

STUDY

Requested by the IMCO committee

# Personalised Pricing

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# Personalised Pricing

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## **Abstract**

This study conceptualises personal pricing, distinguishing different forms including individual prices and group prices. It summarises empirical insights on the occurrence of personal pricing in practice and related consumer attitudes. In its legal part, it analyses whether and how current EU law deals with this phenomenon and identifies regulatory gaps and legal uncertainty, on the basis of which recommendations for future regulation of personalised pricing are presented.

This document was provided by the Policy Department for Economic, Scientific and Quality of Life Policies at the request of the committee on Internal Market and Consumer Protection.

This document was requested by the European Parliament's committee on Internal Market and Consumer Protection.

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Original: EN

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Manuscript completed: October 2022  
Date of publication: November 2022  
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This document is available on the internet at:  
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For citation purposes, the publication should be referenced as: Rott, P., Strycharz, J., and Alleweldt, F., 2022, *Personalised Pricing*, Publication for the Committee on Internal Market and Consumer Protection, Policy Department for Economic, Scientific and Quality of Life Policies, European Parliament, Luxembourg.

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## LIST OF ABBREVIATIONS

<b>ACM</b>	Authority for Consumers and Markets (Netherlands)
<b>AK</b>	Arbeiterkammer (Chamber of Labour - Austria)
<b>BEUC</b>	Bureau Européen des Consommateurs
<b>CJEU</b>	Court of Justice of the European Union
<b>CNIL</b>	Commission Nationale de l'Informatique et des Libertés (National Committee for Informatics and Liberties - France)
<b>CRD</b>	Consumer Rights Directive
<b>DGCCRF</b>	Direction générale de la Concurrence, de la Consommation et de la Répression des Fraudes (Directorate General for Competition, Consumers and Fraud repression - France)
<b>ECJ</b>	European Court of Justice
<b>EU</b>	European Union
<b>GDPR</b>	General Data Protection Regulation
<b>IMCO</b>	Committee on the Internal Market and Consumer Protection
<b>LG</b>	Landgericht (Regional Court – Germany)
<b>OFT</b>	Office of Fair Trading (United Kingdom)
<b>OLG</b>	Oberlandesgericht (Higher Regional Court – Germany)
<b>SMEs</b>	Small and medium-sized enterprises
<b>SVRV</b>	Sachverständigenrat für Verbraucherfragen (Advisory Council for Consumer Affairs - Germany)
<b>UCPD</b>	Unfair Commercial Practices Directive
<b>UCTD</b>	Unfair Contract Terms Directive
<b>UK</b>	United Kingdom
<b>US</b>	United States

## EXECUTIVE SUMMARY

### Background

Personalised pricing can be described as price differentiation for identical products or services at the same time based on information a trader holds about a potential customer. It has become possible because traders have, lawfully or unlawfully, acquired personal data which they, or rather algorithms they use, may process to understand personal preferences and purchasing habits of individuals. Personalised pricing allows traders to exploit the (inferred) customers' willingness to pay better, and therefore to increase their profits.

### Aim

This study aims to provide an updated analysis of the different mechanisms and categories of price personalisation practices which can be observed on the market, and to define the concept of personalised pricing. It investigates the extent to which these practices are applied in the EU, and the possible impacts on consumer welfare as well as potential risks such practices represent for consumers.

Based on these findings, the study assesses the relevance of the current legal framework of EU law, including the new information obligation introduced by Directive (EU) 2019/2161, the Unfair Commercial Practices Directive, the General Data Protection Regulation and the proposed Consumer Credit Directive. It identifies certain shortcomings of this legal framework and makes proposals for further regulation.

### Key Findings

Price personalisation can take different forms, namely first-degree personalisation (based on personal characteristics of individual consumers), second-degree price personalisation (based on the quantity of products, e.g. when several bottles are sold in one package) and third-degree personalisation (based on membership in a market segment or consumer group, e.g. student rebate), and can be presented as a different price or a personalised discount. First-degree price personalisation is the most problematic of the three forms. It bases on the consumers' willingness to pay, that can be inferred from different types of personal data processed on individual or aggregated level. Subsequently, a price matched to the willingness to pay is offered either automatically through algorithmic processing or non-automatically through human intervention.

First-degree price personalisation is technically possible, but its frequency of occurrence in practice is contested. While several studies failed to identify price personalisation in online offers, other studies, and press reports, including the recent case of the online platform Wish, show that this type of price personalisation has been occurring in some instances.

In principle, price personalisation can be beneficial for both traders and consumers. For traders, it allows profit maximisation while expanding their client base through the possibility of offering lower prices to consumers with lower willingness to pay. At the same time, it requires advanced data collection and processing practices and may potentially lead to consumer backlash. From a consumer perspective, it may allow certain groups to purchase products that they could otherwise not afford. On the other hand, price personalisation may lead to an increase of the regular price, and hamper consumers' ability to compare offers.

Consumers tend to have a negative attitude towards price personalisation. While they accept second- and third-degree personalisation, they perceive individually personalised prices as unfair. This attitude is partially driven by the lack of transparency of personalisation practices. Three approaches to



transparency can be distinguished: disclosing *that* the price is personalised, *how* it is personalised and how it *compares* to the regular price. All these disclosure practices should be treated with caution, as behavioural research shows that consumer-related factors (motivation, knowledge, and biases) and disclosure-related factors (informativeness, completeness, comprehensiveness) impact on the effectiveness of personalisation disclosures.

Turning to the legal situation, personalised pricing is, in principle, allowed under EU law, as long as traders do not use personal characteristics in breach of anti-discrimination laws. Exceptions apply only to certain universal service obligations.

Consent requirements may stem from data protection law. Article 22(1) of the General Data Protection Regulation (GDPR) can be interpreted as prohibiting personalised pricing without the consumer's consent, but the interpretation of this provision is highly controversial. Case law is not available. Article 9 GDPR requires consent for the use of sensitive data. The GDPR also requires traders to inform consumers about automated decision-making, but not at the time of purchase.

New Article 6(1)(ea) of the Consumer Rights Directive (CRD) requires traders to inform consumers if they apply personalised pricing based on automated decision-making, but the scope of application of this provision is limited. The current proposal for a new Consumer Credit Directive (CCD) provides for a similar rule, and arguably, an equivalent information obligation can be derived from Article 7(1) of the Unfair Commercial Practices Directive (UCPD), but this has never been tested in court. As it stands, this information obligation is not sufficiently effective.

This leads to the following conclusions. As price personalisation is expected to become more widespread in the near future and has already occasionally proven to occur, there is a need for regulating this phenomenon.

Given the general rejection by consumers of personalised pricing, regardless of potentially being offered lower or higher prices, and the likelihood of overall consumer detriment of such practices, one could consider prohibiting personalised prices in the form of first degree price discrimination that lead to a higher than the regular price. At least, there are certain areas where personalised pricing should be prohibited, namely, universal service obligations in areas such as electricity, gas and telecommunications where everyone should have access to services of general interest at the same conditions.

Moreover, while anti-discrimination laws limit the way in which personalised pricing can be performed in that they prohibit the inclusion of certain criteria in the personalisation process (e.g. sex, race, colour, ethnic or social origin, etc.) certain 'sensitive' criteria are currently not covered. These could be prohibited to be used for the personalisation of prices, including health conditions, and vulnerabilities such as anxieties that should not be exploited.

Otherwise, information obligations regarding personalised pricing could be extended to all goods and services and to offline or hybrid situations, and information provided should be 'meaningful', a notion well-known from data protection law. Thus, traders would have to disclose how prices are personalised and what criteria are used to do so. Moreover, traders should be required to place information on personalised pricing next to the price in such a way that it cannot be overlooked.

Enforcement should be facilitated through the reversal of the burden of proof once there is an indication of price personalisation. Competent authorities could be granted access to the algorithm that is used.

# 1. WHAT IS PERSONALISED PRICING?

## KEY FINDINGS

Recent technological developments have enabled online retailers to collect and process consumer data in order to draw conclusions about their needs and interests, but also their price sensitivity for products and services. As a result, traders can categorise consumers according to how sensitive they are to different prices and, for example, charge a higher price to individuals that are willing to pay more.

Price personalisation can be defined as differentiating the price for identical products or services based on information a company has about a potential customer. It can take different forms, namely *first-degree personalisation* (based on personal characteristics of individual consumers), *second-degree price personalisation* (based on the quantity of products, e.g. when several bottles are sold in one package) and *third-degree personalisation* (based on membership in a market segment or consumer group, e.g. student rebate), and can be presented as a different price or a personalised discount. This study focuses mainly on first-degree personalisation, and to some extent on the other forms, especially in the framework of the legal analysis.

Regarding the working of first-degree price personalisation, it bases on the consumers' willingness to pay that can be inferred from different types of personal data. Subsequently, a price matched to the willingness to pay is offered either automatically through algorithmic processing or non-automatically through human intervention.

In this chapter, we introduce the notion of price personalisation and describe different types of this phenomenon. Further, its mode of operation is explained and known examples from practice are presented.

## 1.1. Personalised pricing and related phenomena

Increasing purchase intention and actual sale revenues have always been among the main goals of retailers. For example, advertising has been used as an effective tool to increase both<sup>1</sup>. Recent advances in data collection and processing possibilities have made it possible to further increase advertising effectiveness by tailoring ads to the likely needs and interests of individual consumers<sup>2</sup>. In fact, it is currently possible not only to predict what products are relevant to consumers and advertise accordingly, but also to predict consumers' price-sensitivity<sup>3</sup>. For instance, retailers can categorise consumers according to how sensitive they are to different prices and charge people that are willing to pay more a higher price.

This phenomenon of *personalised pricing* can be defined as 'differentiating the online price for identical products or services based on information a company has about a potential customer'<sup>4</sup>. The Office of

<sup>1</sup> For an overview of advertising effectiveness research see for example, Tellis, G. J., 2003, *Effective advertising: Understanding when, how, and why advertising works*, Sage Publications.

<sup>2</sup> Li, H., 2019, *Special Section Introduction: Artificial Intelligence and Advertising*, Journal of Advertising 48. Available at: <https://www.tandfonline.com/doi/full/10.1080/00913367.2019.1654947>.

<sup>3</sup> Poort, J., and Zuiderveen Borgesius, F., 2019, *Does everyone have a price? Understanding people's attitude towards online and offline price discrimination*, Internet Policy Review 8; Wagner, G., and Eidenmüller, H., 2019, *In der Falle der Algorithmen? Abschöpfen von Konsumentenrente, Ausnutzen von Verhaltensanomalien und Manipulation von Präferenzen: Die Regulierung der dunklen Seite personalisierter Transaktionen*, Zeitschrift für die gesamte Privatrechtswissenschaft.

<sup>4</sup> Poort, J. and Zuiderveen Borgesius, F., 2019, *Does everyone have a price? Understanding people's attitude towards online and offline price discrimination*, Internet Policy Review 8. Available at: <https://policyreview.info/articles/analysis/does-everyone-have-price-understanding-peoples-attitude-towards-online-and-offline>.

Fair Trade in the United Kingdom (UK) notes that the information about an individual can be observed, voluntarily given, inferred or collected, and that it can be related to single individuals or groups<sup>5</sup>. However, the question of what exactly constitutes personalised pricing is still a matter of debate. Some scholars argue that only so-called *first-degree price personalisation* results in a truly personalised price. This means that the price for the same product offered at the same time is different for individual consumers based on their personal characteristics<sup>6</sup>. First degree personalisation enables retailers to extract all consumer surplus. This is to be distinguished from so-called *second-degree price personalisation*, i.e. a situation where a retailer does not use any information on potential customers. Instead, the retailer assumes the existence of different segments of consumers, for example, high demand and low demand customers. The retailer hence provides quantity discounts, essentially bundle pricing, but offers different quantities in the bundles at different prices. Consumers can then choose themselves whether to make use of such offers and pay a different price<sup>7</sup>. Finally, *third-degree price personalisation*, also referred to as group price personalisation, involves charging different pricing for products and services depending on the particular market segment or consumer group. Retailers may price products and services differently based on the particular demographics of a subset of their consumers, such as students or older adults<sup>8</sup>. Table 1 summarises different types of price personalisation, including examples.

Importantly, personalised pricing should be distinguished from a related pricing strategy, namely *dynamic pricing*. This term also describes a situation in which the online price is differentiated for identical products or services. However, this differentiation is not based on consumer data, but on current market demands<sup>9</sup>. Dynamic pricing is commonly applied, for example, in the electricity pricing<sup>10</sup> or in the airline industry<sup>11</sup>. It will not be discussed in detail in this study.

Further, personalised search results and recommendations are often named in relation to personalised pricing. In this case, the products consumers see are personalised, commonly based on analytics. Personalisation of search results is used by retailers and online platforms to inform and persuade consumers to consider certain products while evaluating competing offerings, thus converting browsers into buyers, increasing loyalty, and improving retention<sup>12</sup>. This strategy does not directly involve differentiating prices for different consumers, but rather offers they can choose from. For example, the Wall Street Journal showed in 2012 that the travel agency OrbitzWorldwide was ranking more expensive hotel offers higher for Mac users than to PC users (who were offered cheaper hotels)<sup>13</sup>. In other examples identified by this news outlet, firms were using customers' browsing history and geolocation to personalise the order of offers and products. As one of the interviewed trade

<sup>5</sup> Office of Fair Trading, 2013, *Personalised pricing*. Available at: <https://webarchive.nationalarchives.gov.uk/ukgwa/20140402162153/http://oft.gov.uk/OFTwork/markets-work/othermarketswork/personalised-pricing>.

<sup>6</sup> Zander-Hayat, H., et al., 2016, *Personalisierte Preise (Sachverständigenrat für Verbraucherfragen beim Bundesministerium der Justiz und für Verbraucherschutz)*. Available at: [https://www.svr-verbraucherfragen.de/wp-content/uploads/SVRV\\_WP02\\_Personalisierte-Preise.pdf](https://www.svr-verbraucherfragen.de/wp-content/uploads/SVRV_WP02_Personalisierte-Preise.pdf).

<sup>7</sup> Thomsen, M.R., 2018, *An Interactive Text for Food and Agricultural Marketing*, University of Arkansas. Available at: <https://shiny.uark.edu/AGEC3303/OnlineText>.

<sup>8</sup> Horton, M., 2021, *3 Degrees of Price Discrimination. The fine art of charging different prices for the same item*, Investopedia. Available at: <https://www.investopedia.com/ask/answers/042415/what-are-different-types-price-discrimination-and-how-are-they-used.asp>.

<sup>9</sup> Den Boer, A.V., 2015, *Dynamic pricing and learning: historical origins, current research, and new directions. Surveys in operations research and management science* 20.

<sup>10</sup> For a discussion on dynamic pricing in electricity sector see Roozbehani, M., et al., 2010, *Dynamic pricing and stabilization of supply and demand in modern electric power grids*, 2010 First IEEE International Conference on Smart Grid Communications. Available at: <https://ieeexplore.ieee.org/document/5621994/authors#authors>.

<sup>11</sup> For a dynamic pricing framework in the airline industry see Wittman, M.D., and Belobaba, P.P., 2019, *Dynamic pricing mechanisms for the airline industry: A definitional framework*, Journal of Revenue and Pricing Management 18.

<sup>12</sup> Basu, S., 2021, *Personalised product recommendations and firm performance*, Electronic Commerce Research and Applications 48. Available at: <https://doi.org/10.1016/j.eierap.2021.101074>.

<sup>13</sup> Valentino-DeVries, J., et al., 2012, *Websites Vary Prices, Deals Based on Users' Information*, Wall Street Journal of 24 October 2012. Available at: <https://www.wsj.com/articles/SB1000142412788732377204578189391813881534>.

associations remarked, personalised search results and recommendations tend to relate to what kind of information individual consumers have access to rather than to prices offered to these consumers. As noted by them, lack of access to information about certain products may affect the price paid, but does not mean that different individual prices are offered.

Table 1: Overview of price personalisation and related phenomena

	Definition	Examples
Price personalisation	Differentiating the price for identical products or services based on information a company has about a potential customer	
First-degree price personalisation	Differentiating the price for identical products or services at identical time based on personal characteristics of individual consumers	Individual price for a product based on past shopping behaviour
Second-degree price personalisation	Differentiating the price for products or services based on quantity purchased	Family-prices packaging
Third-degree price personalisation	Differentiating the price for identical products or services at identical time for a particular market segment or consumer group	Student discount
Dynamic pricing	Differentiating the price for identical products or services at identical time based on current market demands	Dynamically priced airline tickets
Personalised recommendations/search results	Differentiating the products the consumers sees, commonly based on consumer characteristics	Personalised product recommendation in a web shop

Source: Authors' own elaboration based on Poort and Zuiderveen Borgesius (2019), Zander-Hayat, Domurath and Groß (2016), Thomsen (2018), Horton (2021), Den Boer (2015) and Basu (2021).

The current analysis focuses on the forms of price personalisation where prices are personalised based on personal characteristics of individual consumers (first-degree personalisation) or on their group membership (third-degree price personalisation).

## 1.2. Functioning of personalised pricing

Willingness to pay is a central construct of determining the personalised price. It can be defined as 'the maximum price a given consumer accepts to pay for a product or service'<sup>14</sup>. Retailers try to predict how much a consumer is willing to pay for a product or service and the aim of personalised pricing is to quote prices to specific consumers according to their personal willingness to pay. The price based on willingness to pay is usually compared to a regular price, the so-called reference price. This price can

<sup>14</sup> Le Gall-Ely, M., 2009, *Definition, measurement and determinants of the consumer's willingness to pay: a critical synthesis and avenues for further research*, Recherche et Applications en Marketing (English Edition) 24.

be defined as the price that the same trader would offer to all customers at a given point in time if no price personalisation were applied.

With respect to the personalisation of prices, two methods can be distinguished: automated and non-automated personalisation. In case of automated personalisation, also referred to as algorithmic personalisation, the process occurs automatically using personalisation algorithms<sup>15</sup>. Personalisation of prices is an example of a broader trend towards data-driven and algorithmic personalisation of services. It applies similar technology to other personalisation techniques: just as retailers can tailor online advertising to individual consumers, they can use the same technology to tailor prices. In this case, the willingness to pay is inferred from consumer data. Algorithmic price personalisation typically works as follows: an online store identifies a customer for instance by means of a cookie, an IP-address, or user log-in information. This unique identification is generally not an end in itself, but allows the retailer to either infer the consumer's willingness to pay for a certain product (first-degree personalisation) or to distinguish between broader categories, e.g. high and low spending consumers (third-degree personalisation)<sup>16</sup>. In contrast, non-automated personalisation does not involve algorithms, but rather a human intervention. Providing consumers with personalised discounts has been a common practice in brick-and-mortar stores. It does not involve automated processing, but a decision made by an employee. As one of the interviewed trade associations noted, this type of personalisation can also be moved online, although in this case a direct contact between the retailer and the customer is required. The current analysis **focuses on automated personalisation that involves consumer data processing and algorithmic decisions making**. Unless otherwise specified, in the following, a reference to personalised pricing shall be understood as a reference to such automated personalisation practices.

Regarding the basis for decisions about personalised prices, consumer data is central to them. One of the conditions for personalisation is that the retailer is capable of distinguishing customers and thus knows which price to charge to whom – this is possible with the use of different types of data<sup>17</sup>, including demographic information, information on consumers' device and location, their interests and preferences, services used, social networks and behaviour<sup>18</sup>. Subsequently, an individually determined price can be shown to the consumer.

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<sup>15</sup> Poort, J., and Zuiderveen Borgesius, F., 2019, *Does everyone have a price? Understanding people's attitude towards online and offline price discrimination*, Internet Policy Review 8. Available at: <https://policyreview.info/articles/analysis/does-everyone-have-price-understanding-peoples-attitude-towards-online-and-offline>.

<sup>16</sup> Example following Poort, J., and Zuiderveen Borgesius, F., 2019, *Does everyone have a price? Understanding people's attitude towards online and offline price discrimination*, Internet Policy Review 8.

<sup>17</sup> Poort, J., and Zuiderveen Eislser Borgesius, F., 2021, *Personalised pricing: The demise of the fixed price?*, in: Kohl, U. and, J. (eds), *Data-Driven Personalisation in Markets, Politics and Law*, Cambridge University Press.

<sup>18</sup> Searby, S., 2003, *Personalisation — an overview of its use and potential*, BT Technology Journal 21.

## 2. EMPIRICAL INSIGHTS INTO PERSONALISED PRICING

### KEY FINDINGS

First-degree price personalisation is technically possible, but its frequency of occurrence in practice is contested. While several studies failed to identify price personalisation in online offers, other studies and press reports, including recent cases, show that this type of price personalisation has been occurring in some instances.

Price personalisation can be beneficial for both traders and consumers. For traders, it allows profit maximisation while expanding their client base through the possibility of offering lower prices to consumers with lower willingness to pay. At the same time, it requires advanced data collection and processing practices and may potentially lead to consumer backlash. From a consumer perspective, it has the potential to allow certain groups to purchase products that they could otherwise not afford. On the other hand, price personalisation may lead to an increase of the regular price, and hamper consumers' ability to compare offers.

As a consequence, consumers tend to have a negative attitude towards price personalisation. While they accept second- and third-degree personalisation, they perceive individually personalised prices as unfair. This attitude is partially driven by the lack of transparency of personalisation practices. Three approaches to transparency can be distinguished: disclosing *that* the price is personalised, *how* it is personalised and how it *compares* to the regular price. All these disclosure practices should be treated with caution, as behavioural research shows that consumer-related factors (motivation, knowledge, and biases) and disclosure-related factors (informativeness, completeness, comprehensiveness) have impact on the effectiveness of personalisation disclosures.

Research into price personalisation includes research on traders' and consumers' perspectives on benefits and costs of personalisation, economic studies on impact of personalising prices on consumer welfare, as well as research on consumers' perceptions of and behavioural reactions to the practice. The current chapter presents an overview of findings from research, which are complemented by insights from expert interviews.

### 2.1. Occurrence of personalised pricing in practice

There is no conclusive empirical evidence how widespread first-degree personalised pricing is in online markets<sup>19</sup>. Several early reports have shown little evidence of this phenomenon. For example, a 2013 report by the UK's Office of Fair Trading stated that while price personalisation was technically possible, it was not a common practice at the time<sup>20</sup>. In 2014, a report by the Commission Nationale de l'Informatique et des Libertés, Direction générale de la Concurrence, de la Consommation et de la Répression des Fraudes (CNIL-DGCCRF: French National Committee for Informatics and Liberties, Directorate General for Competition, Consumers and Fraud repression) found no evidence of personalised prices based on IP address in France on e-commerce websites<sup>21</sup>.

<sup>19</sup> In the following, when we present the available evidence concerning personalised pricing, we refer to first degree personalisation only; an overview of evidence is summarised in Tables 2 and 3.

<sup>20</sup> Office of Fair Trading, 2013, *Personalised pricing*. Available at: <https://webarchive.nationalarchives.gov.uk/ukgwa/20140402162153/http://oft.gov.uk/OFTwork/markets-work/othermarketswork/personalised-pricing>; data for the report was collected in 2012.

<sup>21</sup> CNIL-DGCCRF, 2014, «*IP Tracking*»: conclusions de l'enquête conjointe menée par la CNIL et la DGCCRF. Available at: [https://www.economie.gouv.fr/files/files/directions\\_services/dgccrf/presse/communiqu/2014/cp\\_tracking\\_27012014.pdf](https://www.economie.gouv.fr/files/files/directions_services/dgccrf/presse/communiqu/2014/cp_tracking_27012014.pdf).

Similarly, a study conducted for the European Commission in 8 Member States and 4 market sectors (TVs, sport shoes, hotels rooms and airline tickets) did not find personalised pricing when conducting a mystery shopping experiment on 160 websites<sup>22</sup>. In fact, differences in prices were observed in only 6% of situations with identical products and their magnitude was small (the median difference being less than 1.6%). In the academic literature, Vissers et al. conducted a longitudinal experiment in 2014 with 66 simulated user profiles searching for tickets on 25 airlines twice a day and found no evidence of individual price differences based on the profiles, although prices were very dynamic<sup>23</sup>. A consumer survey conducted in 2016 in the Netherlands found that 56.9% of respondents indicated they had never experienced online price personalisation while 4.3% claimed to have experienced it often or very often<sup>24</sup>.

At the same time, several examples suggest that prices are indeed tailored to individual consumers. Over twenty years ago, the BBC reported that Amazon charged existing customers more than potential customers<sup>25</sup>. When customers deleted cookies from their device, they saw the price of a DVD drop. This suggested that customers who had previously ordered from Amazon (and thus had the cookie on their device) had to pay more for a product than potential customers. Amazon denied this, stating in a press release that it was merely experimenting with random discounts and gave a refund to people who paid a price above the average. In 2012, an investigation delivered hard evidence for price personalisation by some United States (US) webshops based on consumers' location, which was collected through their computer IP address. For example, the office supply store Staples charged lower prices if the customer was in a proximity of a brick-and-mortar store selling office supplies<sup>26</sup>.

Similarly, tests conducted in 2014 by the German Sachverständigenrat für Verbraucherfragen (SVRV - Advisory Council for Consumer Affairs) showed that prices of products differed significantly depending on the device used<sup>27</sup>. More specifically, they concluded that the price was higher when using a mobile device compared to a desktop.

Regarding personalisation based on the device used, the Austrian Arbeiterkammer (AK - Chamber of Labour) concluded in 2019 that different flight and hotel booking websites showed different prices depending on whether a computer or a mobile device was used to access the website<sup>28</sup>. For example, in one instance, hotel prices on booking.com were 10.3% higher on mobile devices compared to PCs and laptops. In this study, the websites were accessed on multiple days using different types of devices.

<sup>22</sup> Ipsos, London Economics and Deloitte, 2018, *Consumer market study on online market segmentation through personalised pricing/offers in the European Union*, Study for the European Commission. Available at: [https://ec.europa.eu/info/sites/default/files/aid\\_development\\_cooperation\\_fundamental\\_rights/aid\\_and\\_development\\_by\\_topic/documents/synthesis\\_report\\_online\\_personalisation\\_study\\_final\\_0.pdf](https://ec.europa.eu/info/sites/default/files/aid_development_cooperation_fundamental_rights/aid_and_development_by_topic/documents/synthesis_report_online_personalisation_study_final_0.pdf).

<sup>23</sup> Vissers, T., et al., 2014, *Crying wolf? On the price discrimination of online airline tickets*, in: 7th Workshop on Hot Topics in Privacy Enhancing Technologies. Available at: <https://hal.inria.fr/hal-01081034>.

<sup>24</sup> Poort, J., and Zuiderveen Borgesius, F., 2019, *Does everyone have a price? Understanding people's attitude towards online and offline price discrimination*, Internet Policy Review 8. Available at: <https://policyreview.info/articles/analysis/does-everyone-have-price-understanding-peoples-attitude-towards-online-and-offline>.

<sup>25</sup> BBC, 2000, *Amazon's old customers 'pay more'*, 8 September 2000. Available at: <http://news.bbc.co.uk/2/hi/business/914691.stm>.

<sup>26</sup> Valentino-DeVries, J., et al., 2012, *Websites Vary Prices, Deals Based on Users' Information*, Wall Street Journal of 24 October 2012. Available at: <https://www.wsj.com/articles/SB1000142412788732377204578189391813881534>.

<sup>27</sup> Schleusener, M., and Hosell, S., 2016, *Expertise zum Thema „Personalisierte Preisdifferenzierung im Online-Handel“* (Sachverständigenrat für Verbraucherfragen beim Bundesminister für Justiz und Verbraucherschutz). Available at: [https://www.svr-verbraucherfragen.de/wp-content/uploads/eWeb-Research-Center\\_Preisdifferenzierung-im-Onlinehandel.pdf](https://www.svr-verbraucherfragen.de/wp-content/uploads/eWeb-Research-Center_Preisdifferenzierung-im-Onlinehandel.pdf).

<sup>28</sup> Delapina, M., 2019, *AK-Test. Preisdifferenzierung im Online-Handel*. Available at: [https://www.arbeiterkammer.at/beratung/konsument/EinkaufundRecht/Preisdifferenzierung\\_im\\_Online-Handel\\_2022.pdf](https://www.arbeiterkammer.at/beratung/konsument/EinkaufundRecht/Preisdifferenzierung_im_Online-Handel_2022.pdf).

Recently, the Netherlands Authority for Consumers and Markets (ACM) discovered that the e-commerce website Wish (a major American platform that sells items online such as fashion, home decor, and electronics to consumers in several European countries, among other regions) was applying first-degree personalisation to prices by offering consumers different prices based on their purchasing behaviour and location, among other factors. The website informed the public in an investor brochure that they use first-degree price personalisation in the United States, but this practice was not clearly disclosed on the website to consumers. Hence, consumers were not aware that they were being offered different prices. Upon request by the ACM, Wish informed the authority how their price personalisation work. ACM concluded that these practices constituted a breach of the UCPD and requested Wish to clearly disclose price personalisation. As a result, Wish decided to stop the practice<sup>29</sup>.

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<sup>29</sup> ACM, 2022, *Following ACM actions, Wish bans fake discounts and blocks personalised pricing*. Available at: <https://www.acm.nl/en/publications/following-acm-actions-wish-bans-fake-discounts-and-blocks-personalized-pricing>.



Table 2: Overview of cases and reports in which first-degree personalisation was not confirmed

Study	Year	Context	Conclusions	Reference
Office of Fair Trading	2012	UK	Traders were shown to try to identify different sorts of customer and segment their customer base into fine groups. No first-degree personalisation practices discovered.	Office of Fair Trading, 2013, <i>Personalised pricing</i> .
CNIL-DGCCRF	2014	France E-commerce websites	No evidence of first-degree price personalisation based on IP addresses.	CNIL-DGCCRF, 2014, « <i>IP Tracking</i> »: conclusions de l'enquête conjointe menée par la CNIL et la DGCCRF.
Ipsos, London Economics and Deloitte	2018	Czech Republic, Germany, Spain, France, Poland, Romania, Sweden, the UK TVs, sport shoes, hotels rooms and airline tickets sectors	No evidence for first-degree price personalisation found in a mystery shopping experiment on 160 websites.	Ipsos, London Economics and Deloitte, 2018, <i>Consumer market study on online market segmentation through personalised pricing/offers in the European Union, Study for the European Commission</i> .
Vissers et al.	2014	Belgium Airline tickets	No evidence for first-degree price personalisation found in a longitudinal experiment with 66 simulated user profiles searching for tickets on 25 airlines twice a day. Evidence for dynamic pricing.	Vissers, T., et al., 2014, <i>Crying wolf? On the price discrimination of online airline tickets</i> , in: 7th Workshop on Hot Topics in Privacy Enhancing Technologies (HotPETs 2014).
Poort and Zuiderveen Borgesius	2019	Netherlands	In a consumer survey, 56.9% of respondents indicated they never experienced online price personalisation.	Poort, J. and Zuiderveen Borgesius, F., 2019, <i>Does everyone have a price? Understanding people's attitude towards online and offline price discrimination</i> , Internet Policy Review 8.

Source: Authors' own elaboration.

Table 3: Overview of cases and reports in which first-degree personalisation was confirmed

Study	Year	Context	Conclusions	Reference
BBC	2000	UK DVD prices	Evidence that Amazon charged more to existing customers (identified based on an Amazon cookie on their device) than to potential customers (who did not have the cookie on their device).	BBC News, 2000, <i>Amazon's old customers 'pay more'</i> .
Valentino-DeVries et al.	2012	US E-commerce websites	Evidence for personalisation of prices based on consumer location (collected through the IP address of their computer).	Valentino-DeVries, et al., 2012, <i>Websites Vary Prices, Deals Based on Users' Information</i> , Wall Street Journal of 24 October 2012.
SVRV	2014	Germany E-commerce websites	Evidence for price personalisation based on device used (a higher price when using a mobile device compared to a desktop).	Schleusener, M., and Hosell, S., 2016, <i>Expertise zum Thema „Personalisierte Preisdifferenzierung im Online-Handel“</i> (Sachverständigenrat für Verbraucherfragen beim Bundesminister für Justiz und Verbraucherschutz).
AK	2019	Austria E-commerce websites	Evidence for price personalisation based on device used (prices differed between computers and mobile devices in different directions depending on the website)	Delapina, M., 2019, <i>AK-Test. Preisdifferenzierung im Online-Handel.</i>
ACM	2022	Netherlands E-commerce website	Evidence for price personalisation based on consumers' purchase behaviour and location, among other factors. First-degree personalisation was not disclosed to consumers.	ACM, 2022, <i>Following ACM actions, Wish bans fake discounts and blocks personalised pricing.</i>

Source: Authors' own elaboration.

Finally, personalised discounts have been introduced by retailers in various EU Member States. For example, the supermarket chain Lidl has introduced a loyalty scheme that offers registered customers discounted prices based on their past shopping behaviour, which is tracked in an app. The personalised discounts are now available in several EU Member States and in the US<sup>30</sup>. Similar practices have been common in Dutch supermarkets (for example, Albert Heijn) for almost ten years<sup>31</sup>. These examples show that personalising pricing both at individual and group level is certainly technically possible and already being applied in some areas.

Interviewees from traders' organisations argued that price personalisation was far too complicated and therefore too expensive, especially for small and medium-sized enterprises (SMEs), and would not occur for that reason. Moreover, traders would shy away from personalising prices for fear of adverse reactions of customers (see also section 2.3. below).

Other interviewed parties argued that the difficulty in detecting personalised pricing may be the reason for the low number of cases in which price personalisation was detected. In situations where there are no transparency mechanisms and prices are personalised for individual consumers, it is challenging to detect such practices. Detection of personalised prices often relies on information provided by traders (as it was the case with the Wish platform) or small-scale experiments where a limited number of devices or profiles is used to compare prices (for example, the investigation by AK). However, such small case experiments often cannot detect personalisation patterns. More effective large-scale experiments such as simulating users' searches are time- and resource-consuming. As Poort and Zuiderveen Borgesius note, price personalisation may also occur without being noticed, as sellers can adjust prices in ways that are harder to detect, such as when a trader advertises one price on its website but e-mails each consumer a personalised discount coupon<sup>32</sup> or the coupon appears as a pop-up on the website, as one consumer organisation has observed. All in all, experts expect that price personalisation will become more common as access to data-driven technology advances<sup>33</sup>.

## 2.2. Benefits and costs of price personalisation

Price personalisation results in different benefits-costs trade-offs for traders and for consumers. In this section, we summarise findings from literature as well as information gathered in the expert interviews.

### 2.2.1. Traders' benefits and costs

Price personalisation relies on offering different prices to individual consumers (first-degree personalisation) or groups of consumers (third-degree personalisation). From the perspective of traders, there is little incentive to personalise prices in a way that customers are offered a product at their personally best price, as this could lead to a loss of revenue. On the contrary, personalisation usually involves offering consumers with a higher willingness to pay a higher price than the regular

<sup>30</sup> Rode, J., and Rennack, S., 2019, *Lidl rollt Loyalty-System in Europa aus*, Lebensmittelzeitung. Available at: <https://www.lebensmittelzeitung.net/tech-logistik/nachrichten/Personalisierte-Angebote-Lidl-rollt-Loyalty-System-in-Europa-aus-139713?crefresh=1>.

<sup>31</sup> Bakhuis Roozeboom, F., 2013, *AH personaliseert bonuskaart? It's about bloody time*, Adformatie. Available at: <https://www.adformatie.nl/customer-experience/ah-personaliseert-bonuskaart-its-about-bloody-time>.

<sup>32</sup> Poort, J., and Zuiderveen Borgesius, F., 2019, *Does everyone have a price? Understanding people's attitude towards online and offline price discrimination*, Internet Policy Review 8. Available at: <https://policyreview.info/articles/analysis/does-everyone-have-price-understanding-peoples-attitude-towards-online-and-offline>.

<sup>33</sup> See Wagner, G., and Eidenmüller, H., 2019, *In der Falle der Algorithmen? Abschöpfen von Konsumentenrente, Ausnutzen von Verhaltensanomalien und Manipulation von Präferenzen: Die Regulierung der dunklen Seite personalisierter Transaktionen*, Zeitschrift für die gesamte Privatrechtswissenschaft, 220.

price. This allows traders to maximise their profits<sup>34</sup>. Personalising prices for consumers with a willingness to pay lower than the regular price can also be profitable for traders. In that case, the profit per product will decrease, but the lower price makes the product attractive to a larger group of consumers. This enlarges the target group and, overall, leads to increased profits<sup>35</sup>.

At the same time, the interviewed traders' associations mentioned that the possible costs of personalisation often prevent traders from applying it in practice. First, both academic research<sup>36</sup> and interviewees argue that SMEs in particular may lack sufficient data or technology to adapt prices with enough precision. The technology requires additional investments while the potential increase in profit margins is rather uncertain. Second, some traders may refrain from price personalisation due to a fear of negative consumers' reactions. Consumer backlash was the second most common reason mentioned by traders' associations and is generally known to discourage retailers from applying personalisation in different contexts<sup>37</sup>. Indeed, as shown below in section 2.3., consumer attitudes towards personalised pricing tend to be rather negative, which may be anticipated by traders. Finally, traders' associations mention how personalised pricing may undermine trust between consumers and traders. This can be explained by the implicit social contract – a hypothetical contract that people feel they conclude when they share their personal information with online traders<sup>38</sup>. When this contract is breached, for example when consumers' personal data is used for adjusting the price they pay without them being aware of this possibility, this may undermine trust in the trader. According to traders' associations, some traders would hence refrain from processing consumer data for price personalisation purposes to protect the trust they have gained.

### 2.2.2. Consumers' benefits and costs

In general, the impact of price personalisation on consumers is expected to be substantial: personalisation impacts directly on consumers' purchase decisions as the price is the main consideration for many consumers when buying goods and services online<sup>39</sup>. On the one hand, this influence can be beneficial for consumers. They can benefit from such a data-driven approach because they are only exposed to relevant information and offers that match their needs and preferences<sup>40</sup>. In addition, price personalisation is a technological innovation that contributes to the consumers' buying experience, and innovations are known to have economic and social advantages<sup>41</sup>. Furthermore, consumers with a lower willingness to pay have the opportunity to purchase a product at a lower price that they can afford. As a result, these consumers can buy products that they could not or would not buy at the regular price<sup>42</sup>. This gives certain consumer groups, especially marginalised ones, access to a wider range of products.

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<sup>34</sup> Bulten, M.E., 2018, *Online prijspersonalisatie in het Nederlandse consumentenrecht*, Tijdschrift voor Consumentenrecht en handelspraktijken.

<sup>35</sup> Bourreau, M., and de Streeck, A., 2018, *The Regulation of Personalised Pricing in the Digital Era*, SSRN Electronic Journal. Available at: <https://ssrn.com/abstract=3312158>.

<sup>36</sup> Poort, J., and Zuiderveen Borgesius, F., 2021, *Personalised pricing: The demise of the fixed price?*, in Kohl, U. and Eisler, J. (eds), *Data-Driven Personalisation in Markets, Politics and Law*, Cambridge University Press.

<sup>37</sup> Strycharz, J., et al., 2019, *Contrasting perspectives – practitioner's viewpoint on personalised marketing communication*, *European Journal of Marketing* 53.

<sup>38</sup> Fogel, J., and Nehmad, E., 2009, *Internet social network communities: Risk taking, trust, and privacy concerns*, *Computers in human behavior* 25.

<sup>39</sup> ACM. 2020, *Leidraad Bescherming van de online consument: grenzen aan online beïnvloeding*, Available at: <https://www.acm.nl/sites/default/files/documents/2020-02/acm-leidraad-bescherming-online-consument.pdf>.

<sup>40</sup> Strycharz, J., et al., 2019, *Consumer view on personalized advertising: Overview of self-reported benefits and concerns*, *Advances in advertising research* X.

<sup>41</sup> Mak, V., 2018, *Gedachten bij een 'gepersonaliseerd' consumentenrecht*, Tijdschrift voor Consumentenrecht 6.

<sup>42</sup> Siciliani, P., 2019, *Tackling Anticompetitive Parallel Conduct under Personalized Pricing*, *World Competition Law and Economics Review* 42.

Finally, some argue that price personalisation can increase competition as it allows traders to provide a competitive offer to consumers, increasing competition between traders. In general, then, increased competition has a positive effect on consumer welfare<sup>43</sup>. However, the impact of price personalisation on the average price of goods and services, and thereby on total consumer welfare, is not always clear<sup>44</sup>. While increased competition may be advantageous to consumers, price personalisation may lead to a net welfare loss, if the loss for consumers who pay higher prices (based on their inferred higher willingness to pay) is greater than the net gain by traders<sup>45</sup>.

On the other hand, research also names a number of negative effects of price personalisation on consumers that were also emphasised by consumer organisations in the expert interviews. First, while personalised pricing has the potential to expand the market for some customers with a low willingness to pay, it may also result in the so-called appropriation effect<sup>46</sup>. This effect assumes that the trader charges consumers with a high willingness to pay higher personalised prices than the regular prices. Those consumers are then worse off with personalised prices. The more personalised a price is (first- vs. third-degree personalisation), the stronger this effect is. Poort and Zuiderveen Borgesius give the example of student discounts<sup>47</sup>. Traditionally an example of third-degree personalisation, student prices could become more differentiated with the current technology. Within the student population, there may be poorer and richer students. Personalisation techniques allow traders to further differentiate within the student population, based on, for instance, the neighbourhood where they live in or the type of device they use. Hence, potentially richer students can be classified as having a higher willingness to pay and be offered a premium price. Furthermore, as consumer organisations noted in the interviews, it is possible that the appropriation effect would lead to a higher regular price, as setting an initial higher regular price would allow discounts to be offered to all consumers, including those with a higher willingness to pay.

Furthermore, consumer organisations mention the burden that personalised pricing may create for consumers searching for an offer. In the past, research has discussed so-called obfuscation strategies that traders can use to increase the consumers' search costs<sup>48</sup>. In the context of personalised pricing, different prices offered based on consumers' data may make it difficult for consumers to compare prices across traders, which may increase their search costs. Whether personalised prices lead to higher prices depends on the consumers' ability to compare prices across different channels or sources<sup>49</sup>.

Finally, depending on the transparency of the practice, price personalisation can result in additional costs for consumers. Price personalisation with low transparency can contribute to information asymmetry and inequalities. Traders use different techniques that allow them to collect personal data by consumers and to gain insights into their willingness to pay. At the same time, these consumers often have little insight into how their data is collected and that it can be used for personalisation

<sup>43</sup> Bulten, M.E., 2018, *Online prijspersonalisatie in het Nederlandse consumentenrecht*, Tijdschrift voor Consumentenrecht en handelspraktijken.

<sup>44</sup> Armstrong, M., 2006, *Recent developments in the economics of price discrimination* in Blundell, R., Newey, W. and Persson, T. (eds), *Advances in economics and econometrics, Theory and applications: Ninth World Congress*. Available at: <https://discovery.ucl.ac.uk/id/eprint/14558>.

<sup>45</sup> Poort, J., and Zuiderveen Borgesius, F., 2021, *Personalised pricing: The demise of the fixed price?*, in: Kohl, U. and Eisler, J. (eds), *Data-Driven Personalisation in Markets, Politics and Law*, Cambridge University Press.

<sup>46</sup> Bourreau, M., et al., 2017. *Big Data and Competition Policy: Market power, personalised pricing and advertising*. Available at: [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2920301](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2920301).

<sup>47</sup> Poort, J., and Zuiderveen Borgesius, F., 2021, *Personalised pricing: The demise of the fixed price?*, in Kohl, U. and Eisler, J. (eds), *Data-Driven Personalisation in Markets, Politics and Law*, Cambridge University Press.

<sup>48</sup> Ellison, G., and Ellison, S., 2009, *Search, Obfuscation, and Price Elasticities on the Internet*, *Econometrica* 77.

<sup>49</sup> Bourreau, M., et al., 2017. *Big Data and Competition Policy: Market power, personalised pricing and advertising*. Available at: [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2920301](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2920301).

purposes<sup>50</sup>. This also applies to the personalised prices themselves – without effective disclosures consumers only see the prices shown to them, without additional information on how the price was decided or how it compares to regular prices. This results in an information asymmetry: traders have a much better picture of the demand curve and price distribution than consumers. Consumers remain unaware of how the prices displayed compare to the regular prices and are therefore unable to judge whether the personalised prices lead to an advantage or disadvantage<sup>51</sup>.

### 2.3. Consumer attitudes towards personalisation

Consumer attitudes towards personalisation are to a great extent dependent on the type of data used for it. Third-degree price personalisation – differentiating prices for different segments – is generally accepted among consumers. They are accustomed to this form of price personalisation because it has also been used offline, for example in the form of student or elderly discounts<sup>52</sup>. It is also important to note that when group-based prices and discounts are offered, consumers are generally informed about the parameters on which the price difference is based, and they know the regular price. The information asymmetry between traders and consumers is thus low.

A similar logic applies to second-degree personalisation – a study among Dutch consumers has shown that quantity discounts are generally considered acceptable. The authors explain that this acceptability is driven by the existence of a choice: ‘someone can decide to go for a quantity discount and buy several bottles of soda or a large bucket of popcorn’<sup>53</sup>.

In contrast, offering fully individualised prices (first-degree personalisation) is generally not acceptable to consumers. A survey among Dutch consumers has shown that more than 80% consider it to some extent unacceptable and unfair<sup>54</sup>. Similar findings were reported from the US, where 91% of respondents had a negative attitude towards supermarkets personalising prices to individual consumers and 64% responded negatively to the idea of individually personalised coupons<sup>55</sup>. Another study showed that consumers were concerned about the collection and processing of their personal data for price personalisation, which reduced their repurchase intentions<sup>56</sup>. Overall, empirical research shows that price personalisation at the individual level is seen as not acceptable, regardless of whether prices are lower or higher. The interviewees from traders’ associations share these findings and confirm that there are no differences between consumers from different parts of the EU in this respect.

<sup>50</sup> Smit, E.G., et al., 2014, *Understanding online behavioural advertising: User knowledge, privacy concerns and online coping behaviour in Europe*, *Computers in Human Behavior* 32.

<sup>51</sup> Bulten, M.E., 2018, *Online prijspersonalisatie in het Nederlandse consumentenrecht*, *Tijdschrift voor Consumentenrecht en handelspraktijken*.

<sup>52</sup> Poort, J., and Zuiderveen Borgesius, F., 2019, *Does everyone have a price? Understanding people's attitude towards online and offline price discrimination*, *Internet Policy Review* 8. Available at: <https://policyreview.info/articles/analysis/does-everyone-have-price-understanding-peoples-attitude-towards-online-and-offline>.

<sup>53</sup> Ibid.

<sup>54</sup> Ibid.

<sup>55</sup> Turow, J., et al., 2005, *Open to exploitation: America's shoppers online and offline*, *Departmental Papers (ASC)*. Available at: [https://repository.upenn.edu/cgi/viewcontent.cgi?article=1035&context=asc\\_papers](https://repository.upenn.edu/cgi/viewcontent.cgi?article=1035&context=asc_papers).

<sup>56</sup> Victor, V., et al., 2019, *Consumer Attitude and Reaction towards Personalised Pricing in the E-Commerce Sector*, *Journal of Management and Marketing Review* 4.

## 2.4. Transparency of personalisation practices

Transparency is one of the key factors contributing to consumers' acceptance of price personalisation. They are generally more positive towards the practice when it is more transparent. This fact drives acceptance of second-degree personalisation in form of quantity discounts and third-degree personalisation in form of student discounts<sup>57</sup>.

Regarding the practical implementation of transparency mechanism, de Streel and Jacques have identified three types of information that can be disclosed:

1. Informing the consumer *that* the price is personalised (mere fact of personalisation);
2. Informing the consumer about *how* the price is personalised (parameters used for personalisation); and
3. Informing the consumer about how the price they are offered *compares* to prices offered to others or to the regular price (comparison between prices)<sup>58</sup>.

Research specifically into the effects of price personalisation disclosures is scarce. Experimental research that manipulated the amount of information in personalised pricing disclosures showed that vulnerable groups can benefit most from rich disclosures. More specifically, consumers who were economically inactive, in a difficult financial situation or had low experience with online transactions showed the highest increase in awareness from disclosures. When participants were shown a personalised price, only 28% of respondents over the age of 65 reported awareness of personalisation in the low transparency communication treatment, while 44% did so in the high transparency communication treatment<sup>59</sup>.

At the same time, while transparency can contribute to better consumers' attitudes and potentially enable consumers to make an informed decision about accepting a personalised price, it does not guarantee the effectiveness and meaningfulness of these mechanisms. For disclosures to fulfil their role, consumers must also be motivated to read them, and once they do so, they need to be able to comprehend them. This means that both consumer-related factors (motivation, knowledge, biases) and disclosure-related factors (informativeness, completeness and comprehensiveness) impact the effectiveness of personalisation disclosures.

It can therefore be concluded that:

First, as shown above (section 1.2.), personalised pricing is a complex phenomenon involving a magnitude of consumer data and different algorithms used to process it. The algorithms used for personalisation purposes are highly complex and increasingly able of self-learning. Regarding consumer data, the algorithms do not only rely on individual-level data (such as the device used), but also on aggregated inferences on the customers' willingness to pay. Such inferences cannot be directly linked to specific characteristics of a particular consumer, but they provide accurate information about the behaviour of all consumers<sup>60</sup>. In fact, professionals in the industry disagree to what extent accurate

<sup>57</sup> Poort, J., and Zuiderveen Borgesius, F., 2021, *Personalised pricing: The demise of the fixed price?*, in: Kohl, U. and Eisler, J. (eds), *Data-Driven Personalisation in Markets, Politics and Law*, Cambridge University Press.

<sup>58</sup> de Streel, A., and Jacques, F., 2019, *Personalised Pricing and EU Law*. Available at: <http://hdl.handle.net/10419/205221>.

<sup>59</sup> Ipsos, London Economics and Deloitte, 2018, *Consumer market study on online market segmentation through personalised pricing/offers in the European Union*, Study for the European Commission. Available at : [https://ec.europa.eu/info/sites/default/files/aid\\_development\\_cooperation\\_fundamental\\_rights/aid\\_and\\_development\\_by\\_topic/documents/synthesis\\_report\\_online\\_personalisation\\_study\\_final\\_0.pdf](https://ec.europa.eu/info/sites/default/files/aid_development_cooperation_fundamental_rights/aid_and_development_by_topic/documents/synthesis_report_online_personalisation_study_final_0.pdf).

<sup>60</sup> Hannak, A., et al., 2014, *Measuring Price Discrimination and Steering on E-commerce Web Sites*, in: *Proceedings of the 2014 Conference on Internet Measurement Conference*, 305-318. Available at: <https://dl.acm.org/doi/abs/10.1145/2663716.2663744>.

information can be provided about inferences and their exact sources due to the complexity of algorithms<sup>61</sup>.

Second, not only challenges stemming from the complexity of technology behind personalisation but also biases of consumers regarding individual information processing impact on the effectiveness of disclosures<sup>62</sup>. In this context, when and where the information is offered is central to the effectiveness of disclosures. Regarding timing, consumers often get the information about data collection and processing for personalisation when they do not need it (for example accessing a web shop when their incentive is to complete the action). At the moment when consumers receive the information, their objective is not to understand the personalisation practices, but to access the information or services that ask them to share their personal data and explain the aims. This situation leads to the so-called 'present bias', meaning that individuals disregard future costs when they can choose immediate gratification<sup>63</sup>.

Looking at disclosures of other types of data collection and processing for personalisation, the notices that consumers see on different websites vary greatly in terms of the user interface, their functionality, content and wording. For example, in the case of cookie notices, some only display information to visitors, while others include additional information and complex choices<sup>64</sup>. Research on example data collection disclosures has shown that their complexity decreases their effectiveness in informing consumers<sup>65</sup>. Furthermore, the wording may impact the effect the disclosure has on consumers. For data collection disclosures, positive framing leads to a more positive attitude and stronger intention to use the services of the trader<sup>66</sup>.

All in all, *what information* is provided, *where* it is provided and *how* it is provided all impact the effectiveness of personalisation disclosures for consumers. Empirical research on broader personalisation issues suggests that specific challenges need to be overcome. These challenges have been incorporated in recommendations in chapter 4 below.

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<sup>61</sup> Jesus, P., et al., 2014, *A survey of distributed data aggregation algorithms*, IEEE Communications Surveys & Tutorials 17. Available at: <https://ieeexplore.ieee.org/stamp/stamp.jsp?arnumber=6894544>.

<sup>62</sup> Extensive analysis of such biases can for example be found in the works of Zuiderveen Borgesius or Acquisti. For example: Acquisti, A., et al., 2015, *Privacy and human behavior in the age of information*, Science 347, 509 ff.; Zuiderveen Borgesius, F., 2014, *Behavioural Sciences and the Regulation of Privacy on the Internet*. Available at: [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2513771](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2513771).

<sup>63</sup> Acquisti, A., and Grossklags, J., 2005, *Privacy and rationality in individual decision making*. IEEE security & privacy 3.

<sup>64</sup> Degeling, M., et al., 2018, *We value your privacy ... now take some cookies: Measuring the GDPR's impact on web privacy*. Available at: <https://arxiv.org/abs/1808.05096>.

<sup>65</sup> For example, Cranor, L.F., 2012, *Necessary but not sufficient: Standardized mechanisms for privacy notice and choice*, Journal on Telecommunications and High Technology Law 10.

<sup>66</sup> Adjerid, I., et al., 2019, *Choice architecture, framing, and cascaded privacy choices*. Management Science 65.



### 3. CURRENT EU LAW ON PERSONALISED PRICING

#### KEY FINDINGS

Apart from certain universal service obligations, personalised pricing is, in principle, allowed under EU law, as long as traders do not use personal characteristics in breach of anti-discrimination laws.

Consent requirements may stem from data protection law. Article 22(1) of the General Data Protection Regulation (GDPR) can be interpreted as prohibiting personalised pricing without the consumer's consent, but the interpretation of this provision is highly controversial. Case law is not available. The GDPR also requires traders to inform consumers about automated decision-making, but not at the time of purchase.

New Article 6(1)(ea) of the Consumer Rights Directive (CRD) requires traders to inform consumers if they apply personalised pricing based on automated decision-making, but the scope of application of this provision is limited. The current proposal for a new Consumer Credit Directive (CCD) provides for a similar rule, and arguably, an equivalent information obligation can be derived from Article 7(1) of the Unfair Commercial Practices Directive (UCPD) but this has never been tested in court. As it stands, this information obligation is not sufficiently effective.

In this chapter we analyse current EU consumer law<sup>67</sup> with relevance to personalised pricing. This includes both legal provisions that explicitly regulate personalised pricing and general legal provisions that can be applied to personalised pricing. The main focus is on the newly introduced information obligation under Article 6(1)(ea) of the Consumer Rights Directive (CRD)<sup>68</sup>.

#### 3.1. Equal pricing in the law of services of general interest

Personalisation of prices is obviously prohibited where the law requires traders to adopt an equal pricing strategy.

EU secondary law enshrines the principle of equality specifically for universal service obligations. For example, the basic service under the Telecommunications Universal Service Directive<sup>69</sup> was to be made available at a base tariff that should be equal to all consumers of a specific area, and Article 85(2) of its successor, the European Electronic Communications Code<sup>70</sup>, allows Member States to require universal service providers to apply common tariffs, including geographic averaging, throughout the territory. Article 5(1) of the Postal Services Directive<sup>71</sup> states that universal service means an identical service to users under comparable conditions. Under Article 27(1) of the Electricity Market Directive<sup>72</sup>, all household customers enjoy universal service, i.e. the right to be supplied with electricity of a specified

<sup>67</sup> For an analysis of the competition law relevance of personalised pricing see, for example, Paal, B., 2019, *Missbrauchstatbestand und Algorithmic Pricing*, Gewerblicher Rechtsschutz und Urheberrecht; Botta, M., and Wiedemann, K., 2020, *To discriminate or not to discriminate? Personalised pricing in online markets as exploitative abuse of dominance*, *European Journal of Law and Economics* 50.

<sup>68</sup> Directive 2011/83/EU of the European Parliament and of the Council of 25 October 2011 on consumer rights, [2011] OJ L 304/64.

<sup>69</sup> Directive 2002/22/EC of the European Parliament and of the Council of 7 March 2002 on universal service and users' rights relating to electronic communications networks and services (Universal Service Directive), [2002] OJ L 108/51.

<sup>70</sup> Directive (EU) 2018/1972 of the European Parliament and of the Council of 11 December 2018 establishing the European Electronic Communications Code, [2018] OJ L 321/36.

<sup>71</sup> Directive 97/67/EC of the European Parliament and of the Council of 15 December 1997 on common rules for the development of the internal market of Community postal services and the improvement of quality of service, [1998] OJ L 15/14.

<sup>72</sup> Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity, [2019] OJ L 158/125.

quality within their territory at competitive, easily and clearly comparable, transparent and non-discriminatory prices.

All these rules exclude the personalisation of prices aiming at maximising the suppliers' profits.

### 3.2. Prohibited criteria under anti-discrimination laws

Anti-discrimination laws do not exclude personalised pricing, but they do limit the way in which personalised pricing can be performed in that they prohibit the inclusion of certain criteria in the personalisation process.

Discrimination on such grounds 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 is prohibited under Article 21 of the Charter of Fundamental Rights, and the Court of Justice of the European Union (CJEU) has held in the *Egenberger* case that prohibition of discrimination has horizontal effect between private parties<sup>73</sup>.

More specific provisions prohibiting discrimination can be found in EU secondary law, in different forms. For example, Article 15 of the Payment Accounts Directive<sup>74</sup> in relation to basic bank accounts refers to the grounds mentioned in the Charter while adding nationality and place of residence.

Other provisions apply to the supply of goods and services generally. Thus, discrimination on grounds of racial or ethnic origin is prohibited, in relation to the supply of goods and services, by Directive 2000/43/EC implementing the principle of equal treatment between persons irrespective of racial or ethnic origin<sup>75</sup>, whereas discrimination on grounds of sex is prohibited by Directive 2004/113/EC implementing the principle of equal treatment between men and women in access to and supply of goods and services<sup>76</sup>. National legislators have extended the prohibition of discrimination to other grounds. For example, the German legislator has extended the scope of application of (the implementation of) Directive 2004/113/EC to religion, disability, age and sexual identity<sup>77</sup>.

Clearly, all these prohibitions also apply where discrimination is hidden in an algorithm<sup>78</sup>. They therefore prohibit the personalisation of prices on the basis of the grounds mentioned, even if these are only some of many criteria applied. Obviously, differences in the consumers' individual willingness to pay do not constitute a justification for different treatment due to the criteria mentioned above<sup>79</sup>.

### 3.3. Consent requirements under data protection law

Meaningful personalisation of prices relies on immense amounts of consumers' personal data. Therefore, data protection law appears to be a relevant area of law in this context<sup>80</sup>. Data protection law, however, mainly deals with the acquisition and processing of personal data and less with its use.

<sup>73</sup> CJEU, 17 April 2018, Case C-414/16 *Vera Egenberger v Evangelisches Werk für Diakonie und Entwicklung eV*, ECLI:EU:C:2018:257, para. 76; confirmed by CJEU, 6 November 2018, joined Cases C-569/16 and C-570/16 *Stadt Wuppertal v Maria Elisabeth Bauer and Volker Wilmeroth v Martina Broßonn*, ECLI:EU:C:2018:871, paras 85 ff.

<sup>74</sup> Directive 2014/92/EU of the European Parliament and of the Council of 23 July 2014 on the comparability of fees related to payment accounts, payment account switching and access to payment accounts with basic features, [2014] OJ L 257/214.

<sup>75</sup> [2000] OJ L 180/22, in particular Article 3(1)(h).

<sup>76</sup> [2004] OJ L 373/37.

<sup>77</sup> See § 19 para. 1 *Allgemeines Gleichbehandlungsgesetz* (General Act on Equal Treatment).

<sup>78</sup> See Genth, S., 2016, *Dynamische Preise: ein Gewinn für Handel und Verbraucher*, Wirtschaftsdienst 96; Sachverständigenrat für Verbraucherfragen, 2018, *Verbrauchergerechtes Scoring*. Available at: [https://www.svr-verbraucherfragen.de/wp-content/uploads/SVRV\\_Verbrauchergerechtes\\_Scoring.pdf](https://www.svr-verbraucherfragen.de/wp-content/uploads/SVRV_Verbrauchergerechtes_Scoring.pdf); Hacker, P., 2018, *Teaching fairness to artificial intelligence: Existing and novel strategies against algorithmic discrimination under EU law*, Common Market Law Review 55.

<sup>79</sup> See also Tillmann, T.J., and Vogt, V., 2018, *Personalisierte Preise im Big-Data-Zeitalter*, Verbraucher und Recht 2018.

<sup>80</sup> See also Linderkamp, J., 2020, *Der digitale Preis – eine automatisierte Einzelfallentscheidung?*, Zeitschrift für Datenschutz.

Nevertheless, data protection law offers two provisions that may disallow certain types of price personalisation if the 'data subject' (here: the consumer) has given his or her consent. These concern 'sensitive data' and 'automated decisions'.

### 3.3.1. 'Sensitive data'

According to Article 9(1) of the General Data Protection Regulation<sup>81</sup> (GDPR), processing of special categories of data is prohibited and can therefore not be used for the personalisation of prices either. Such 'sensitive data' include personal data revealing racial or ethnic origin, political opinions, religious or philosophical beliefs, or trade union membership, as well as genetic data, biometric data for the purpose of uniquely identifying a natural person, data concerning health and data concerning a natural person's sex life or sexual orientation.

An exemption applies, according to Article 9(2)(a) GDPR, where the data subject (the consumer) has given explicit consent for the specific purpose, in this case the personalisation of prices.

### 3.3.2. 'Automated decisions'

According to Article 22(1) GDPR, 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. The basic aim of this provision is related to human dignity and fundamental rights: the exercise of fundamental freedoms by human beings should not be subjected to the decision of an algorithm; instead, a decision with legal effects should always be made by a natural person<sup>82</sup>. Again, Article 22(2)(c) GDPR allows for decisions based solely on automated processing with the data subject's consent.

Whereas the personalisation of prices clearly involves a decision that is based on automated processing, there are several elements of Article 22(1) GDPR that are discussed controversially in academic writing and that also seem to be interpreted differently by data protection authorities<sup>83</sup>.

First, does the determination of a price produce legal effects or does it similarly significantly affect the data subject? And second, when is a decision 'solely' based on automated processing?

#### a. Legal effects

An offer is by most authors regarded as producing legal effects<sup>84</sup>. Due to the lack of harmonisation of general contract law, the precise effects differ from one Member State to another<sup>85</sup>, but generally speaking an offer can be accepted, which will then bring a contract into being at the personalised price.

In the same way, it should not matter whether the 'offer' on a website is considered an offer in its technical sense or rather an invitation to treat, on the basis of which the consumer then makes an offer.

<sup>81</sup> 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, [2006] OJ L 119/1.

<sup>82</sup> See, for example, Marsch, N., 2018, *Das europäische Datenschutzrecht*, Mohr Siebeck; Scholz, P., 2019, *DSVGO Art. 22 Automatisierte Entscheidungen im Einzelfall einschließlich Profiling*, in: Simitis, S., Hornung, G. and Spiecker, I. (eds), *Datenschutzrecht, Nomos*, para. 3.

<sup>83</sup> See also Linderkamp, J., 2020, *Der digitale Preis – eine automatisierte Einzelfallentscheidung?*, *Zeitschrift für Datenschutz*.

<sup>84</sup> See Scholz, P., 2019, *DSVGO Art. 22 Automatisierte Entscheidungen im Einzelfall einschließlich Profiling*, in: Simitis, S., Hornung, G., and Spiecker, I. (eds), *Datenschutzrecht, Nomos*, para. 34. See also the opinion of the Belgian Committee for personal data protection (Commission de la protection de la vie privée), 2012, Avis no. 35/2012 of 21 November 2012, para. 80. Available at: <https://www.autoriteprotectiondonnees.be/publications/avis-n-35-2012.pdf>. This is also the view of representatives from two traders' associations. Deviating, however, Hofmann, F., and Freiling, F., 2020, *Personalisierte Preise und das Datenschutzrecht*, *Zeitschrift für Datenschutz*; von Lewinski, K., 2022, *DS-GVO Art. 22 Automatisierte Entscheidungen im Einzelfall einschließlich Profiling* in: Wolff, H.A., and Brink, S. (eds), *BeckOK Datenschutzrecht*, 41st ed., C.H. Beck, para. 35.

<sup>85</sup> For example, in Germany, offers are binding (§ 145 of the German Civil Code) whereas in common law, offers can be withdrawn at any time before they are accepted.

In both situations, if following the offer the contract is concluded, the personalised price will be the contractually agreed price, as there will be no human intervention that may adjust the price. The conclusion of the contract will only be stopped if the product is no longer available, but not due to disagreement over the (personalised) price<sup>86</sup>.

#### b. Affecting the data subject similarly significantly

If one takes a different view on whether an 'offer' on internet produces legal effects, then the personalisation of such an offer may at least 'affect the data subject similarly significantly' in the terms of Article 22(1) GDPR<sup>87</sup>. However, there may be a difference between the two, and again this is matter of controversy. Some authors argue that the notion of 'legal effects' includes positive and negative legal effects<sup>88</sup>. Thus, even an automatically generated discount would be covered by Article 22 GDPR. Others, however, consider only negative legal effects to be covered by the scope of application of Article 22 GDPR<sup>89</sup>.

In contrast, a decision that 'similarly significantly affects the data subject' is generally understood to have to *negatively* affect the data subject. This would cover a higher price, or the unavailability of a discount that is granted to other consumers<sup>90</sup> but not a discount itself<sup>91</sup>. It should be noted though that the exact meaning of this criterion is discussed controversially as well. Whereas it would seem clear that any breach of anti-discrimination laws significantly affects the consumer who sees a thus personalised price<sup>92</sup>, some authors have argued that a significant effect arises only where the effect is of economic significance but not in the case of low-value products. Others see significance only when a specific vulnerability or an emergency is exploited<sup>93</sup>.

#### c. Solely based on automated processing

The precondition of the decision 'solely' being based on automated processing means that no meaningful human intervention takes place. Taking into consideration the purpose of this provision, it should be clear that not only the automated rejection of a credit application comes under Article 22 GDPR, but the same applies when an employee rejects that application because of the score. Only a new decision, which takes other factors into account, constitutes a relevant human intervention<sup>94</sup>.

<sup>86</sup> Tillmann, T.J., and Vogt, V., 2018, *Personalisierte Preise im Big-Data-Zeitalter*, Verbraucher und Recht, however, argue that such an invitation to treat does not produce legal effects.

<sup>87</sup> See, for example, Scholz, P., 2019, *DSVGO Art. 22 Automatisierte Entscheidungen im Einzelfall einschließlich Profiling*, in: Simitis, S., Hornung, G. and Spiecker, I. (eds), *Datenschutzrecht, Nomos*, para. 36.

<sup>88</sup> See, for example, Moos, F., and Rothkegel, T., 2016, *Nutzung von Scoring-Diensten im Online-Versandhandel*, *Zeitschrift für Datenschutz* (concerning the predecessor provision of § 6a German Federal Data Protection Act).

<sup>89</sup> See, for example, von Lewinski, K., 2022, *DS-GVO Art. 22 Automatisierte Entscheidungen im Einzelfall einschließlich Profiling* in: Wolff, H.A., and Brink, S. (eds), *BeckOK Datenschutzrecht*, 41st ed., C.H. Beck, para. 33; Kumkar, L.K., and Roth-Isigkeit, D., 2022, *Erklärungspflichten bei automatisierten Datenverarbeitungen nach der DSGVO*, *Juristenzeitung*.

<sup>90</sup> See Scholz, P., 2019, *DSVGO Art. 22 Automatisierte Entscheidungen im Einzelfall einschließlich Profiling*, in: Simitis, S., Hornung, G., and Spiecker, I. (eds), *Datenschutzrecht, Nomos*, para. 36. For a different view, see von Lewinski, K., 2022, *DS-GVO Art. 22 Automatisierte Entscheidungen im Einzelfall einschließlich Profiling* in: Wolff, H.A. and Brink, S. (eds), *BeckOK Datenschutzrecht*, 41st ed., C.H. Beck, para. 39.

<sup>91</sup> See Linderkamp, J., 2020, *Der digitale Preis – eine automatisierte Einzelfallentscheidung?*, *Zeitschrift für Datenschutz*.

<sup>92</sup> See Moos, F. and Rothkegel, T., 2016, *Nutzung von Scoring-Diensten im Online-Versandhandel*, *Zeitschrift für Datenschutz*; Scholz, P., 2019, *DSVGO Art. 22 Automatisierte Entscheidungen im Einzelfall einschließlich Profiling*, in: Simitis, S., Hornung, G. and Spiecker, I. (eds), *Datenschutzrecht, Nomos*, para. 35; Tillmann, T.J., and Vogt, V., 2018, *Personalisierte Preise im Big-Data-Zeitalter*, Verbraucher und Recht; Linderkamp, J., 2020, *Der digitale Preis – eine automatisierte Einzelfallentscheidung?*, *Zeitschrift für Datenschutz*.

<sup>93</sup> See, for example, Linderkamp, J., 2020, *Der digitale Preis – eine automatisierte Einzelfallentscheidung?*, *Zeitschrift für Datenschutz*.

<sup>94</sup> See Article 29 Data Protection Working Party, 2018, *Guidelines on Automated individual decision-making and Profiling for the purposes of Regulation 2016/679*. Available at: <https://ec.europa.eu/newsroom/article29/redirection/document/49826>, at 22; Scholz, P., 2019, *DSVGO Art. 22 Automatisierte Entscheidungen im Einzelfall einschließlich Profiling*, in: Simitis, S., Hornung, G. and Spiecker, I. (eds), *Datenschutzrecht, Nomos*, paras 26 f.; Helfrich, M., 2018, *DSVGO Automatisierte Entscheidungen im Einzelfall einschließlich Profiling* in: Sydow, G. (ed.), *Europäische Datenschutzgrundverordnung*, 2nd ed., Nomos, paras 43 f.

### 3.3.3. Consent

Consent in the terms of Articles 9(2)(a) and 22(2)(c) GDPR would have to be informed consent, having regard also to Article 4(11) GDPR. Thus, the consumers (data subjects) would need to be informed that prices are personalised on the basis of their profile, and would have to explicitly agree to that<sup>95</sup>. They would also have to be informed about the relevant parameters that are taken into account<sup>96</sup>.

This is usually the case when it comes to loyalty programmes<sup>97</sup>. Instead, consent into 'personalised advertising' or 'personalised services' would not cover consent into personalised pricing, which is of an entirely different nature<sup>98</sup>. Moreover, the fact that consumers would give their informed consent to personalised pricing for the purposes of the exploitation of their willingness to pay is quite unlikely, given their general resistance against that strategy<sup>99</sup>.

In relation to the time of consent though, Article 22(2)(c) GDPR only requires the data controller to obtain that consent once. Thus, when actually purchasing a product the consumer may have long forgotten that he or she has agreed to personalised prices a long time ago.

### 3.3.4. Consequences of breach

Of course, a breach of data protection law can be sanctioned by the data protection authority using public law sanctions, such as fines; which is not of much help for the individual consumer. Individual consumers could, however, claim damages under Article 82 GDPR, a provision that is increasingly used now<sup>100</sup>. Certainly, charging a higher price on the basis of an automated decision without the consumer's consent to the personalisation of prices would qualify for a damage claim.

## 3.4. Information obligations

Information obligations may again stem from data protection law, and have recently been integrated in the CRD. Moreover, an information obligation is likely to form part of the revised Consumer Credit Directive (CCD) whose legislative procedure is currently ongoing.

### 3.4.1. Data protection law

If personalised pricing is considered as 'automated decision-making', which is the mainstream interpretation, then the data controller shall, according to Article 13(2)(f) GDPR, provide the data subject with the information about its existence and, at least in those cases, meaningful information about the logic involved, as well as the significance and the envisaged consequences of such processing for the data subject.

Meaningful information about the logic involved does not necessarily require a full explanation of the details, or even the disclosure of the algorithm, but it does require the trader to disclose the relevant criteria that are used. The 'envisaged consequences' would require the trader to explain that automated decision-making is used to calculate personalised prices, and that this could lead to a price that is higher or lower than the 'regular' price that is offered to an anonymous user. Notably, Article

<sup>95</sup> A pre-ticked box would not satisfy this requirement, see in particular CJEU, 1 October 2019, Case C-673/17 *Bundesverband der Verbraucherzentralen und Verbraucherverbände - Verbraucherzentrale Bundesverband e.V. v Planet49 GmbH*, ECLI:EU:C:2019:801.

<sup>96</sup> See Linderkamp, J., 2020, *Der digitale Preis – eine automatisierte Einzelfallentscheidung?*, Zeitschrift für Datenschutz.

<sup>97</sup> Ibid.

<sup>98</sup> See Zuiderveen Borgesius, F., and Poort, J., 2017, *Online Price Discrimination and EU Data Privacy Law*, Journal of Consumer Policy 40; Hofmann, F., and Freiling, F., 2020, *Personalisierte Preise und das Datenschutzrecht*, Zeitschrift für Datenschutz.

<sup>99</sup> See also Zuiderveen Borgesius, F., and Poort, J., 2017, *Online Price Discrimination and EU Data Privacy Law*, Journal of Consumer Policy 40.

<sup>100</sup> See, for example, OLG Koblenz, 18 May 2022 – 5 U 2141/21; LG Munich I, 9 December 2021 – 31 O 16606/20, Zeitschrift für Bank- und Kapitalmarktrecht 131.

13(2)(f) GDPR does not give the consumer a right to an explanation of the specific way in which the (personalised) price was calculated<sup>101</sup>.

The problem here is that this information must be provided at the time when personal data are obtained, thus not when it is actually used. And it will usually be provided in the trader's privacy notices that few consumers ever read. Thus, it is quite likely that this information goes unnoticed or may have been forgotten by the time when personalised prices are shown to the consumer.

### 3.4.2. Consumer Rights Directive

At EU level, personalised pricing was for the first time specifically addressed in the so-called Omnibus Directive<sup>102</sup>. Its Article 4(4)(a)(ii) inserted a new Article 6(1)(ea) into the CRD, which now reads:

'(1) Before the consumer is bound by a distance or off-premises contract, or any corresponding offer, the trader shall provide the consumer with the following information in a clear and comprehensible manner:

(...)

(ea) where applicable, that the price was personalised on the basis of automated decision-making

(...)'.

Recital (45) of the Omnibus Directive explains:

'Traders may personalise the price of their offers for specific consumers or specific categories of consumer based on automated decision-making and profiling of consumer behaviour allowing traders to assess the consumer's purchasing power. Consumers should therefore be clearly informed when the price presented to them is personalised on the basis of automated decision-making, so that they can take into account the potential risks in their purchasing decision. Consequently, a specific information requirement should be added to Directive 2011/83/EU to inform the consumer when the price is personalised, on the basis of automated decision-making. (...). This information requirement is without prejudice to Regulation (EU) 2016/679, which provides, inter alia, for the right of the individual not to be subjected to automated individual decision-making, including profiling.'

The provision was not part of the original proposal of the European Commission<sup>103</sup> but was included in the Omnibus Directive in the last stage of the negotiations between the European Parliament and the Council, as a reaction to public debate on personalised pricing<sup>104</sup>.

#### a. Scope of application

The scope of application of Article 6(1)(ea) CRD is, firstly, limited by the scope of application of that Directive in general. Article 3(3) CRD excludes numerous types of contracts from its scope of application, including, for example, social services such as childcare and long-term care, healthcare,

<sup>101</sup> For details, see Article 29 Data Protection Working Party, 2018, *Guidelines on Automated individual decision-making and Profiling for the purposes of Regulation 2016/679*. Available at: <https://ec.europa.eu/newsroom/article29/redirection/document/49826>; Wachter, S., et al., 2017, *Why a right to explanation of automated decision-making does not exist in the general data protection regulation*, 7(2) International Data Privacy Law.

<sup>102</sup> Directive (EU) 2019/2161 of the European Parliament and of the Council of 27 November 2019 amending Council Directive 93/13/EEC and Directives 98/6/EC, 2005/29/EC and 2011/83/EU of the European Parliament and of the Council as regards the better enforcement and modernisation of EU consumer protection rules, [2019] OJ L 328/7.

<sup>103</sup> COM(2018) 185 final of 12 April 2018. Available at: [https://ec.europa.eu/transparency/documents-register/api/files/COM\(2018\)185\\_0/de00000000145690?rendition=false](https://ec.europa.eu/transparency/documents-register/api/files/COM(2018)185_0/de00000000145690?rendition=false).

<sup>104</sup> See, for example, BEUC, 2018, *Proposal for a better enforcement and modernisation of EU consumer protection rules – "Omnibus Directive" – the BEUC view*. Available at: [https://www.beuc.eu/sites/default/files/publications/beuc-x-2018-081\\_omnibus\\_directive.pdf](https://www.beuc.eu/sites/default/files/publications/beuc-x-2018-081_omnibus_directive.pdf).

financial services, package travel, timeshare and passenger transport. If personalisation of prices were to become more popular among traders, some of these contracts would certainly be relevant.

Secondly, Article 6 only applies to distance selling and to off-premises contracts, and the European Commission thinks that in practice it will only be relevant for distance selling<sup>105</sup>. Indeed, it would seem unlikely to see personalised pricing in terms of first degree price discrimination in stationary shops where everybody sees the price tag that is affixed or relates to a certain product. However, hybrid ways of conveying personalised discounts are already applied in shops where, for example, Bluetooth technology can be used to locate the consumer and the products he or she is interested in<sup>106</sup>. Moreover, loyalty schemes (second degree price discrimination) are also frequent in shops, and differential treatment of different groups (third degree price discrimination) is also possible.

This raises the question as to when a 'price was personalised', as required for the application of Article 6(1)(ea) CRD. In other words, which types of price discrimination (in economic terms) does that provision cover? Certainly, personalisation includes the individualisation of the price on the basis of (a multitude of) personal characteristics of the consumer<sup>107</sup>. However, recital (45) suggests a broader interpretation when it mentions that 'traders may personalise the price of their offers for specific consumers or *specific categories of consumer*'<sup>108</sup>, which would seem to include loyalty schemes as well as student discounts. At the same time, recital (45) continues that traders may personalise prices 'based on automated decision-making and profiling of consumer behaviour allowing traders to assess the consumer's purchasing power'. Automated decision-making would also take place where, for example, the consumer ticks the box 'student' and on that basis sees a modified price. Unlike recital (45), Article 6(1)(ea) CRD does not mention 'profiling of consumer behaviour as a requirement of its scope of application'. Thus, Article 6(1)(ea) CRD covers personalisation based on automated decision-making that does not only consider consumer behaviour but also membership in a group, such as students or elderly persons.

In addition to the price personalisation to the effect of price increases exploiting the consumer's willingness to pay, price personalisation in the terms of Article 6(1)(ea) CRD also covers personalised discounts<sup>109</sup>.

As a final requirement, the price must be personalised 'on the basis of automated decision making'. The notion of automated decision-making is not defined in the CRD or the Omnibus Directive.

Article 6(1)(ea) CRD does not specify where the automated decision was made. Thus, it applies both to internal algorithmic calculation and to externally produced scores. The latter would seem to be the more frequent situation, as most traders will not collect all information and process them themselves into a score, but rely on the score calculated by a specialised company, e.g. a credit rating agency, on the basis of the information it has available<sup>110</sup>.

<sup>105</sup> See European Commission, 2021, *Guidance on the interpretation and application of Directive 2011/83/EU of the European Parliament and of the Council on consumer rights*, OJ 2021, C 525/1, 36.

Available at: [https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52021XC1229\(04\)](https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52021XC1229(04)).

<sup>106</sup> Interview with a traders association.

<sup>107</sup> See also European Commission, 2021, *Guidance on the interpretation and application of Directive 2011/83/EU of the European Parliament and of the Council on consumer rights*, OJ 2021, C 525/1, 36.

<sup>108</sup> Emphasis added.

<sup>109</sup> See also Wendehorst, C., 2022, *BGB § 312d Informationspflichten*, in: Krüger, W. (ed.), *Münchener Kommentar zum Bürgerlichen Gesetzbuch*, vol. 3, 9th ed., C.H. Beck, para. 27.

<sup>110</sup> See Scholz, P., 2019, *DSVGO Art. 22 Automatisierte Entscheidungen im Einzelfall einschließlich Profiling*, in: Simitis, S., Hornung, G. and Spiecker, I. (eds), *Datenschutzrecht, Nomos*, para. 29; against Martini, M., 2018, *DS-GVO Art. 22 Automatisierte Entscheidungen im Einzelfall einschließlich Profiling*, in: Paal, B.P., and Pauly, D.A. (eds), *DS-GVO – BDSG*, 2nd ed., C.H. Beck, para. 24.

‘On the basis of’ means that the result of the algorithmic calculation forms the basis for the decision on the price offered. Thus, the final decision does not need to be made by automated means but could be a human decision on the basis of the algorithmic calculation. Thus, Article 6(1)(ea) CRD also applies where an employee sets the price determined by an algorithm without adding their own considerations. Only a new decision that takes other factors into account constitutes a relevant human intervention<sup>111</sup>. This is confirmed by a comparison with Article 22(1) GDPR, which applies to the situation where a decision is based ‘solely’ on automated processing.

#### b. The information to be provided

If Article 6(1)(ea) CRD applies, the trader must inform the consumer ‘that the price was personalised on the basis of automated decision-making’. The understanding of this provision becomes clear when its wording is compared with an earlier version during the legislative process. In the report of the IMCO Committee of the European Parliament of January 2019<sup>112</sup>, the provision read: ‘(da) whether and how algorithms or automated decision making were used, to present offers or determine prices, including personalised pricing techniques’. Thus, in the final version of the Omnibus Directive, the ‘how’ was deleted. Accordingly, the trader only has to inform the consumer that he applies such techniques, without specifying in any way what criteria are applied or how they are weighed<sup>113</sup>.

Of course, the consumer could use his or her rights under the GDPR to find out what personal data the trader avails of and to assess whether they are accurate in the first place. The consumer could try to find information about the existence of automated decision-making and meaningful information about the logic involved, in accordance with the above-mentioned Article 13(2)(f) GDPR. And even with that information, the consumer would not be able to understand whether personalisation of prices is beneficial or detrimental to him or her, but would have to take a decision in complete uncertainty.

#### c. Time and place of information

The decisive advantage of Article 6(1)(ea) CRD over the information obligations under data protection law is the time of information. Information in the data protection policy document is not sufficient but information must be provided prior to the conclusion of the contract<sup>114</sup>.

According to Article 6(1) CRD, the relevant information must be provided in a clear and comprehensible manner. There is agreement both in academic writing and among the interviewees that information

<sup>111</sup> See Scholz, P., 2019, *DSVGO Art. 22 Automatisierte Entscheidungen im Einzelfall einschließlich Profiling*, in Simitis, S., Hornung, G. and Spiecker, I. (eds), *Datenschutzrecht (Nomos)*, para. 29; Helfrich, M., 2018, *DSVGO Automatisierte Entscheidungen im Einzelfall einschließlich Profiling* in Sydow, G. (ed.), *Europäische Datenschutzgrundverordnung*, 2nd ed., Nomos, paras 43 f.

<sup>112</sup> See European Parliament, IMCO Committee, 2019, *Report on the proposal for a directive of the European Parliament and of the Council amending Council Directive 93/13/EEC of 5 April 1993, Directive 98/6/EC of the European Parliament and of the Council, Directive 2005/29/EC of the European Parliament and of the Council and Directive 2011/83/EU of the European Parliament and of the Council as regards better enforcement and modernisation of EU consumer protection rules*, doc. PE625.551v02-00 of 25 January 2019, 47. Available at: [https://www.europarl.europa.eu/doceo/document/A-8-2019-0029\\_EN.pdf](https://www.europarl.europa.eu/doceo/document/A-8-2019-0029_EN.pdf).

<sup>113</sup> See European Commission, 2021, *Guidance on the interpretation and application of Directive 2011/83/EU of the European Parliament and of the Council on consumer rights*, OJ 2021, C 525/1, 36. See also Gijrath, S., 2022, *Consumer law as a tool to regulate Artificial Intelligence* in Micklitz, H.-W. et al. (eds), *Constitutional Challenges in the Algorithmic Society*, Cambridge University Press.

<sup>114</sup> See also European Commission, 2021, *Guidance on the interpretation and application of Directive 2011/83/EU of the European Parliament and of the Council on consumer rights*, OJ 2021, C 525/1, 36.



on the personalisation of prices can therefore not be placed in the standard terms of the trader<sup>115</sup> but must be made available prior to the conclusion of the specific contract<sup>116</sup>.

#### d. Consequences of breach

The legal consequences of a breach of Article 6(1)(ea) CRD can be derived from the Consumer Rights Directive itself as well as from the Unfair Commercial Practices Directive (UCPD)<sup>117</sup>, as implemented in the Member States.

Article 23(1) CRD calls for adequate and effective means to ensure compliance with the Directive, without specifying those means. Thus, Member States have a certain amount of discretion over how to sanction breaches. A typical remedy would be damages, with the problem to calculate the damage. Is it the difference between a (higher) personal price and the regular price, and how would one determine the regular price? At the very least, it is likely that there would be a set price as the starting point on the basis of which the personalised price is calculated.

Alternatively, does the damage lie in the fact that the consumer has concluded a contract with the trader, which he or she would not have done had he or she known that the price was personalised? In that instance, the damage can only be remedied through the cancellation of the contract and the reimbursement of goods and payment.

According to Article 24 CRD, as amended, Member States must foresee penalties for breaches of the Directive including the obligation to inform the consumer about personalisation of prices. Article 24 CRD lays down non-exhaustive and indicative criteria that Member States should take into account when imposing penalties on traders. It remains to be seen whether the amendment leads to a 'penalisation' of consumer law.

At the same time, Article 7(5) of the UCPD links the breach of an information duty under EU consumer law with unfair commercial practices law. Under Article 7(1) UCPD, '(a) commercial practice shall be regarded as misleading if, in its factual context, taking account of all its features and circumstances and the limitations of the communication medium, it omits *material* information that the average consumer needs, according to the context, to take an informed transactional decision and thereby causes or is likely to cause the average consumer to take a transactional decision that he would not have taken otherwise.'. Article 7(5) specifies that 'information requirements established by Community law in relation to commercial communication including advertising or marketing, a non-exhaustive list of which is contained in Annex II, shall be regarded as material.'. The CRD clearly belongs to EU law in relation to commercial communication that Article 7(5) refers to.

Thus, the provisions of the UCPD on enforcement and penalties also apply to a breach of the obligation to inform the consumer about the application of personalised pricing. Under Article 11 UCPD, this includes adequate and effective means to enforce compliance with the Directive, including collective action by public authorities and/or consumer organisations but also competitors, and Article 13 requires Member States to lay down effective, proportionate and dissuasive penalties for breaches of the Directive (as implemented), whereas again the Omnibus Directive added a second paragraph with

<sup>115</sup> See, for example, Bakos, Y., et al., 2014, *Does Anyone Read the Fine Print? Consumer Attention to Standard Form Contracts*, 43 *Journal of Legal Studies*; Wagner, G., and Eidenmüller, H., 2019, *In der Falle der Algorithmen? Abschöpfen von Konsumentenrente, Ausnutzen von Verhaltensanomalien und Manipulation von Präferenzen: Die Regulierung der dunklen Seite personalisierter Transaktionen*, *Zeitschrift für die gesamte Privatrechtswissenschaft*; Gleixner, A., 2020, *Personalisierte Preise im Onlinehandel und Europas „New Deal for Consumers“*, *Verbraucher und Recht*.

<sup>116</sup> See Wendehorst, C., 2022, *BGB § 312d Informationspflichten*, in: Krüger, W. (ed.), *Münchener Kommentar zum Bürgerlichen Gesetzbuch*, vol. 3, 9th ed., C.H. Beck, para. 34.

<sup>117</sup> Directive 2005/29/EC of the European Parliament and of the Council of 11 May 2005 concerning unfair business-to-consumer commercial practices in the internal market, [2005] OJ L 149/22.

non-exhaustive and indicative criteria that Member States should take into account when imposing penalties on traders.

Importantly, with the Omnibus Directive a new Article 11a on 'Redress' was inserted in the UCPD. According to Article 11a(1) UCPD as amended, consumers harmed by unfair commercial practices shall have access to proportionate and effective remedies, including compensation for damage suffered and, where relevant, a price reduction or termination of the contract. Member States may determine the conditions for the application and effects of those remedies. They may take into account, where appropriate, the gravity and nature of the unfair commercial practice, the damage suffered by the consumer and other relevant circumstances. The new provision was important because some Member States had not recognised individual remedies for the breach of the UCPD.

Article 11a(1) leaves some discretion to Member States, but it would seem to allow consumers to cancel a contract where personalised pricing was not disclosed to the consumer. Instead, consumers could ask for a reduction in price if they have paid a higher than the regular price.

Meaningful collective redress mechanisms for breaches of consumer laws has in the past been subject to the national laws of the Member States. However, in December 2020, the Injunctions Directive<sup>118</sup> was replaced by the new Representative Actions Directive<sup>119</sup> that provides for a remedial action from which consumers can directly benefit. This Directive applies to national remedies implementing Article 23 CRD (on sanctions) as well as to the right to redress under Article 11a(1) UCPD. Thus, once the Representative Actions Directive has been implemented by the Member States<sup>120</sup>, qualified entities will have the right to sue for the cancellation of contracts with consumers who have been unknowingly subjected to personalised pricing, and for the reimbursement of the price they have paid.

#### e. Evaluation

The content of the information obligation of Article 6(1)(ea) CRD seems to be in certain contradiction with recital (45), according to which the information obligation is meant to enable the consumer to take into account the potential risks in their purchasing decision. The only risk that the consumer will be aware of is the risk of the unknown, as there is no way the consumer could appreciate whether personalised pricing might have a positive or negative effect on him or her.

Most stakeholders agree that meaningful information would have to include the main criteria used for personalisation and the logic involved as required, for example, by Article 13(2)(f) GDPR<sup>121</sup>. If the consumer then feels that there is a chance for an advantageous deal he or she could use his or her rights under the GDPR to check whether the personal data used for the calculation is correct. One could also consider a refund if it turns out that incorrect personal data was used and the price would have been lower if correct data had been used. This would allow the consumer to buy now and control later.

In contrast, as it stands, the consumer's only possible choice is to accept the risk of the unknown or to find another trader. This of course presupposes that there are other traders competing in the first place, and that there are traders in the market who do not engage in personalised pricing or disclose the criteria and their weighting.

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<sup>118</sup> Directive 2009/22/EC of the European Parliament and of the Council of 23 April 2009 on injunctions for the protection of consumers' interests, [2009] OJ L 110/30.

<sup>119</sup> Directive (EU) 2020/1828 of the European Parliament and of the Council of 25 November 2020 on representative actions for the protection of the collective interests of consumers, [2020] OJ L 409/1.

<sup>120</sup> Transposition of the Directive is due on 25 December 2022, and Member States shall apply the new measures from 25 June 2023, see Article 24(1) Representative Actions Directive.

<sup>121</sup> See also BEUC, 2018, *Proposal for a better enforcement and modernisation of EU consumer protection rules – "Omnibus Directive" – the BEUC view*, 20 September 2018. Available at: [https://www.beuc.eu/sites/default/files/publications/beuc-x-2018-081\\_omnibus\\_directive.pdf](https://www.beuc.eu/sites/default/files/publications/beuc-x-2018-081_omnibus_directive.pdf). Only one interviewee from a traders' organisation argued that being warned of personalised pricing was meaningful information.

In practice, none of our interviewees knew of a trader who informs the consumers about personalised pricing. This was also the observation of the academic authors<sup>122</sup>.

### 3.4.3. The proposed Consumer Credit Directive

Special rules for personalised pricing are also envisaged in the proposed Consumer Credit Directive (CCD proposal)<sup>123</sup>, although their exact wording is still to be agreed by the European Parliament and the Council in the ongoing legislative procedure.

The Commission proposed an information obligation that mirrors Article 6(1)(ea) CRD. According to Article 10(3)(t) of the proposal, the pre-contractual information shall specify where applicable, an indication that the price was personalised on the basis of automated processing, including profiling. This obligation shall be complemented by the duty of creditors, credit intermediaries and providers of crowdfunding credit services to inform consumers when they are presented with a personalised offer based on profiling or other types of automated processing of personal data (Article 13 of the proposal).

Recital (40) clarifies that creditors, credit intermediaries and providers of crowdfunding credit services should be allowed to personalise the price of their offers for specific consumers or specific categories of consumer based on automated decision-making and profiling of consumer behaviour allowing them to assess the consumer's purchasing power.

The reference to the consumer's purchasing power, rather than his or her creditworthiness, reveals that exploitation shall be a legitimate strategy.

While the Council did not amend the text significantly, the rapporteur for the IMCO Committee<sup>124</sup> proposed in the draft report to introduce a new recital (40a). According to this recital, 'credit offers should not be based on personal data other than data related to assessing the ability of the consumers to re-pay their credit and data relevant to assess the consumer's creditworthiness. Discriminatory price optimisation practices when selling consumer credit products to consumers, based on individual price sensitivity, should be prohibited.' Moreover, under the same recital, credit offers 'should not be based on behavioural data, should be objective and consumers should be given the possibility to effectively compare offers on the basis of relevant pre-contractual information and pre-defined and understandable criteria'.

This may be interpreted as meaning that different prices should only be justified on the basis of different creditworthiness, whereas mere exploitation of the consumer's willingness to pay should be prohibited. This restriction, however, was not adopted by the IMCO Committee, and recital (40a) does not appear in the final report adopted on 12 July 2022. Instead, recital (40) was amended to the effect that creditors should also inform consumers receiving the offer about the sources of data used to personalise the offer<sup>125</sup>.

### 3.4.4. Unfair Commercial Practices Law

Whereas a breach of Article 6(1)(ea) CRD automatically constitutes a breach of the UCPD, in the form of a misleading omission under Article 7(5) UCPD, this only applies within the scope of application of Article 6(1)(ea) CRD. Thus, Article 7(5) UCPD does not cover undisclosed personalised pricing outside

<sup>122</sup> See Zuiderveen Borgesius, F., and Poort, J., 2017, *Online Price Discrimination and EU Data Privacy Law*, Journal of Consumer Policy 40.

<sup>123</sup> European Commission, *Proposal for a Directive of the European Parliament and the Council on consumer credits*, COM(2021) 347 final.

<sup>124</sup> European Parliament, IMCO Committee, 2022, *Draft Report on the proposal for a directive of the European Parliament and of the Council on consumer credit*. Available at: [https://www.europarl.europa.eu/doceo/document/IMCO-PR-696560\\_EN.pdf](https://www.europarl.europa.eu/doceo/document/IMCO-PR-696560_EN.pdf).

<sup>125</sup> European Parliament, IMCO Committee, 2022, *Report on the proposal for a directive of the European Parliament and of the Council on consumer credit*. Available at: [https://www.europarl.europa.eu/doceo/document/A-9-2022-0212\\_EN.html](https://www.europarl.europa.eu/doceo/document/A-9-2022-0212_EN.html).

the scope of application of the CRD, for example in passenger transport, nor undisclosed personalised pricing in shops.

In these situations, the general rule of Article 7(1) UCPD may be of use, and this is indeed what academics had suggested even before Article 6(1)(ea) CRD was adopted<sup>126</sup>. According to Article 7(1) UCPD, a commercial practice shall be regarded as misleading if, in its factual context, taking account of all its features and circumstances and the limitations of the communication medium, it omits *material information* that the average consumer needs, according to the context, in order to take an informed transactional decision and thereby causes or is likely to cause the average consumer to take a transactional decision that he would not have taken otherwise. Article 7(1) therefore establishes a positive obligation on traders to provide all the information necessary for the average consumer to make an informed purchasing decision<sup>127</sup>.

As the above-mentioned studies have shown, the vast majority of consumers (and therefore the average consumer) have expressed strong negative attitudes towards personalised pricing<sup>128</sup>. Anecdotal evidence such as the adverse reaction to Amazon's attempt to personalise prices in 2000<sup>129</sup> confirms their findings.

Moreover, the relevance of price personalisation for consumers' decisions seems to be confirmed by Article 6(1)(ea) CRD that was introduced to allow consumers to 'take into account the potential risks in their purchasing decision'<sup>130</sup>. The limited scope of application of this new provision does not indicate that personalised pricing should only be regulated in the specific areas of law covered by the CRD but is owed to the fact that it was the CRD that was under review at the time, following the fitness check of consumer and marketing law, and that it was introduced 'last minute'. This conclusion is confirmed by the fact that an identical provision is now envisaged in the proposed CCD, again because this Directive is being revised after a fitness check.

Thus, in our view, the obligation to inform consumers about the personalisation of prices already stems from Article 7(1) UCPD<sup>131</sup>. This interpretation has, however, to our knowledge never been tested in court. The European Commission only mentions, in its guidance document, that the UCPD does not prevent traders from personalising their prices based on online tracking and profiling<sup>132</sup>. In that sense, the law lacks a clarification.

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<sup>126</sup> See Zander-Hayat, et al., 2016, *Personalisierte Preise – Eine verbraucherpolitische Einordnung*, Verbraucher und Recht; Obergfell, E.I., 2017, *Personalisierte Preise im Lebensmittelhandel - Vertragsfreiheit oder Kundenbetrug?*, Zeitschrift für Lebensmittelrecht; Tillmann, T.J., and Vogt, V., 2018, *Personalisierte Preise im Big-Data-Zeitalter*, Verbraucher und Recht.

<sup>127</sup> See European Commission, 2021, *Guidance on the interpretation and application of Directive 2005/29/EC of the European Parliament and of the Council concerning unfair business-to-consumer commercial practices in the internal market*, OJ 2021 C 526/1, at 2.9.1.

<sup>128</sup> See also van Boom, W., et al., 2020, *Consumers Beware: Online Personalised Pricing in Action! How the Framing of Mandated Discriminatory Pricing Disclosure Influences Intention to Purchase*, Social Justice Research 33, with further references.

<sup>129</sup> See BBC, 2000, *Amazon's old customers 'pay more'*, 8 September 2000. Available at: <http://news.bbc.co.uk/2/hi/business/914691.stm>.

<sup>130</sup> See recital (45) CRD.

<sup>131</sup> See also de Streel, A., and Jacques, F., 2019, *Personalised Pricing and EU Law*. Available at: <http://hdl.handle.net/10419/205221>; Gleixner, A., 2020, *Personalisierte Preise im Onlinehandel und Europas „New Deal for Consumers“*, Verbraucher und Recht.

<sup>132</sup> See European Commission, 2021, *Guidance on the interpretation and application of Directive 2005/29/EC of the European Parliament and of the Council concerning unfair business-to-consumer commercial practices in the internal market*, OJ 2021 C 526/1, at 4.2.8.

### 3.5. Neighbouring laws

#### 3.5.1. Price Indication Law

Price indication law, as enshrined in the Price Indication Directive<sup>133</sup>, aims to make prices transparent. Consumers shall be enabled to compare prices and find the best deal for them.

Price indication law, however, only relates to the clear and transparent indication of the final price but not to the mechanism by which this price was calculated. Moreover, price indication law allows individual discounts. Thus, it is currently of no help when it comes to the disclosure of personalised pricing<sup>134</sup>.

Given the risk that personalised pricing poses to price transparency, academic authors have already proposed to include the indication of personalised pricing into price indication law<sup>135</sup>.

#### 3.5.2. Unfair Contract Terms Law

It would also seem difficult to see personalised pricing as a breach of the Unfair Contract Terms Directive<sup>136</sup> (UCTD). According to Article 6 UCTD, unfair contract terms in consumer contracts are not binding on the consumer. However, so-called 'core terms' are excluded from the fairness control. According to Article 4(2) UCTD, 'the assessment of the unfair nature of the terms shall not relate to the definition of the main subject matter of the contract nor to the adequacy of the price and remuneration, on the one hand, as against the services or goods supplied in exchange'. The only exception are terms that are not 'in plain intelligible language'.

The Court of Justice has indicated that the latter may be the case when the price is obscured, for example, when a creditor indicates an incorrect annual percentage rate in a consumer credit contract<sup>137</sup>. When it comes to personalised pricing, however, the price as such is crystal clear. It is only the way by which the price was determined that is obscure.

Overall, the UCTD does not seem to offer protection against personalised pricing.

### 3.6. National leeway

Generally speaking, EU law does not prohibit the personalisation of prices. This is expressed in recital (45) of the CRD as well as in the European Commission's Guidance on the UCPD. The question remains whether individual Member States could do so, or whether they could introduce more far-reaching information obligations or restrict the type of personal data that may be used for the personalisation of prices.

Doubts about national leeway may stem from the fact that most of the recent EU legislative acts in the area of consumer protection are full harmonisation measures. These include, in principle, the CRD<sup>138</sup> and the UCPD. As we have seen in the case law of the Court of Justice though, there is a fine line between issues that have been fully harmonised and issues that have not been dealt with at all.

<sup>133</sup> Directive 98/6/EC of the European Parliament and of the Council of 16 February 1998 on consumer protection in the indication of the prices of products offered to consumers, [1998] OJ L 80/27.

<sup>134</sup> See Tillmann, T.J., and Vogt, V., 2018, *Personalisierte Preise im Big-Data-Zeitalter*, Verbraucher und Recht.

<sup>135</sup> See Obergfell, E.I., 2017, *Personalisierte Preise im Lebensmittelhandel - Vertragsfreiheit oder Kundenbetrug?*, Zeitschrift für Lebensmittelrecht.

<sup>136</sup> Council Directive 93/13/EEC of 5 April 1993 on unfair terms in consumer contracts, [1993] OJ L 95/29.

<sup>137</sup> See ECJ, 16 November 2010, Case C-76/10 *Pohotovost's. r. o. v Iveta Korčková*, ECLI: EU:C:2010:685.

<sup>138</sup> See Article 4 CRD.

### 3.6.1. Consumer Rights Directive

With regard to Article 6(1)(ea) CRD, there is no doubt that Member States cannot introduce a more far-reaching information obligation in doorstep and distance selling law. When it comes to brick-and-mortar shops, Article 5(4) CRD expressly allows Member States to maintain or adopt additional pre-contractual information obligations. Thus, they could extend the information obligation of Article 6(1)(ea) CRD beyond off-premises and distance contracts, and even introduce more stringent information obligations for contracts outside the scope of Article 6 CRD.

Importantly, according to the ECJ case law, the obligation to inform about a specific issue does not necessarily preclude an outright ban of the same issue. The Court dealt with this question in relation to the Consumer Credit Directive<sup>139</sup> (CCD), which is another full harmonisation instrument. That directive requires, among other things, the creditor to inform the consumer of all costs of the credit. Romania had introduced a national prohibition of certain bank charges. In the case of *Volksbank Romania*, the Court held that whilst the Directive fully harmonised information obligations related to such charges, it did not regulate their admissibility at all. Thus, Member States still enjoy regulatory freedom in this area<sup>140</sup>.

Recital (45) of the Omnibus Directive does not contradict that finding. According to this recital, '(t)raders may personalise the price of their offers for specific consumers or specific categories of consumer based on automated decision-making and profiling of consumer behaviour allowing traders to assess the consumer's purchasing power'. The term 'may' here refers to the possibility of them doing so but not to their right to do so. This becomes clear when we compare this recital to recital (40) of the CCD proposal, according to which creditors, credit intermediaries and providers of crowdfunding credit services *should be allowed to* personalise the price of their offers for specific consumers or specific categories of consumer based on automated decision-making and profiling of consumer behaviour allowing them to assess the consumer's purchasing power.

We thus note that Member States still have the legislative freedom to introduce an outright ban on personalised pricing in the area of consumer contract law, or to regulate the way in which traders are allowed to personalise prices, namely, which criteria they may consider.

### 3.6.2. The proposed Consumer Credit Directive

In relation to the CCD proposal, the starting point is the same. The Court has already decided more than once that the information obligations are fully harmonised and that no information obligations can be added or amended<sup>141</sup>.

Recital (40), as mentioned above, indicates that the future CCD would prevent a national prohibition of personalised pricing within its scope of application. This would seem to reflect the common practice of creditors to adjust interest rates to the creditworthiness of their customers.

In contrast, it would not seem to ban national legislative provisions on what can be taken into account in personalised pricing. As the IMCO rapporteur's proposal for a recital (40a) on that aspect has not been adopted by the IMCO Committee, such aspect is likely to remain unregulated and therefore open to national legislation.

<sup>139</sup> Directive 2008/48/EC of the European Parliament and of the Council of 23 April 2008 on credit agreements for consumers, [2008] OJ L 133/66.

<sup>140</sup> See CJEU, 12 July 2012, Case C-602/10 *SC Volksbank România SA v Autoritatea Națională pentru Protecția Consumatorilor – Comisariatul Județean pentru Protecția Consumatorilor Călărași (CJPC)*, ECLI:EU:C:2012:443.

<sup>141</sup> See ECJ, 9 November 2016, Case C-42/15 *Home Credit Slovakia, as v Klára Bíróová*, ECLI: EU: C:2016:842; paras 51 ff.; ECJ, 26 March 2020, Case C-779/18 *Mikrokasa SA v XO*, ECLI:EU:C:2020:236.

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### 3.6.3. Unfair Commercial Practices Law

The UCPD generally pursues a full harmonisation approach. However, according to its Article 4, it has spared certain areas, in which Member States could declare commercial practices unfair that would not otherwise be regarded as unfair under the UCPD. Examples are financial services including credit and insurance, and immovable property (see Article 3(9) UCPD).

Where no exception applies, it seems difficult to argue that personalised pricing can be generally banned as a misleading practice if traders do so openly so that no misleading omission is involved<sup>142</sup>, which is also the position of the European Commission<sup>143</sup>. Moreover, it should be noted that the breach of a purely national information obligation, for example related to face-to-face contracts, would not qualify as a misleading omission in accordance with Article 7(5) UCPD, as this provision exclusively applies to the breach of information obligations stemming from EU law.

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<sup>142</sup> See also de Streef, A., and Jacques, F., 2019, *Personalised Pricing and EU Law*. Available at: <http://hdl.handle.net/10419/205221>.

<sup>143</sup> See above, section 3.6.

## 4. REGULATORY OPTIONS AND RECOMMENDATIONS

### KEY FINDINGS

Due to technical developments and an increasing trend of personalising products and services, price personalisation is expected to become more widespread in the near future. Also, the occasionally proven occurrence of personalised pricing, in which the price for identical products at identical time was differentiated based on personal characteristics of individual consumers, demonstrate a need for regulating this phenomenon.

Given the general rejection by consumers of higher prices due to personalisation and the likelihood of overall consumer detriment of such practices, one could consider prohibiting personalised prices in the form of first degree price discrimination that lead to a higher than the regular price.

At least, there are certain areas where personalised pricing should be prohibited, namely, universal service obligations in sectors such as electricity, gas and telecommunications where everyone should have access to services of general interest at the same conditions.

While anti-discrimination laws limit the way in which personalised pricing can be performed in that they prohibit the inclusion of certain criteria in the personalisation process (e.g. sex, race, colour, ethnic or social origin, etc.) certain 'sensitive' criteria are currently not covered. These could be prohibited to be used for the personalisation of prices, and include health conditions and vulnerabilities, such as anxieties, that should not be exploited.

Otherwise, information obligations regarding personalised pricing could be extended to all goods and services and to offline or hybrid situations, and information provided should be 'meaningful', a notion well-known from data protection law. Moreover, traders should be required to place information on personalised pricing next to the price in such a way that it cannot be overlooked.

Enforcement could be facilitated through the reversal of the burden of proof once there is an indication of price personalisation. Competent authorities could be granted access to the algorithm that is used.

### 4.1. The need for regulation

Representatives from traders' associations have unanimously argued that there was no need for regulation as there was no phenomenon of personalised pricing<sup>144</sup> to regulate in the first place. In contrast, representatives from consumers' organisations point at certain incidents of personalised pricing in the past and at the undoubted technical feasibility of price personalisation, and therefore press for regulation. In addition to that, most recently, the online platform Wish has been found to apply personalised pricing (without adequate notification of this practice to consumers)<sup>145</sup>. This case demonstrates that personalised pricing is not pure theory, but it is in fact already applied. Looking at developments in the broader area of personalisation, price personalisation can be expected to become more widespread in the near future.

Moreover, regulation at EU level may be necessary to prevent the fragmentation of the law, as individual Member States might use their national competence to regulate personalised prices.

<sup>144</sup> The reference to personalised pricing here refers to first-degree personalisation, i.e. a situation where the price for identical products or services at identical time is differentiated based on personal characteristics of individual consumers.

<sup>145</sup> For more details, see ACM, 2022, *Following ACM actions, Wish bans fake discounts and blocks personalised pricing*. Available at: <https://www.acm.nl/en/publications/following-acm-actions-wish-bans-fake-discounts-and-blocks-personalized-pricing>.



As to the traders' associations argument that the vast majority of traders does not apply personalised pricing and should therefore not be burdened with new regulation, it must be noted that, for example, information obligations such as the one that was introduced in Article 6(1)(ea) CRD does not place any burden on these traders as it only applies to traders that do personalise prices. Thus, traders who abstain from such practices do not need to take any action.

Finally, traders who operate with second- and third-degree price personalisation (quantity discounts and group discounts) already communicate this transparently, as they see such practices as useful marketing that is generally accepted. Thus, increased regulation would only really affect those engaging in first-degree price personalisation.

## 4.2. Preliminary considerations for regulation

From the studies described above (chapter 2) and from the interviews with stakeholders, it became clear that no consumer would wish to pay a personalised price that is higher than the 'regular' price, unless there was a good reason that is communicated in a transparent manner to consumers who understand the grounds for personalisation (as it is for example in case of student or quantity discounts). Thus, consumers may accept, or even appreciate, price differentiation for social reasons and be ready to pay more if in turn socially disadvantaged groups or people on low income can get access to the same goods or products at a lower price.

Also, personalised discounts may be generally accepted or welcomed, and are therefore communicated openly by traders<sup>146</sup>. This applies to quantity discounts as well as to group-specific discounts such as students' discounts, but it may also apply to personalised discounts offered, for example, on a website following the (tracked) movements of the consumer on that website. Still, even in the case of the latter type of personalised discount, consumers may wish to understand why they get that discount, and – if there is an indication that the starting price is very high and everybody may get a discount – how their personal discount relates to the discounts that other consumers are offered.

In contrast, consumers generally reject the idea of simple exploitation of their purchasing power, or their willingness to pay, to the benefit of the trader. They perceive such practices as unfair, reporting willingness to look for other 'fairer' non-personalised price elsewhere<sup>147</sup>. This is the reason why traders rather abstain from personalised pricing than applying this pricing strategy if they have to disclose the personalisation of prices. Or they stop personalised pricing immediately once they are found to apply that strategy, as did Amazon in 2000<sup>148</sup> and Wish just recently.

In other words, there are only three ways to apply personalised pricing in a way that does not deter consumers from purchasing: (1) in the form of discounts rather than a higher price, (2) fully transparent or (3) secretly; the latter being generally seen as unacceptable.

<sup>146</sup> See also Wendehorst, C., 2022, *BGB § 312d Informationspflichten*, in Krüger, W. (ed.), *Münchener Kommentar zum Bürgerlichen Gesetzbuch*, vol. 3, 9th ed., C.H. Beck, para. 27.

<sup>147</sup> See Poort, J., and Zuiderveen Borgesius, F., 2019, *Does everyone have a price? Understanding people's attitude towards online and offline price discrimination*, Internet Policy Review 8. Available at: <https://policyreview.info/articles/analysis/does-everyone-have-price-understanding-peoples-attitude-towards-online-and-offline>.

<sup>148</sup> See Amazon, 2000, *Amazon.com Issues Statement Regarding Random Price Testing*, 27 September 2000. Available at: <https://press.aboutamazon.com/news-releases/news-release-details/amazoncom-issues-statement-regarding-random-price-testing>.

### 4.3. Prohibition of price personalisation

#### 4.3.1. General prohibition of first degree price discrimination

As mentioned above, while second degree price discrimination (loyalty programmes) and third degree price discrimination (e.g. student discounts) are socially accepted, first degree price discrimination that leads to a higher than the regular price is generally rejected by consumers. Moreover, it is detrimental to the general price transparency, which is a core objective of EU consumer law, such as the Price Indication Directive, or the price transparency provisions of the CRD<sup>149</sup>. Finally, most authors agree that, despite economic theory, it is unlikely that in practice individual poorer consumers would benefit from first degree price discrimination, but that most probably traders would merely aim to maximise their profits. Therefore, first degree price discrimination is likely to lead to overall consumer detriment, both through reduced transparency of prices which may affect consumer choice, and a reduction of consumer surplus (compared to a situation where this pricing method is not applied).

Generally speaking, representatives of consumer organisations therefore advocate for a general prohibition of personalised pricing in terms of first-degree price discrimination, whereas representatives of traders' organisations advocate for leaving the issue to the forces of the market. The latter point out that there is no need for any prohibition (beyond anti-discrimination laws) as traders would not engage in hidden or unfair personalised pricing anyway to avoid losing consumers' trust, and thus losing business.

One could consider prohibiting price increases by way of personalisation of prices and at the same time allowing personal discounts as well as price differentiations that are transparent and justified, in particular on the basis of the individual consumer's creditworthiness. This would be the solution that interviewees from consumer associations would welcome.

#### 4.3.2. Special prohibitions

Alternatively, one could consider special prohibitions of price personalisation related to certain industries or certain criteria to be used.

##### a. Prohibitions related to certain industries

In terms of consistency with the equal pricing policies in the universal services regimes of electricity and telecommunications, it would seem logical to prohibit personalised pricing in universal services in general. This was also a context mentioned in the majority of interviews as clearly not appropriate for personalisation. This does not, of course, prohibit certain justified price differentiations related to, for example, technical difficulties of connecting certain customers to a network.

##### b. Prohibitions related to certain criteria

Asked about whether the application of certain criteria for the personalised pricing was unacceptable – beyond the breach of anti-discrimination law -, stakeholders generally thought that the exploitation of vulnerabilities should be prohibited. Examples could be the medical disposition of the consumer, anxiety, or addiction. Some stakeholders pointed at the list of sensitive personal data of Article 9 GDPR.

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<sup>149</sup> See, in particular, Article 6(1)(d) CRD.

## 4.4. Upgrading the information obligation

Where price personalisation is allowed, existing and proposed information obligations could be upgraded in relation to the content of the information and its place.

### 4.4.1. The content of the information

Representatives from consumer organisations and traders' associations agree that the simple information that prices are personalised is meaningless to consumers, and even acts as a deterrent, if there is no indication as to what the 'rules of the game' are. This is in line with past behavioural research on disclosures that shows that while abstract explanations about the workings and consequences of algorithmic processes may not be effective, making consumers aware of specific known outcomes of data aggregation and inferences for them could help them become more aware of the working of the practice related risks. Hence, it is necessary to inform consumers from the perspective of their specific situation which will lead to more informed decision-making. Representatives from traders' associations have argued that consumer trust is essential for businesses, and that consumers would not trust personalised pricing if they had no idea of what the criteria were<sup>150</sup>.

For the sake of coherence with the neighbouring area of data protection law, one could adopt the notion of 'meaningful information about the logic involved' of, for example, Article 13(2)(f) GDPR, that applies when the data controller engages in automated decision-making, including profiling. This was also the approach of the Dutch ACM before the Dutch implementation of the Omnibus Directive. In its statement concerning Wish, it required that 'consumers must also understand in what ways their personal information affect prices'<sup>151</sup>.

At the same time, all stakeholders agree that consumers are already supposed to digest an enormous amount of information and that information on price personalisation must be designed in such a way that consumers can easily understand the basics and that they can then find more detailed information if they are interested in the matter. Thus, one stakeholder advocated two layers of information, with a fairly simple message on the first layer and more details on the second layer<sup>152</sup>. Furthermore, displaying information in accordance with the 'EAST framework' may improve the effectiveness of disclosures, i.e. displaying information in a way that is easy, attractive, social and timely<sup>153</sup>.

### 4.4.2. The place of information

It seems clear that information on price personalisation must be placed on the same webpage as the price itself, as only then it is relevant to current consumer actions, which can prevent present bias. A representative of a consumer organisation even argued that it should be placed right next to the price<sup>154</sup>, with a wording such as 'This price has been personalised'. This would be similar to the 'button solution' of Article 8(2) CRD, according to which a button by which a consumer places an order must be labelled with the words 'order with obligation to pay' or a corresponding unambiguous formulation.

<sup>150</sup> See also Gijrath, S., 2022, *Consumer law as a tool to regulate Artificial Intelligence* in: Micklitz, H.-W., et al., (eds), *Constitutional Challenges in the Algorithmic Society*, Cambridge University Press.

<sup>151</sup> See ACM, 2022, *Following ACM actions, Wish bans fake discounts and blocks personalised pricing*. Available at: <https://www.acm.nl/en/publications/following-acm-actions-wish-bans-fake-discounts-and-blocks-personalized-pricing>.

<sup>152</sup> Interview with a consumer protection authority.

<sup>153</sup> See de Streef, A., and Jacques, F., 2019, *Personalised Pricing and EU Law*. Available at: <http://hdl.handle.net/10419/205221>.

<sup>154</sup> Similarly Gleixner, A., 2020, *Personalisierte Preise im Onlinehandel und Europas „New Deal for Consumers“*, *Verbraucher und Recht*.

## 4.5. Extension of the information obligation

The limited scope of application of the information obligation enshrined in Article 6(1)(ea) CRD leaves gaps of protection and therefore calls for extensions.

### 4.5.1. Extension to other areas

As shown above, the scope of application of Article 6(1)(ea) CRD is limited to the scope of application of the CRD, whereas the risks that are associated with personalised pricing exist in the same way in other areas, such as travel contracts. With the current proposal for a new CCD, the EU legislator already acknowledges this. This inconsistent situation could be remedied by extending the (potentially upgraded) information obligation across all areas of EU consumer law<sup>155</sup>. A possible place for this could be the UCPD that applies across the board.

### 4.5.2. Extension to offline contracts

As shown above, offline contracts and hybrid shopping situations are currently not covered by the scope of application of the information obligation of Article 6(1)(ea) CRD, whereas it is now technically possible to offer personalised prices also in shops, for example, by using apps or electronic price labels in combination with video surveillance and image processing techniques. This inconsistency could be remedied by extending the (potentially upgraded) information obligation to offline contracts and hybrid situations. Of course, the precondition of 'automated decision-making' would remain. A 'traditional' bargaining situation between a trader and a consumer would thus not be covered by the extension.

## 4.6. Clarification of Article 22 GDPR

Finally, a clarification of Article 22 GDPR on automated individual decision-making would be helpful. This provision is so controversial, and so many restrictions to its interpretation are discussed in the literature, that it is dysfunctional<sup>156</sup>. This corresponds with the finding that it is not applied by the data protection authorities in practice.

## 4.7. Enforcement

### 4.7.1. Burden of proof

Clearly, individual consumers will hardly be able to prove personalised pricing, or the use of prohibited criteria in personalised pricing. As in other areas of law where the potential victim has no insights into the internal affairs of the potential infringer, it could therefore be considered to shift the burden of proof to the trader once there is a reasonable suspicion of an infringement<sup>157</sup>, which could simply be two screenshots taken at the same time concerning the same product with different prices. For anti-discrimination law, such rules have already been enshrined in the legislative acts<sup>158</sup>.

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<sup>155</sup> See also Gleixner, A., 2020, *Personalisierte Preise im Onlinehandel und Europas „New Deal for Consumers“*, Verbraucher und Recht.

<sup>156</sup> See also Wachter, S., et al., 2017, *Why a right to explanation of automated decision-making does not exist in the general data protection regulation*, 7(2) International Data Privacy Law.

<sup>157</sup> See also Gleixner, A., 2020, *Personalisierte Preise im Onlinehandel und Europas „New Deal for Consumers“*, Verbraucher und Recht.

<sup>158</sup> See Article 8(1) of Directive 2000/43/EC and Article 9(1) of Directive 2004/113/EC.

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#### 4.7.2. Access to the algorithm for competent authorities

Due to its vicinity to data protection law and to the envisaged Artificial Intelligence Act<sup>159</sup>, it would seem a consistent approach to grant competent authorities, such as consumer authorities and anti-discrimination authorities, access to the algorithms<sup>160</sup> used by traders for the calculation of prices, which these authorities could make use of in the event of an indication of undisclosed personalisation or of a personalisation prohibited by the law.

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<sup>159</sup> Proposal for a Regulation of the European Parliament and of the Council laying down harmonised rules on artificial intelligence (Artificial Intelligence Act), COM(2021) 206 final. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A52021PC0206>.

<sup>160</sup> See Article 23 of the proposed Artificial Intelligence Act.

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## ANNEX 1: EXPERT INTERVIEWS METHODS AND PARTICIPANTS

To complement the findings from literature review and legal analysis, qualitative expert interviews were conducted with individuals representing organisations that are involved in personalisation processes, including consumer organisations, traders' associations, industry players and enforcement agencies.

To recruit participants, purposive sampling was used, which can be seen as appropriate as the recruited participants had to strictly fulfil certain characteristics – they needed to represent a relevant party and to have up-to-date knowledge on price personalisation practices.

The interviews were conducted online. Before each interview, the purpose of the study was explained to the participants, and if they consented to participate, they were given the right to withdraw from the study at any time and to stay anonymous. The interviews lasted between 27 and 60 minutes and were semi-structured. The questions were developed based on past research, but were adapted based on initial results.

An interview guide with a topic list was developed based on the topics relevant to the study. It included five main themes, namely: conceptualisation of personalised pricing, current personalisation practices, benefits of price personalisation for traders and consumers, considerations related to price personalisation, transparency practices around price personalisation, and future trends in the field. The full topic list and interview questions can be found in Annex 2.

Table 4: Interview participants

Organisation	<i>N</i>
Consumer organisations	3
Law enforcement	1
Traders and traders' associations	5

Source: Authors' own elaboration.

## ANNEX 2: TOPIC LIST AND INTERVIEW GUIDE

### Topic 1: Conceptualisation

- How would you define personalised pricing? When is a price personalised? What conditions need to be met?
- How common is the phenomenon currently?
- What types of personalised pricing would you differentiate between?  
*Prompt: think about related terms such as first- and second-degree discrimination*

### Topic 2: Current practices

- What current personalisation practices would you say are most common?
- What is consumers' view of personalised pricing?
- What are the current transparency practices surrounding personalised pricing?
- What are the most pressing regulatory issues around personalised pricing?

### Topic 3: Benefits

- To what extent do traders benefit from personalised pricing?
- What is the benefit for consumers?  
*Prompt: To what extent does it depend on a) context, b) data used for personalisation, c) transparency?*

### Topic 4: Considerations

- What is the tipping point at which personalised pricing becomes unacceptable?  
*Prompt: think about context, consumer awareness or acceptance, data used for personalisation.*
- Are there criteria that should not be used for personalisation? Which ones? Why?
- Beyond anti-discrimination law, should one prohibit certain criteria to be used as the IMCO rapporteur suggested (unsuccessfully) for consumer credit law?
  - How should such a blacklist be defined?
- Are there contexts or industries where personalised pricing is unacceptable, regardless of transparency measures or consumer acceptance?  
*Prompt: Think about basic provisions, services that citizens need?*
  - How should such contexts be defined? What would be the leading rule?
- Should third degree price personalisation on certain criteria be prohibited? Which ones?

### Topic 5: Transparency of price personalisation

- How would disclosure of personalised pricing impact on consumers? How would it impact on their buying behaviour?
- What is needed for such a disclosure to be effective? Is an upgrade to the information obligation needed?  
*Prompt: think about disclosing data used for the personalised price, criteria used by the algorithm, differences with other consumers or mere fact of personalisation*
- Can disclosing personalised pricing be beneficial for traders?

**Topic 6: Future developments and challenges**

- How do you see future market and regulatory developments around personalised pricing?
- What is the most pressing issue that should be tackled?

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This study conceptualises personal pricing, distinguishing different forms including individual prices and group prices. It summarises empirical insights on the occurrence of personal pricing in practice and related consumer attitudes. In its legal part, it analyses whether and how current EU law deals with this phenomenon and identifies regulatory gaps and legal uncertainty, on the basis of which recommendations for future regulation of personalised pricing are presented.

This document was provided by the Policy Department for Economic, Scientific and Quality of Life Policies at the request of the committee on Internal Market and Consumer Protection (IMCO).

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PE 734.008  
IP/A/IMCO/2022-3

Print ISBN 978-92-846-9942-1 | doi:10.2861/066156 | QA-03-22-164-EN-C  
PDF ISBN 978-92-846-9941-4 | doi:10.2861/869778 | QA-03-22-164-EN-N