	- Need data subject consent to base PP on personal data	- May stimulate competition hence users' choices	
Prohibition of some personalisation		- PP based on sensitive data is usually prohibited	PP which is welfare-detrimental (to be determined on case-by-case)	- PP based on sensitive grounds such as sex or racial/ethnic origin

[19] On the complementarity between the consumer protection and data protection rules, the Staff of the European Commission (2016, p. 26) notes that the violation of data protection rules do not always means that the practice would be considered as unfair under consumer protection, but that '*such data protection violations should be considered when assessing the overall unfairness of commercial practices under the Unfair Commercial Practice Directive, particularly in the situation where the trader processes consumer data in violation of data protection requirements, i.e. for direct marketing purposes or any other commercial purposes like profiling, personal pricing or big data applications*.'

	Agreements - Horizontal - Vertical ***Unilateral conducts*** - Exclusionary in B2B: internal discrimination and external discrimination - Exploitative in B2C	- In EU, PP based on nationality or residence

4. Remedies and policy recommendation

34. Although the rapid technical progress in data collection and data analysis makes the personalisation of prices easier and less costly, several recent studies across the world show that digital firms generally do not personalise their prices. This may be explained by the mistrust of the consumers against personalised prices and by the availability of alternatives which are more accepted by consumers, such as personalisation of search results or discounts. Moreover, economic theory shows that personalised prices are not always bad for consumers and their welfare effects depend on the market characteristics and the specificities of the case at hand. However, consumers are worry of price personalisation especially when based on personal data; their trust is at stake when they do not understand well how prices are determined and how their data have been used. To maintain trust in the digital services, it is thus important that the legal framework applicable to personalised prices is well understood and provides for appropriate obligations which are effectively implemented. This last section provides recommendations in that regard.

4.1. Rules and remedies for personalised pricing in the digital era

35. The regulation of personalised prices should first and foremost empower the consumers by ensuring they are well informed that prices are personalised and by maximising as much as possible their choices. However, empowering consumers may not be enough in some circumstances and, in those cases, regulation should go further and prohibit the personalisation.

4.1.1. Consumer information

36. As the consumers' mistrust and fear can partly be explained by a lack of knowledge about when and how prices are personalised and as information asymmetry can be an important market failure in the digital economy (Townley et al., 2017), rules should lead to more transparency. According to us, consumer protection rules should ensure that consumers are informed about the price personalisation and also about the main parameters used for the personalisation.[20] Moreover, as recommended by OECD (2018a), those

[20] A similar obligation has been proposed by the European Commission for the ranking of online offers which is an alternative and more common form of personalisation. In the reform of EU consumer protection rules, the so-called New Deal for consumers, the Commission proposes to add a new Article 6a in the Consumer Rights Directive 2011/83 imposing that : '*online marketplace*

information should be disclosed to the consumers in a smart manner taking into account the bias and heuristics underlined by behavioural studies. Or, as put by the UK Behavioural Insight Team, information disclosure should comply with the EAST framework, i.e. be easy, attractive, social and timely.

4.1.2. Consumer choice and market competition

37. As transparency to consumers is only useful when they can act upon the information and as price personalisation is more likely to be good for consumers when firms compete, rules should maximise consumers choices by stimulating competition between providers and facilitating consumers switching. Hence, antitrust rules should establish a level playing field between all providers and firmly condemn anti-competitive agreements and unilateral conducts. Specifically for unilateral conducts, antitrust rules are better at condemning exclusionary price personalisation than regulating exploitative price personalisation. In addition, independently of the state of competition, users should have the right to oppose personalisation especially when it is based on their personal data. Hence, data protection rules should require consent when personal data are used for price personalisation.

4.1.3. Prohibition of some forms of price personalisation

38. As informed consumers having choices may lead to cases where prices are personalised on grounds which are deemed inacceptable in a liberal democracy, rules should prohibit those case of personalisation by the public authorities as well as by the private firms.

4.2. The effectiveness of the rules and their enforcement

39. Legal rules are only piece of paper; they need to be effectively enforced to be meaningful. This implies that rules should be clear and sufficiently certain, enforced by strong and expert agencies which cooperate between each other at the national and at the international levels.

4.2.1. Clear and legally certain rules

40. As explained in Section 3, most of the rules applicable to personalised pricing are principle-based. Such rules have the advantage of being easily adaptable to new issues (such as personalised pricing) but the disadvantage of leaving legal uncertainty until their application are clarified by the case-law. To speed up this process of legal clarification, which is needed in the digital economy when the technological time is much quicker than the judicial time, the enforcement agencies may adopt interpretative guidance as the done for example by the Staff of the European Commission (2016) for the Directive on unfair commercial practices.

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shall (...) provide (...) the main parameters determining ranking of offers presented to the consumer as result of his search query on the online marketplace'. The Commission clarified that: '*the obligation to provide information about the main parameters determining ranking of search results is without prejudice to any trade secrets regarding the underlying algorithms. This information should explain the main default parameters used by the marketplace but does not have to be presented in a customized manner for each individual search query*': recital 19 of the Commission Proposal of 11 April 2018 for a Directive on better enforcement and modernisation of EU consumer protection rules, COM(2018) 185.

4.2.2. Strong and expert enforcement authorities

41. The different agencies enforcing the rules on consumer protection, on personal data protection, on competition protection and on anti-discrimination should be credible, hence they should be sufficiently financed and staffed in particular with computer and data scientists understanding the incentives and the process of the prices personalisation in the digital era.

4.2.3. Cooperating enforcement authorities

42. As different legal rules apply to personalised prices, it is key that the different national agencies in charge of those rules cooperate closely between each other to better understand the common problems they face and, when intervention is needed, adopt consistent decisions. However, institutional cooperation does not mean legal fusion. The role of each agency and legal instrument should be differentiated, as they are mainly complements and not substitutes. In addition, as many actors of the digital economy are global, it is also important that those authorities cooperate at the global or, at least, regional level. This is why the European Data Protection Supervisor (2016, p. 15) set up a Digital Clearing House, a voluntary network of contact points in regulatory authorities at national and EU level who are responsible for regulation of the digital sector.[21]

[21] https://edps.europa.eu/data-protection/our-work/subjects/big-data-digital-clearinghouse_en

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